



**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY PROGRAM**

**TITLE V/STATE OPERATING PERMIT**

Issue Date: December 7, 2022

Effective Date: December 7, 2022

Expiration Date: December 7, 2027

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 operate the air emission source(s) more fully described in this permit. This Facility is subject to all terms and conditions specified in this permit. Nothing in this permit 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 permit condition is set forth in brackets. All terms and conditions in this permit are federally enforceable applicable requirements unless otherwise designated as "State-Only" or "non-applicable" requirements.

**TITLE V Permit No: 35-00011**

Federal Tax Id - Plant Code: 23-2383025-1

**Owner Information**

Name: ALLIANCE SANI LDFL INC  
Mailing Address: 398 S KEYSER AVE  
TAYLOR, PA 18517-1009

**Plant Information**

Plant: ALLIANCE SANI LANDFILL INC/TAYLOR LDFL  
Location: 35 Lackawanna County 35812 Taylor Borough  
SIC Code: 4953 Trans. & Utilities - Refuse Systems

**Responsible Official**

Name: GLENN R KEMPA  
Title: DISTRICT MANAGER  
Phone: (570) 562 - 1600 Email: gkempa@wm.com

**Permit Contact Person**

Name: GLENN R KEMPA  
Title: DISTRICT MANAGER  
Phone: (570) 562 - 1600 Email: gkempa@wm.com

[Signature] \_\_\_\_\_  
MARK J. WEJKSZNER, NORTHEAST REGION AIR PROGRAM MANAGER



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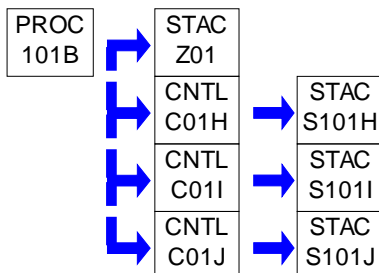
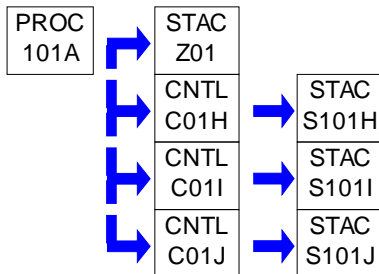
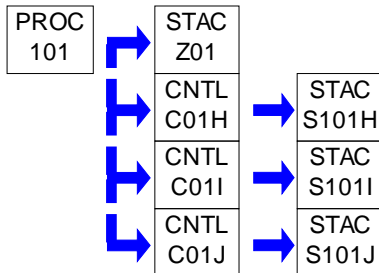
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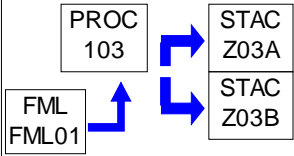
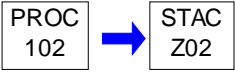
**SECTION A. Site Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
101	GAS EXTRACTION/COLLECTION SYSTEM (AREA I)		
101A	GAS EXTRACTION/COLLECTION SYSTEM (AREA II)		
101B	GAS EXTRACTION/COLLECTION SYSTEM (AREA 2A)		
102	HAUL ROADS		
103	TWO (2) DIESEL-FUEL ELECTRIC GENERATORS		
C01H	ENCLOSED FLARE H - 6,000 CFM		
C01I	ENCLOSED FLARE I - 3,300 CFM		
C01J	UTILITY FLARE J - 500 CFM		
FML01	DIESEL FUEL TANK 1		
S101H	STACK - ENCLOSED FLARE H		
S101I	STACK - ENCLOSED FLARE I		
S101J	STACK - CANDLE FLARE J		
Z01	FUGITIVE EMISSIONS - LANDFILL VOCS		
Z02	FUGITIVE EMISSIONS - HAUL ROADS		
Z03A	FUGITIVE EMISSIONS - GENERATOR 1		
Z03B	FUGITIVE EMISSIONS - GENERATOR 2		

**PERMIT MAPS**



**PERMIT MAPS**



**SECTION B. General Title V Requirements****#001 [25 Pa. Code § 121.1]****Definitions**

Words and terms that are not otherwise defined in this permit 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 § 121.7]****Prohibition of Air Pollution**

No person may permit air pollution as that term is defined in the act.

**#003 [25 Pa. Code § 127.512(c)(4)]****Property Rights**

This permit does not convey property rights of any sort, or any exclusive privileges.

**#004 [25 Pa. Code § 127.446(a) and (c)]****Permit Expiration**

This operating permit is issued for a fixed term of five (5) years and shall expire on the date specified on Page 1 of this permit. The terms and conditions of the expired permit shall automatically continue pending issuance of a new Title V permit, provided the permittee has submitted a timely and complete application and paid applicable fees required under 25 Pa. Code Chapter 127, Subchapter I and the Department is unable, through no fault of the permittee, to issue or deny a new permit before the expiration of the previous permit. An application is complete if it contains sufficient information to begin processing the application, has the applicable sections completed and has been signed by a responsible official.

**#005 [25 Pa. Code §§ 127.412, 127.413, 127.414, 127.446(e), 127.503 & 127.704(b)]****Permit Renewal**

(a) An application for the renewal of the Title V permit shall be submitted to the Department at least six (6) months, and not more than 18 months, before the expiration date of this permit. The renewal application is timely if a complete application is submitted to the Department's Regional Air Manager within the timeframe specified in this permit condition.

(b) The application for permit renewal shall include the current permit number, the appropriate permit renewal fee, a description of any permit revisions and off-permit changes that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term. The fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" and submitted with the fee form to the respective regional office.

(c) The renewal application shall also include submission of proof that the local municipality and county, in which the facility is located, have been notified in accordance with 25 Pa. Code § 127.413. The application for renewal of the Title V permit shall also include submission of compliance review forms which have been used by the permittee to update information submitted in accordance with either 25 Pa. Code § 127.412(b) or § 127.412(j).

(d) The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information during the permit renewal process. The permittee shall also promptly provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

**#006 [25 Pa. Code §§ 127.450(a)(4) & 127.464(a)]****Transfer of Ownership or Operational Control**

(a) In accordance with 25 Pa. Code § 127.450(a)(4), a change in ownership or operational control of the source shall be treated as an administrative amendment if:

- (1) The Department determines that no other change in the permit is necessary;
- (2) A written agreement has been submitted to the Department identifying the specific date of the transfer of permit responsibility, coverage and liability between the current and the new permittee; and,
- (3) A compliance review form has been submitted to the Department and the permit transfer has been approved by

**SECTION B. General Title V Requirements**

the Department.

(b) In accordance with 25 Pa. Code § 127.464(a), this permit may not be transferred to another person except in cases of transfer-of-ownership which are documented and approved to the satisfaction of the Department.

**#007 [25 Pa. Code § 127.513, 35 P.S. § 4008 and § 114 of the CAA]****Inspection and Entry**

(a) Upon presentation of credentials and other documents as may be required by law for inspection and entry purposes, the permittee shall allow the Department of Environmental Protection or authorized representatives of the Department to perform the following:

- (1) Enter at reasonable times upon the permittee's premises where a Title V source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit;
- (2) Have access to and copy or remove, at reasonable times, records that are kept under the conditions of this permit;
- (3) Inspect at reasonable times, facilities, equipment including monitoring and air pollution control equipment, practices, or operations regulated or required under this permit;
- (4) Sample or monitor, at reasonable times, substances or parameters, for the purpose of assuring compliance with the permit or applicable requirements as authorized by the Clean Air Act, the Air Pollution Control Act, or the regulations promulgated under the Acts.

(b) 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.

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

**#008 [25 Pa. Code §§ 127.25, 127.444, & 127.512(c)(1)]****Compliance Requirements**

(a) The permittee shall comply with the conditions of this permit. Noncompliance with this permit constitutes a violation of the Clean Air Act and the Air Pollution Control Act and is grounds for one (1) or more of the following:

- (1) Enforcement action
- (2) Permit termination, revocation and reissuance or modification
- (3) Denial of a permit renewal application

(b) A person may not cause or permit the operation of a source, which is subject to 25 Pa. Code Article III, unless the source(s) and air cleaning devices identified in the application for the plan approval and operating permit and the plan approval issued to the source are operated and maintained in accordance with specifications in the applications and the conditions in the plan approval and operating permit issued by the Department. A person may not cause or permit the operation of an air contamination source subject to 25 Pa. Code Chapter 127 in a manner inconsistent with good operating practices.

(c) For purposes of Sub-condition (b) of this permit condition, the specifications in applications for plan approvals and operating permits are the physical configurations and engineering design details which the Department determines are essential for the permittee's compliance with the applicable requirements in this Title V permit.

**#009 [25 Pa. Code § 127.512(c)(2)]****Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**SECTION B. General Title V Requirements****#010 [25 Pa. Code §§ 127.411(d) & 127.512(c)(5)]****Duty to Provide Information**

(a) The permittee shall furnish to the Department, within a reasonable time, information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit.

(b) Upon request, the permittee shall also furnish to the Department copies of records that the permittee is required to keep by this permit, or for information claimed to be confidential, the permittee may furnish such records directly to the Administrator of EPA along with a claim of confidentiality.

**#011 [25 Pa. Code §§ 127.463, 127.512(c)(3) & 127.542]****Reopening and Revising the Title V Permit for Cause**

(a) This Title V permit may be modified, revoked, reopened and reissued or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay a permit condition.

(b) This permit may be reopened, revised and reissued prior to expiration of the permit under one or more of the following circumstances:

(1) Additional applicable requirements under the Clean Air Act or the Air Pollution Control Act become applicable to a Title V facility with a remaining permit term of three (3) or more years prior to the expiration date of this permit. The Department will revise the permit as expeditiously as practicable but not later than 18 months after promulgation of the applicable standards or regulations. No such revision is required if the effective date of the requirement is later than the expiration date of this permit, unless the original permit or its terms and conditions has been extended.

(2) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator of EPA, excess emissions offset plans for an affected source shall be incorporated into the permit.

(3) The Department or the EPA determines that this permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

(4) The Department or the Administrator of EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(c) Proceedings to revise this permit shall follow the same procedures which apply to initial permit issuance and shall affect only those parts of this permit for which cause to revise exists. The revision shall be made as expeditiously as practicable.

(d) Regardless of whether a revision is made in accordance with (b)(1) above, the permittee shall meet the applicable standards or regulations promulgated under the Clean Air Act within the time frame required by standards or regulations.

**#012 [25 Pa. Code § 127.543]****Reopening a Title V Permit for Cause by EPA**

As required by the Clean Air Act and regulations adopted thereunder, this permit may be modified, reopened and reissued, revoked or terminated for cause by EPA in accordance with procedures specified in 25 Pa. Code § 127.543.

**#013 [25 Pa. Code § 127.522(a)]****Operating Permit Application Review by the EPA**

The applicant may be required by the Department to provide a copy of the permit application, including the compliance plan, directly to the Administrator of the EPA. Copies of title V permit applications to EPA, pursuant to 25 PA Code §127.522(a), shall be submitted, if required, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].



**SECTION B. General Title V Requirements****#014 [25 Pa. Code § 127.541]****Significant Operating Permit Modifications**

When permit modifications during the term of this permit do not qualify as minor permit modifications or administrative amendments, the permittee shall submit an application for significant Title V permit modifications in accordance with 25 Pa. Code § 127.541. Notifications to EPA, pursuant to 25 PA Code §127.522(a), if required, shall be submitted, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#015 [25 Pa. Code §§ 121.1 & 127.462]****Minor Operating Permit Modifications**

The permittee may make minor operating permit modifications (as defined in 25 Pa. Code §121.1), on an expedited basis, in accordance with 25 Pa. Code §127.462 (relating to minor operating permit modifications). Notifications to EPA, pursuant to 25 PA Code §127.462(c), if required, shall be submitted, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#016 [25 Pa. Code § 127.450]****Administrative Operating Permit Amendments**

(a) The permittee may request administrative operating permit amendments, as defined in 25 Pa. Code §127.450(a). Copies of request for administrative permit amendment to EPA, pursuant to 25 PA Code §127.450(c)(1), if required, shall be submitted to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

(b) Upon final action by the Department granting a request for an administrative operating permit amendment covered under §127.450(a)(5), the permit shield provisions in 25 Pa. Code § 127.516 (relating to permit shield) shall apply to administrative permit amendments incorporated in this Title V Permit in accordance with §127.450(c), unless precluded by the Clean Air Act or the regulations thereunder.

**#017 [25 Pa. Code § 127.512(b)]****Severability Clause**

The provisions of this permit are severable, and if any provision of this permit is determined by the Environmental Hearing Board or a court of competent jurisdiction, or US EPA to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

**#018 [25 Pa. Code §§ 127.704, 127.705 & 127.707]****Fee Payment**

(a) The permittee shall pay fees to the Department in accordance with the applicable fee schedules in 25 Pa. Code Chapter 127, Subchapter I (relating to plan approval and operating permit fees). The applicable fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" with the permit number clearly indicated and submitted to the respective regional office.

(b) Emission Fees. The permittee shall, on or before September 1st of each year, pay applicable annual Title V emission fees for emissions occurring in the previous calendar year as specified in 25 Pa. Code § 127.705. The permittee is not required to pay an emission fee for emissions of more than 4,000 tons of each regulated pollutant emitted from the facility.

(c) As used in this permit condition, the term "regulated pollutant" is defined as a VOC, each pollutant regulated under Sections 111 and 112 of the Clean Air Act and each pollutant for which a National Ambient Air Quality Standard has been promulgated, except that carbon monoxide is excluded.

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(d) Late Payment. Late payment of emission fees will subject the permittee to the penalties prescribed in 25 Pa. Code § 127.707 and may result in the suspension or termination of the Title V permit. The permittee shall pay a penalty of fifty percent (50%) of the fee amount, plus interest on the fee amount computed in accordance with 26 U.S.C.A. § 6621(a)(2) from the date the emission fee should have been paid in accordance with the time frame specified in 25 Pa. Code § 127.705(c).

(e) The permittee shall pay an annual operating permit maintenance fee according to the following fee schedule established in 25 Pa. Code § 127.704(d) on or before December 31 of each year for the next calendar year.

(1) Eight thousand dollars (\$8,000) for calendar years 2021—2025.

(2) Ten thousand dollars (\$10,000) for calendar years 2026—2030.

(3) Twelve thousand five hundred dollars (\$12,500) for the calendar years beginning with 2031.

**#019 [25 Pa. Code §§ 127.14(b) & 127.449]****Authorization for De Minimis Emission Increases**

(a) This permit authorizes de minimis emission increases from a new or existing source in accordance with 25 Pa. Code §§ 127.14 and 127.449 without the need for a plan approval or prior issuance of a permit modification. The permittee shall provide the Department with seven (7) days prior written notice before commencing any de minimis emissions increase that would result from either: (1) a physical change of minor significance under § 127.14(c)(1); or (2) the construction, installation, modification or reactivation of an air contamination source. The written notice shall:

(1) Identify and describe the pollutants that will be emitted as a result of the de minimis emissions increase.

(2) Provide emission rates expressed in tons per year and in terms necessary to establish compliance consistent with any applicable requirement.

The Department may disapprove or condition de minimis emission increases at any time.

(b) Except as provided below in (c) and (d) of this permit condition, the permittee is authorized during the term of this permit to make de minimis emission increases (expressed in tons per year) up to the following amounts without the need for a plan approval or prior issuance of a permit modification:

(1) Four tons of carbon monoxide from a single source during the term of the permit and 20 tons of carbon monoxide at the facility during the term of the permit.

(2) One ton of NO<sub>x</sub> from a single source during the term of the permit and 5 tons of NO<sub>x</sub> at the facility during the term of the permit.

(3) One and six-tenths tons of the oxides of sulfur from a single source during the term of the permit and 8.0 tons of oxides of sulfur at the facility during the term of the permit.

(4) Six-tenths of a ton of PM<sub>10</sub> from a single source during the term of the permit and 3.0 tons of PM<sub>10</sub> at the facility during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act or 25 Pa. Code Article III.

(5) One ton of VOCs from a single source during the term of the permit and 5.0 tons of VOCs at the facility during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act or 25 Pa. Code Article III.

(c) In accordance with § 127.14, the permittee may install the following minor sources without the need for a plan approval:

(1) Air conditioning or ventilation systems not designed to remove pollutants generated or released from other sources.

(2) Combustion units rated at 2,500,000 or less Btu per hour of heat input.

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(3) Combustion units with a rated capacity of less than 10,000,000 Btu per hour heat input fueled by natural gas supplied by a public utility, liquefied petroleum gas or by commercial fuel oils which are No. 2 or lighter, viscosity less than or equal to 5.82 c St, and which meet the sulfur content requirements of 25 Pa. Code § 123.22 (relating to combustion units). For purposes of this permit, commercial fuel oil shall be virgin oil which has no reprocessed, recycled or waste material added.

(4) Space heaters which heat by direct heat transfer.

(5) Laboratory equipment used exclusively for chemical or physical analysis.

(6) Other sources and classes of sources determined to be of minor significance by the Department.

(d) This permit does not authorize de minimis emission increases if the emissions increase would cause one or more of the following:

(1) Increase the emissions of a pollutant regulated under Section 112 of the Clean Air Act except as authorized in Subparagraphs (b)(4) and (5) of this permit condition.

(2) Subject the facility to the prevention of significant deterioration requirements in 25 Pa. Code Chapter 127, Subchapter D and/or the new source review requirements in Subchapter E.

(3) Violate any applicable requirement of the Air Pollution Control Act, the Clean Air Act, or the regulations promulgated under either of the acts.

(4) Changes which are modifications under any provision of Title I of the Clean Air Act and emission increases which would exceed the allowable emissions level (expressed as a rate of emissions or in terms of total emissions) under the Title V permit.

(e) Unless precluded by the Clean Air Act or the regulations thereunder, the permit shield described in 25 Pa. Code § 127.516 (relating to permit shield) shall extend to the changes made under 25 Pa. Code § 127.449 (relating to de minimis emission increases).

(f) Emissions authorized under this permit condition shall be included in the monitoring, recordkeeping and reporting requirements of this permit.

(g) Except for de minimis emission increases allowed under this permit, 25 Pa. Code § 127.449, or sources and physical changes meeting the requirements of 25 Pa. Code § 127.14, the permittee is prohibited from making physical changes or engaging in activities that are not specifically authorized under this permit without first applying for a plan approval. In accordance with § 127.14(b), a plan approval is not required for the construction, modification, reactivation, or installation of the sources creating the de minimis emissions increase.

(h) The permittee may not meet de minimis emission threshold levels by offsetting emission increases or decreases at the same source.

**#020 [25 Pa. Code §§ 127.11a & 127.215]****Reactivation of Sources**

(a) The permittee may reactivate a source at the facility that has been out of operation or production for at least one year, but less than or equal to five (5) years, if the source is reactivated in accordance with the requirements of 25 Pa. Code §§ 127.11a and 127.215. The reactivated source will not be considered a new source.

(b) A source which has been out of operation or production for more than five (5) years but less than 10 years may be reactivated and will not be considered a new source if the permittee satisfies the conditions specified in 25 Pa. Code § 127.11a(b).

**#021 [25 Pa. Code §§ 121.9 & 127.216]****Circumvention**

(a) The owner of this Title V facility, 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

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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 permit, 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.

**#022 [25 Pa. Code §§ 127.402(d) & 127.513(1)]****Submissions**

(a) Reports, test data, monitoring data, notifications and requests for renewal of the permit shall be submitted to the:

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

(b) Any report or notification for the EPA Administrator or EPA Region III should be addressed to:

Enforcement & Compliance Assurance Division  
Air, RCRA and Toxics Branch (3ED21)  
Four Penn Center  
1600 John F. Kennedy Boulevard  
Philadelphia, PA 19103-2852

The Title V compliance certification shall be emailed to EPA at R3\_APD\_Permits@epa.gov.

(c) An application, form, report or compliance certification submitted pursuant to this permit condition shall contain certification by a responsible official as to truth, accuracy, and completeness as required under 25 Pa. Code § 127.402(d). Unless otherwise required by the Clean Air Act or regulations adopted thereunder, this certification and any other certification required pursuant to this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

**#023 [25 Pa. Code §§ 127.441(c) & 127.463(e); Chapter 139; & 114(a)(3), 504(b) of the CAA]****Sampling, Testing and Monitoring Procedures**

(a) The permittee shall perform the emissions monitoring and analysis procedures or test methods for applicable requirements of this Title V permit. In addition to the sampling, testing and monitoring procedures specified in this permit, the Permittee shall comply with any additional applicable requirements promulgated under the Clean Air Act after permit issuance regardless of whether the permit is revised.

(b) The sampling, testing and monitoring required under the applicable requirements of this permit, shall be conducted in accordance with the requirements of 25 Pa. Code Chapter 139 unless alternative methodology is required by the Clean Air Act (including §§ 114(a)(3) and 504(b)) and regulations adopted thereunder.

**#024 [25 Pa. Code §§ 127.511 & Chapter 135]****Recordkeeping Requirements**

(a) The permittee shall maintain and make available, upon request by the Department, records of required monitoring information that include the following:

- (1) The date, place (as defined in the permit) and time of sampling or measurements.
- (2) The dates the analyses were performed.
- (3) The company or entity that performed the analyses.
- (4) The analytical techniques or methods used.

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(5) The results of the analyses.

(6) The operating conditions as existing at the time of sampling or measurement.

(b) The permittee shall retain records of the required monitoring data and supporting information for at least five (5) years from the date of the monitoring sample, measurement, report or application. Supporting information includes the calibration data and maintenance records and original strip-chart recordings for continuous monitoring instrumentation, and copies of reports required by the permit.

(c) The permittee shall maintain and make available to the Department upon request, records including computerized records that may be necessary to comply with the reporting, recordkeeping and emission statement requirements in 25 Pa. Code Chapter 135 (relating to reporting of sources). In accordance with 25 Pa. Code Chapter 135, § 135.5, such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions. If direct recordkeeping is not possible or practical, sufficient records shall be kept to provide the needed information by indirect means.

**#025 [25 Pa. Code §§ 127.411(d), 127.442, 127.463(e) & 127.511(c)]****Reporting Requirements**

(a) The permittee shall comply with the reporting requirements for the applicable requirements specified in this Title V permit. In addition to the reporting requirements specified herein, the permittee shall comply with any additional applicable reporting requirements promulgated under the Clean Air Act after permit issuance regardless of whether the permit is revised.

(b) Pursuant to 25 Pa. Code § 127.511(c), the permittee shall submit reports of required monitoring at least every six (6) months unless otherwise specified in this permit. Instances of deviations (as defined in 25 Pa. Code § 121.1) from permit requirements shall be clearly identified in the reports. The reporting of deviations shall include the probable cause of the deviations and corrective actions or preventative measures taken, except that sources with continuous emission monitoring systems shall report according to the protocol established and approved by the Department for the source. The required reports shall be certified by a responsible official.

(c) Every report submitted to the Department under this permit condition shall comply with the submission procedures specified in Section B, Condition #022(c) of this permit.

(d) Any records, reports or information obtained by the Department or referred to in a public hearing shall be made available to the public by the Department except for such records, reports or information for which the permittee has shown cause that the documents should be considered confidential and protected from disclosure to the public under Section 4013.2 of the Air Pollution Control Act and consistent with Sections 112(d) and 114(c) of the Clean Air Act and 25 Pa. Code § 127.411(d). The permittee may not request a claim of confidentiality for any emissions data generated for the Title V facility.

**#026 [25 Pa. Code § 127.513]****Compliance Certification**

(a) One year after the date of issuance of the Title V permit, and each year thereafter, unless specified elsewhere in the permit, the permittee shall submit to the Department and EPA Region III a certificate of compliance with the terms and conditions in this permit, for the previous year, including the emission limitations, standards or work practices. This certification shall include:

- (1) The identification of each term or condition of the permit that is the basis of the certification.
- (2) The compliance status.
- (3) The methods used for determining the compliance status of the source, currently and over the reporting period.
- (4) Whether compliance was continuous or intermittent.

(b) The compliance certification shall be postmarked or hand-delivered no later than thirty days after each anniversary of the date of issuance of this Title V Operating Permit, or on the submittal date specified elsewhere in the permit, to the Department in accordance with the submission requirements specified in Section B, Condition #022 of this permit. The Title V compliance certification shall be emailed to EPA at R3\_APD\_Permits@epa.gov.

**SECTION B. General Title V Requirements****#027 [25 Pa. Code § 127.3]****Operational Flexibility**

The permittee is authorized to make changes within the Title V facility in accordance with the following provisions in 25 Pa. Code Chapter 127 which implement the operational flexibility requirements of Section 502(b)(10) of the Clean Air Act and Section 6.1(i) of the Air Pollution Control Act:

- (1) Section 127.14 (relating to exemptions)
- (2) Section 127.447 (relating to alternative operating scenarios)
- (3) Section 127.448 (relating to emissions trading at facilities with federally enforceable emissions caps)
- (4) Section 127.449 (relating to de minimis emission increases)
- (5) Section 127.450 (relating to administrative operating permit amendments)
- (6) Section 127.462 (relating to minor operating permit amendments)
- (7) Subchapter H (relating to general plan approvals and operating permits)

**#028 [25 Pa. Code §§ 127.441(d), 127.512(i) and 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 Title V facility. The permittee shall submit the RMP to the federal Environmental Protection Agency according to the following schedule and requirements:

- (1) The permittee shall submit the first RMP to a central point specified by EPA no later than the latest of the following:
  - (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 EPA 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 permit 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.

(d) If the Title V facility is subject to 40 CFR Part 68, as part of the certification required under this permit, the permittee shall:

- (1) Submit a compliance schedule for satisfying the requirements of 40 CFR Part 68 by the date specified in 40 CFR § 68.10(a); or,
- (2) Certify that the Title V facility is in compliance with all requirements of 40 CFR Part 68 including the registration and submission of the RMP.

**SECTION B. General Title V Requirements**

(e) If the Title V facility is subject to 40 CFR Part 68, the permittee shall maintain records supporting the implementation of an accidental release program for five (5) years in accordance with 40 CFR § 68.200.

(f) When the Title V facility is subject to the accidental release program requirements of Section 112(r) of the Clean Air Act and 40 CFR Part 68, appropriate enforcement action will be taken by the Department if:

(1) The permittee fails to register and submit the RMP or a revised plan pursuant to 40 CFR Part 68.

(2) The permittee fails to submit a compliance schedule or include a statement in the compliance certification required under Section B, Condition #026 of this permit that the Title V facility is in compliance with the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68, and 25 Pa. Code § 127.512(i).

**#029 [25 Pa. Code § 127.512(e)]****Approved Economic Incentives and Emission Trading Programs**

No permit revision shall be required under approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this Title V permit.

**#030 [25 Pa. Code §§ 127.516, 127.450(d), 127.449(f) & 127.462(g)]****Permit Shield**

(a) The permittee's compliance with the conditions of this permit shall be deemed in compliance with applicable requirements (as defined in 25 Pa. Code § 121.1) as of the date of permit issuance if either of the following applies:

(1) The applicable requirements are included and are specifically identified in this permit.

(2) The Department specifically identifies in the permit other requirements that are not applicable to the permitted facility or source.

(b) Nothing in 25 Pa. Code § 127.516 or the Title V permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act, including the authority of the Administrator of the EPA provided thereunder.

(2) The liability of the permittee for a violation of an applicable requirement prior to the time of permit issuance.

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act.

(4) The ability of the EPA to obtain information from the permittee under Section 114 of the Clean Air Act.

(c) Unless precluded by the Clean Air Act or regulations thereunder, final action by the Department incorporating a significant permit modification in this Title V Permit shall be covered by the permit shield at the time that the permit containing the significant modification is issued.

**#031 [25 Pa. Code §135.3]****Reporting**

(a) The permittee shall submit by March 1 of each year an annual emissions report for the preceding calendar year. The report shall include information for all active previously reported sources, new sources which were first operated during the preceding calendar year, and sources modified during the same period which were not previously reported. All air emissions from the facility should be estimated and reported.

(b) A source owner or operator may request an extension of time from the Department for the filing of an annual emissions report, and the Department may grant the extension for reasonable cause.

**#032 [25 Pa. Code §135.4]****Report Format**

Emissions reports shall contain sufficient information to enable the Department to complete its emission inventory. Emissions reports shall be made by the source owner or operator in a format specified by the Department.

**SECTION C. Site Level Requirements****I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

(a) No person may permit the emission into the outdoor atmosphere of fugitive air contaminant from a source other than the following:

- (1) Construction or demolition of buildings or structures.
- (2) Grading, paving and maintenance of roads and streets.
- (3) 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.
- (4) Clearing of land.
- (5) Stockpiling of materials.
- (6) Open burning operations.
- (7) Blasting in open pit mines. Emissions from drilling are not considered as emissions from blasting.
- (8) Sources and classes of sources other than those identified in paragraphs (1)-(7), for which the operator has obtained a determination from the Department that fugitive emissions from the source, after appropriate control, meet the following requirements:
  - (i) the emissions are of minor significance with respect to causing air pollution; and
  - (ii) 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**

(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.

**# 005 [25 Pa. Code §123.42]****Exceptions**

(a) The limitations of SITE LEVEL - Condition #004 (relating to limitations) 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.



**SECTION C. Site Level Requirements**

(2) When the emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions.

(3) When the emission results from sources specified in SITE LEVEL - Condition #001 (relating to prohibition of certain fugitive emissions).

**# 006 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The landfill owner/operator shall not combust more than 2,395,422 MMBtu of landfill gas per 12-month period based on 12-month rolling sum. In addition, the landfill owner/operator shall not combust landfill gas greater than the amounts listed below per calendar month:

(a) Months with thirty-one (31) days: 203,447 MMBtu

(b) Months with thirty (30) days: 196,884 MMBtu

(c) Months with twenty-nine (29) days: 190,321 MMBtu

(d) Months with twenty-eight (28) days: 183,758 MMBtu

**# 007 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

Open storage of leachate and/or condensate from a landfill permits the release of organic compounds which may cause malodors, are toxic, and/or contribute to the ozone nonattainment problem, which exists in the state. No open storage (ponding or open top tanks) of landfill leachate and/or condensate shall be permitted unless unusual circumstances are encountered. All approvals for unusual circumstances must have the concurrence of the Division of Abatement and Compliance. Uncontrolled stripping of VOCs from the leachate or condensate and/or spray irrigation will not normally be allowed. Installation of enclosed leachate and/or condensate storage systems and treatment systems which control or avoid air releases may be exempt from Air Quality permitting requirements.

**II. TESTING REQUIREMENTS.****# 008 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

All sampling, testing and analyses performed in compliance with the requirements of any section of this permit shall be done in accordance with SECTION B - General Title V requirement #023.

**# 009 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

(a) If required 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 40 CFR Part 62, Section 62.16718 and the Department's source testing procedures described in the latest Source Testing Manual reference in 25 Pa. Code, Section 139.4(5).

**# 010 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

(a) If at any time the Department has cause to believe that air contaminant emissions from the Landfill Sources may be in excess of the limitations specified in, or established pursuant to, any applicable rule or regulation contained in Article III of the Rules and Regulations of the Department of Environmental Protection, the company shall be required to conduct whatever tests are deemed necessary by the Department to determine the actual emission rate of the source(s). Such testing shall be conducted in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection, where applicable, and in accordance with any restrictions or limitations established by the Department at such time as it notifies the company that testing is required.

**SECTION C. Site Level Requirements****III. MONITORING REQUIREMENTS.****# 011 [25 Pa. Code §123.43]****Measuring techniques**

(a) Visible emissions may be measured using either of the following:

(1) A device approved by the Department and maintained to provide accurate opacity measurements.

(2) Observers, trained and qualified to measure plume opacity with the naked eye or with the aid of any devices approved by the Department.

**# 012 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.****VISIBLE, FUGITIVE, AND MALODOR EMISSIONS**

(a) The permittee shall conduct weekly inspections of the facility perimeter, during daylight hours when the landfill is in operation, to detect visible, fugitive, and malodor emissions as follows:

(1) Visible emissions in excess of the limits stated in SITE LEVEL - Condition #004.

(i) Visible emissions may be measured according to the methods specified in SITE LEVEL - Condition #011 or alternatively, landfill personnel who observe any visible emissions in excess of SITE LEVEL - Condition #004 will report the incident of visible emissions to the Department within four (4) hours of each incident and make arrangements for a certified observer to verify the opacity of the emissions.

(2) The presence of fugitive emissions visible beyond the boundaries of the facility, as stated in SITE LEVEL - Condition #002.

(3) The presence of malodor emissions beyond the boundaries of the facility, as stated in SITE LEVEL - Condition #003.

**# 013 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The following emissions were obtained from Plan Approval 35-322-011 issued 10/28/2010:

Emissions of criteria pollutants from the facility shall be limited to all of the following, which are Potential-to-Emit (PTE) calculations:

NO<sub>x</sub> - 125 tons/year on a twelve (12) month rolling sum.  
 SO<sub>x</sub> - 31.4 tons/year on a twelve (12) month rolling sum.  
 CO - 379.5 tons/year on a twelve (12) month rolling sum.  
 VOC - 49.7 tons/year on a twelve (12) month rolling sum.  
 PM/PM<sub>10</sub> - 168.5 tons/year on a twelve (12) month rolling sum.  
 HAPs - 23.4 tons/year on a twelve (12) month rolling sum.

**IV. RECORDKEEPING REQUIREMENTS.****# 014 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

(a) The owner/operator shall keep records of the amount of landfill gas collected and combusted at the facility on a monthly basis to verify compliance with the landfill gas throughput limitation in any 12 consecutive month period.

(b) These records shall be retained for a minimum of five (5) years and shall be made available to the Department upon request.

(c) Records of data, calculations, and total emissions should be kept, as necessary, to ensure compliance with each specific condition so that compliance is easily and readily verified. The records, calculations, and total emissions shall be computed at least monthly for the previous month and the previous twelve consecutive calendar month period, and shall be updated by the 30th calendar day of each calendar month for the preceding monthly and twelve consecutive calendar month periods.

**SECTION C. Site Level Requirements****# 015 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

## VISIBLE, FUGITIVE AND MALODOR EMISSIONS

(a) The permittee shall keep a logbook of weekly facility inspections performed. The logbook shall include the name of the company representative performing the inspections, any instances of exceedances of visible emissions limitations, visible fugitive emissions limitations, and malodorous air emission limitations, and the name of the manager informed if a potential exceedance is observed.

The permittee shall also record any and all corrective action(s) taken to abate each recorded deviation to prevent future occurrences.

(b) The records shall be kept for a five (5) year period and shall be made available to the Department upon request.

**# 016 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

All records, reports and analyses results generated in compliance with the requirements of any section of this permit shall be maintained in accordance with SECTION B - General Title V Requirement #022, and shall be made available to the Department upon written or verbal request at a reasonable time.

**V. REPORTING REQUIREMENTS.****# 017 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

(a) The permittee, within one (1) hour of discovery of an occurrence, shall notify the Department (either by phone at 570-826-2511, facsimile at 570-826-2357, or email to the Regional Air Program Manager) of any malfunction, recordkeeping or reporting error, or other possible non-compliance issue, which reasonably is believed to either result in, or possibly be resulting 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.

(b) A written report shall be submitted to the Department within five (5) 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 standards.

**# 018 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

(a) The permittee shall submit reports to the Department on a semi-annual basis that include the supporting calculations to verify compliance with the NO<sub>x</sub>, CO, SO<sub>x</sub>, VOCs, and PM emissions limitation for the facility in any 12 consecutive month period.

(b) The semi-annual reports shall be submitted to the Department no later than January 31 (for July 1 through December 31 of the previous year) and July 31 (for January 1 through June 30 of the current year).

**# 019 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

## FUGITIVE AND VISIBLE EMISSIONS

(a) On a semi-annual basis, the permittee shall compile a report of all logged instances of deviation of the fugitive or visible emission limitations that occurred and the actions taken in response to them. This report shall be submitted to the Department.

(b) If no deviations have been logged during the reported period, this report shall be retained at the facility and be made available to the Department upon request.

**# 020 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee may forward EPA Region 3 the annual compliance certification report (as defined in SITE LEVEL

**SECTION C. Site Level Requirements**

Requirement - Condition #021 of this existing Title V operating permit) and semi-annual reports electronically, in lieu of a hard copy version, to the email address:

R3\_APD\_Permits@epa.gov.

Please place the following in the subject line:

TV 35-00011, Alliance Sanitary Landfill, Taylor Landfill

**# 021 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The landfill is subject to 40 CFR Part 62 Subpart OOO of the Standards of Performance for New Stationary Sources and 40 CFR Part 63 Subpart AAAA of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), and shall comply with all applicable requirements of both Subparts.

40 CFR Sections 60.4 and 63.13 require submission of copies of all requests, reports, applications, submittals, and other communications to both EPA and the Department. The copies shall be forwarded to:

Region III, Air and Radiation Division  
Permits Branch (3AD10)  
Four Penn Center  
1600 John F. Kennedy Boulevard  
Philadelphia, PA 19103

and:

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

**# 022 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

(a) Odors, relative to the standard specified in 25 Pa. Code §123.31(b). The permittee shall conduct an evaluation at the facility boundary.

(b) Visible emissions, relative to the standards specified in 25 Pa. Code §123.41. The permittee shall conduct a visual evaluation of the emission sources from the facility boundary. If an exceedance of the applicable standard specified in 25 Pa. Code §123.41 is suspected as a result of that evaluation, permittee shall perform a follow-up inspection.

(c) Fugitive particulate matter, relative to the standard specified in 25 Pa. Code §123.2. The permittee shall conduct a visual evaluation at the facility boundary.

(d) Objectionable odors, which may cause annoyance or discomfort to the public noticed at the site property boundaries that are caused, or may be caused, by operations at the site; fugitive particulate matter emitted from the landfill and visible at the point the emissions pass beyond the property boundary; or fugitive emissions in excess of Condition #001 of this Section, or visible emissions in excess of Condition #004 of this Section shall:

(1) Be investigated.

(2) Be reported to the District Manager, or individual(s) designated by the permittee.

(e) After completion of the six (6) month period of daily monitoring referenced in subparagraph (a), above, and upon the permittee's written request, with supporting data of compliance, the Department will determine the feasibility of decreasing the monitoring frequency to weekly.

(f) The Department reserves the right to change the above monitoring requirements at any time, based on but not limited to:

**SECTION C. Site Level Requirements**

the review of the compliance certification, indications of non-compliant monitoring results, and/or Department findings relating to the above-referenced monitored parameters.

**# 023 [25 Pa. Code §127.513]****Compliance certification.**

The reporting period for the Certificate of Compliance required by SECTION B - Condition #24 shall be for the previous calendar year, and it shall be submitted within 60 days after the specified period but no later than March 1st.

**# 024 [25 Pa. Code §135.21]****Emission statements**

(a) Except as provided in subsection (d), this section applies to stationary sources or facilities:

(1) Located in an area designated by the Clean Air Act as a marginal, moderate, serious, severe or extreme ozone nonattainment area and which emit oxides of nitrogen or VOC.

(2) Not located in an area described in subparagraph (1) and included in the Northeast Ozone Transport Region which emit or have the potential to emit 100 tons or more oxides of nitrogen or 50 tons or more of VOC per year.

(b) The owner or operator of each stationary source emitting oxides of nitrogen or VOCs shall provide the Department with a statement, in a form as the Department may prescribe, for classes or categories of sources, showing the actual emissions of oxides of nitrogen and VOCs from that source for each reporting period, a description of the method used to calculate the emissions and the time period over which the calculation is based. The statement shall contain a certification by a company officer or the plant manager that the information contained in the statement is accurate.

(c) Annual emission statements are due by March 1 for the preceding calendar year beginning with March 1, 1993, for calendar year 1992 and shall provide data consistent with requirements and guidance developed by the EPA. The guidance document is available from: United States Environmental Protection Agency, 401 M. Street, S.W., Washington, D.C. 20460. The Department may require more frequent submittals if the Department determines that one or more of the following applies:

(1) A more frequent submission is required by the EPA.

(2) Analysis of the data on a more frequent basis is necessary to implement the requirements of the act.

(d) Subsection (a) does not apply to a class or category of stationary sources which emits less than 25 tons per year of VOC's or oxides of nitrogen, if the Department in its submissions to the Administrator of the EPA under section 182(a)(1) or (3)(B)(ii) of the Clean Air Act (42 U.S.C.A. 7511a(a)(1) or (3)(B)(ii)) provides an inventory of emissions from the class or category of sources based on the use of the emission factors established by the Administrator or other methods acceptable to the Administrator. The Department will publish in the Pennsylvania Bulletin a notice of the lists of classes or categories of sources which are exempt from the emission statement requirement under this subsection.

**# 025 [25 Pa. Code §135.3]****Reporting**

(a) A person who owns or operates a source to which this chapter applies, and who has previously been advised by the Department to submit a source report (AIMS report), shall submit by March 1 of each year a source report for the preceding calendar year. The report shall include information for all previously reported sources, new sources which were first operated during the preceding calendar year and sources modified during the same period which were not previously reported.

(b) A person who receives initial notification by the Department that a source report is necessary shall submit an initial source report within 60 days after receiving the notification or by March 1 of the year following the year for which the report is required, whichever is later.

(c) A source owner or operator may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

**SECTION C. Site Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 026 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

(a) A person responsible for any source specified in SITE LEVEL - Condition #001, shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions shall include, but not be limited to, the following:

- (1) 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.
- (2) Application of asphalt, oil, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.
- (3) Paving and maintenance of roadways.
- (4) 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.

**# 027 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

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

- (a) RACT for this landfill for control of VOC emissions shall be the operation and maintenance of an active gas collection system having at least a 75% collection efficiency, and the operation and maintenance of landfill gas flares having at least a 98% destruction efficiency (DRE) or 20 ppm VOC at the outlet (where VOC is considered to be equal to NMOC).
- (b) The permittee shall ensure that the capture system and the control devices are in operation at all times, consistent with 40 CFR Part 60, Section 60.753 (e) & (f).

**# 028 [25 Pa. Code §127.512]****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.

**# 029 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

- (a) The permittee shall take all reasonable actions that are necessary to prevent particulate matter from becoming airborne.
- (b) The permittee shall develop and document a Best Management Practices (BMPs) manual (latest update provided by the company in 2016), as appropriate in the MSW landfill industry, to minimize fugitive emissions from landfill operations. These BMPs should be appropriate for the landfill and determined based on actual site conditions, and will not include or require any activity, action, or requirement that causes the MSW landfill to engage in unsafe activities.
- (c) The permittee shall determine and document their site-specific BMPs.
- (d) The permittee shall maintain on-site and make available for review by DEP personnel the following:
  - (1) A written manual documenting the BMPs utilized at the MSW landfill to control fugitive particular matter emissions. This manual shall be maintained on-site.

**SECTION C. Site Level Requirements**

(2) Sufficient records to demonstrate that the BMPs are being implemented.

(3) The BMP manual and records documenting implementation of the BMPs should be maintained at the office of the MSW landfill for five (5) years and shall be made available to the Department upon request.

**# 030 [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 unmanufactured 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.

**SECTION C. Site Level Requirements****VII. ADDITIONAL REQUIREMENTS.****# 031 [25 Pa. Code §127.1]****Purpose.**

No person may permit air pollution as that term is defined in the Pennsylvania Air Pollution Control Act (35 P.S. §§ 4001-4015).

**# 032 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The company shall not impose conditions upon or otherwise restrict the Department's access to the aforementioned sources and/or any associated air cleaning devices and shall allow the Department to have access at any time 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.

**VIII. COMPLIANCE CERTIFICATION.**

No additional compliance certifications exist except as provided in other sections of this permit including Section B (relating to Title V General Requirements).

**IX. COMPLIANCE SCHEDULE.**

No compliance milestones exist.

**\*\*\* Permit Shield In Effect \*\*\***



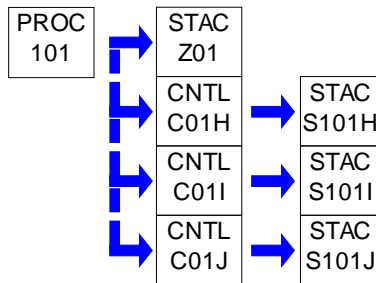
**SECTION D. Source Level Requirements**

Source ID: 101

Source Name: GAS EXTRACTION/COLLECTION SYSTEM (AREA I)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: GROUP 03  
GROUP 04

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V 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 permit including Section B (Title V 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 permit including Section B (Title V 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 permit including Section B (Title V 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 permit including Section B (Title V 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 permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

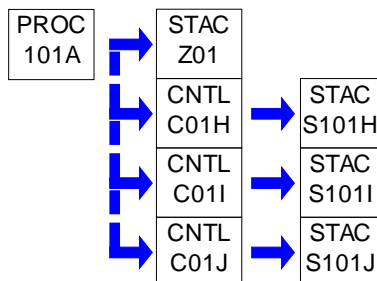
Source ID: 101A

Source Name: GAS EXTRACTION/COLLECTION SYSTEM (AREA II)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: GROUP 03

GROUP 04

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The total annual emission of VOCs from the Landfill Area II may not exceed 40 Tons per Year of Volatile Organic Compounds (VOC's).

**II. TESTING REQUIREMENTS.**

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

**IV. RECORDKEEPING REQUIREMENTS.****# 002 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall, on an annual basis, generate a forecast of both the potential and annual emissions of Volatile Organic Compounds (VOCs) from the Landfill Area II for the following year. Actual VOC emission estimates shall include current and scheduled collection system configurations for the forecast year.

**V. REPORTING REQUIREMENTS.****# 003 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall, on an annual basis, submit to the Department a report based upon the forecast of actual and potential VOC emissions from the Landfill Area II for the following year. If the forecast indicates that the existing and scheduled landfill gas collection and control system is not sufficient to maintain emissions of VOCs from the Landfill Area II under the threshold of 40 tons per year, additional collection and/or control shall be installed within six (6) months of the forecast to ensure that the VOC emission do not exceed the emission limit.



## SECTION D. Source Level Requirements

### VI. WORK PRACTICE REQUIREMENTS.

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

### VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

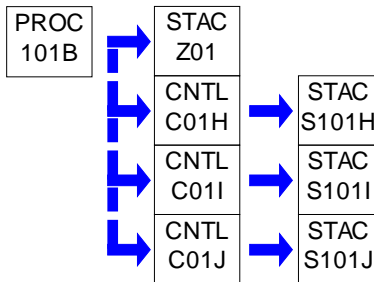
**SECTION D. Source Level Requirements**

Source ID: 101B

Source Name: GAS EXTRACTION/COLLECTION SYSTEM (AREA 2A)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: GROUP 04

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

Each flare used to combust landfill gas at the facility shall meet the following BAT requirements.

- (1) Enclosed flares shall be designed to operate with no visible flames during normal operations.
- (2) Enclosed flares 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 flares 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 flares may be operated at a lower temperature provided that the company has demonstrated, by a stack test that the flare will achieve the 98% destruction/removal efficiency or 20 ppm<sub>dv</sub> NMOC at the outlet, measured as hexane and corrected to 3% oxygen, at the lower temperature and complies with all the emission limits established in this operating permit. Operation at the lower temperature cannot occur until approved by DEP through a permit modification. Under no circumstance the flare 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. The enclosed flare shall be 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 should 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 62.16722(b) requirements.

**# 002 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

- (a) Fugitive PM<sub>10</sub> emissions from the landfill Area 2A operations shall be limited to 46.6 tons per year (on a 12-month rolling basis), calculated in accordance with the methods and emission factors used in the application for plan approval. The Department reserves the right to require the permittee to use a different method in this calculation. In the event that use of such different calculation method, or in the event that the relevant emission factors published in the most recent

**SECTION D. Source Level Requirements**

compilation of AP-42, would result in a calculated increase in PM-10 emissions from the landfill, the Department may require the permittee to submit an appropriate application for modification to incorporate the changes in calculated PM-10 emissions.

(b) The total Volatile Organic Compound (VOC) emissions from the landfill expansion Area 2A including flares shall not exceed 24.6 tons per year on a twelve (12) month rolling sum.

(c) The total nitrogen oxides (NOX) emissions from the landfill expansion Area 2A including flares shall not exceed 40.9 tons per year on a twelve (12) month rolling sum.

(d) The total carbon monoxide (CO) emissions from the landfill expansion Area 2A including flares shall not exceed 136.2 tons per year on a twelve (12) month rolling sum.

(e) The total sulfur oxides (SOX) emissions from the landfill expansion Area 2A including flares shall not exceed 22.1 tons per year on a twelve (12) month rolling sum.

(f) The total hazardous air pollutants (HAPs) emissions from the landfill expansion Area 2A including flares shall not exceed 8.8 tons per year on a twelve (12) month rolling sum.

**# 003 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The owner/operator shall install an interim landfill gas collection system, as submitted to the Department, for each pad. This interim gas collection system shall effectively capture the landfill gas within the landfill within 24 months from the start of placement of waste in a pad. The interim collection and control system shall be maintained at all times such that landfill VOC emissions are less than 50 tons per year.

**# 004 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

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

**# 005 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

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

**Throughput Restriction(s).****# 006 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The maximum amount of municipal solid waste (MSW) disposal in the landfill expansion Area 2A shall be limited to 4,000 tons per day based on a quarterly average and 1,232,000 tons per year on a calendar year.

**II. TESTING REQUIREMENTS.****# 007 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

All performance tests shall be conducted in accordance with 40 CFR §62.16718 and the Department's source testing procedures described in the latest Source Testing Manual referenced in 25 Pa Code Section 139.4(5).

**III. MONITORING REQUIREMENTS.****# 008 [25 Pa. Code §127.512]****Operating permit 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 landfill below the threshold of 50 tons per year, additional collection and/or control shall be

**SECTION D. Source Level Requirements**

installed within six months of the forecast to ensure that the VOC emissions do not exceed the 50 tons per year emission limit.

**IV. RECORDKEEPING REQUIREMENTS.**

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

**V. REPORTING REQUIREMENTS.****# 009 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The landfill shall submit to the Department a collection and control system plan, or submit a collection and control plan for an alternative design prepared by a professional engineer (submitted 2011). The plan must demonstrate that the collection 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.
- (c) Be designed to minimize off-site migration of subsurface gas.
- (d) Maintain the VOC emissions less than 50 tons per year from the landfill.

**# 010 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

(a) On a quarterly basis, the permittee shall report the following for the preceding 3-month period:

- (1) Average collected landfill gas flow rate in cfm by month and calculated collection efficiency for each quarter;
- (2) Average quality of collected landfill gas by month including percent methane, percent carbon dioxide, percent oxygen and percent balance gas;
- (3) Predicted average landfill gas generation rate for the current year as calculated by the latest run of a landfill gas prediction model;
- (4) Data from quarterly surface emission monitoring in a summary spreadsheet.

**# 011 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The permittee shall comply with applicable reporting requirements specified in 40 CFR §62.16724 (relating to reporting requirements). At a minimum, the permittee shall submit the following reports to the Department:

- (a) An Equipment Removal Report which meets the requirements of 40 CFR §62.16724(g) shall be submitted to the Department within 30 days prior to the removal or cessation of operation of a gas collection system.
- (b) The Annual Compliance Report required under 40 CFR §62.16724(h), the owner or operator of a landfill seeking to comply with § 62.16714(e)(2) using an active collection system designed in accordance with § 62.16714(b) must submit to the Department, following the procedures specified in paragraph (j)(2) of this section, an annual report of the recorded information in paragraphs (h)(1) through (7) of this section.
- (c) The Closure Report which meets the requirements of 40 CFR §62.16724(f) shall be submitted to the Department within

**SECTION D. Source Level Requirements**

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.

(d) 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).

(e) 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.

(f) The permittee shall comply with applicable recordkeeping requirements specified in 40 CFR §62.16726 (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 acceptance rate. Offsite records may be maintained by the permittee if they are retrievable within 4 hours.

**VI. WORK PRACTICE REQUIREMENTS.****# 012 [25 Pa. Code §127.512]****Operating permit 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.

**# 013 [25 Pa. Code §127.512]****Operating permit 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 nondegradeable material, (documentation must include nature, location, amount of asbestos or nondegradeable 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.

(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.

**SECTION D. Source Level Requirements**

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

$$QM = \sum_{i=1}^n S k Lo Mi (e^{-kt_i})$$

where,

QM = maximum expected gas generation flow rate, m<sup>3</sup>/yr

k = methane generation rate constant, year<sup>-1</sup>

Lo = methane generation potential, m<sup>3</sup>/Mg solid waste

Mi = mass of solid waste in the ith section, Mg

ti = age of the ith section, years

**# 014 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

- (a) The permittee shall install an interim landfill gas collection system, as submitted to the Department, for each cell. This interim gas collection system shall effectively capture the landfill gas generated within the landfill expansion within 24 months from the start of the placement of waste in the cell.
- (b) The interim landfill gas collection system shall collect gas from each area, cell, or group of cells in the landfill in which the initial waste has been placed for a period of up to 24 months.
- (c) The interim landfill gas collection period shall not exceed 5 years. The permanent landfill gas collection system shall be in place within 5 years of initial solid waste placement in the expansion Area 2A landfill.
- (d) Both interim and permanent landfill gas collection systems shall include all wells, cell or group of cells and shall be sized such that it can handle the maximum expected gas flow rate from the entire expansion area 2A of the landfill.
- (e) Both interim and permanent landfill gas collection systems shall be designed to minimize off-site migration of the landfill gas.
- (f) The final landfill gas management system shall have a design minimum collection efficiency of 90% at closure.



**SECTION D. Source Level Requirements****# 015 [25 Pa. Code §127.512]****Operating permit 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. The design collection efficiency of the gas management system for the final design of the landfill at closure shall not be less than a minimum of 90%.

(b) There should 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. Non-repeatable and momentary readings shall not be considered to be leaks, nor should measurements taken during routine equipment maintenance. The landfill equipment subject to this requirement includes gas extraction equipment designed to operate under positive pressure. This includes the blower, the control device or treatment system, above ground piping connecting these components and applicable fittings and valves. Routine equipment maintenance includes, but is not limited to, the following:

- (1) Gas piping repair;
- (2) Flare station blower repair or replacement;
- (3) Flare relight system testing or repair;
- (4) Flare thermocouple or temperature switch repair or replacement;
- (e) Flare liner inspection, repair, or replacement;
- (6) Flare actuator valve repair or replacement;
- (7) Flare flame arrestor basket cleaning;
- (8) Flare control panel timer adjustment or replacement;
- (9) Condensate trap pump repair or replacement;
- (10) Condensate pump pump-outs;
- (11) Electrical service repairs; and
- (12) Other repairs as determined by the Department

**VII. ADDITIONAL REQUIREMENTS.****# 016 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The permittee shall comply with all applicable requirements stated in 40 CFR Part 62 Subpart OOO.

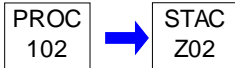
**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 102

Source Name: HAUL ROADS

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.****# 001 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

A detailed record describing the time, location, type and amount of roadway surface treatment shall be maintained at the landfill site for at least five (5) years, As a minimum, the record shall include the following:

(a) For paved roads and parking lot areas:

- (i) Daily log of run time and odometer reading for the vacuum sweeper.
- (ii) Daily log of time and location of vacuum sweeping.
- (iii) Identification, time and location of any maintenance, repair, patching or repaving of roads.
- (iv) A log explaining the reason any required vacuum sweeping was not performed.

(b) For unpaved roads and shoulders of paved roads:

- (i) Log of the time and location of treating areas.
- (ii) Daily log of gallons sprayed and odometer reading of trucks used to apply dust suppressants and the identification of such dust suppressants.
- (iii) Daily log of the dilution ratios of the dust suppressants and diluent used if chemical suppressants are used.
- (iv) Purchase records of the chemical suppressants, if any.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 002 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

Roads in the Landfill Area II and 2A shall be wetted, weather permitting, using water or another dust control method as approved by the Department to minimize fugitive emissions of dust as required by SITE LEVEL - Conditions #001 & #002.

**SECTION D. Source Level Requirements****# 003 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

- (1) Paved and unpaved internal roadways shall not be allowed to generate excessive dust emissions or the tracking of dirt/soils onto public roads (carryout). Best management practices (BMPs) to prevent excessive emissions and carryout include, but are not limited to, sweeping and/or use of a tire washing system.
- (2) Water or other chemical dust suppressants shall be applied to the unpaved road surface to reduce fugitive dusts, if necessary based on daily site conditions. Water, if used, shall not be applied if the result would be a potentially unsafe condition, such as ice formation. In no event shall waste oil be used as a dust suppressant.
- (3) An appropriate speed limit shall be established within 120 days of the issuance of the Plan Approval and posted on all unpaved roadways within the MSW landfill. The MSW landfill owner or operator shall submit the proposed speed limit to DEP, in writing, for approval. If the proposed speed limit is approved, it will be incorporated into the MSW landfill's air quality's operating permit. The owner or operator of the landfill shall post speed limit signs consistent with the requirements of Pennsylvania Department of Transportation (PennDOT) (overall dimension 20 inches x 24 inches, "SPEED LIMIT" in 4-inch letters and 10-inch numerals).
- (4) Parking lots/areas and the landfill access roadways from the public highway to the landfill and other haul roads inside the landfill shall be paved, maintained, and cleaned by vacuum sweeping or any other approved means. The vacuum sweeping should be performed when necessary.
- (5) Upon leaving the landfill, the undercarriage, wheels and chassis of the vehicles which were used to transport wastes and earth shall be washed to prevent earthen carryout onto roadways.
- (6) The access roadways if unpaved at the unloading areas (active cells) should have a crown and/or pitch so that water runs off and does not pool. Water or other chemical dust suppressants should be applied to the unpaved road surface to reduce fugitive dusts. Water or chemical dust suppressants should also be applied as needed.
- (7) Water or other chemical dust suppressants shall be applied on the shoulder of access roadways and the shoulder of the public highway for a distance of 500 feet in both directions. Water, if used, shall be applied at least twice per day. Chemical dust suppressants, if used, shall be applied at least once per month. Application of dust suppressants on the public highway shall be done in accordance with the appropriate PennDOT Bulletins.
- (8) Earth or other materials shall not be deposited by trucking or other means on the public roadways. MSW landfills shall take all reasonable steps necessary to meet this performance standard.
- (9) If any earth or other material is deposited by trucking or other means on public roadways, it shall be removed promptly.

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 103

Source Name: TWO (2) DIESEL-FUEL ELECTRIC GENERATORS

Source Capacity/Throughput:

Conditions for this source occur in the following groups: GROUP 05

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

No person may permit the emission into the outdoor atmosphere of particulate matter in such a manner that the concentration of particulate matter in the effluent gas exceeds 0.0400 grain per dry standard cubic foot of Total Suspended Particulate.

**# 002 [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 SO<sub>2</sub>, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

**# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6600]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

**SECTION D. Source Level Requirements****# 004 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6640]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

- (a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.
- (b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.
- (c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
- (1) The compliance demonstration must consist of at least one test run.
  - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
  - (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
  - (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.
  - (5) You must measure O<sub>2</sub> using one of the O<sub>2</sub> measurement methods specified in Table 4 of this subpart. Measurements to determine O<sub>2</sub> concentration must be made at the same time as the measurements for CO or THC concentration.
  - (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O<sub>2</sub> emissions simultaneously at the inlet and outlet of the control device.
  - (7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.
- (d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).
- (e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions,

**SECTION D. Source Level Requirements**

or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution

**SECTION D. Source Level Requirements**

system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

**Fuel Restriction(s).**

**# 005 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

These sources shall only combust diesel fuel.

**II. TESTING REQUIREMENTS.**

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

**III. MONITORING REQUIREMENTS.**

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6625]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What are my monitoring, installation, operation, and maintenance requirements?**

[40 CFR 63.6625(e) and Table 6]

(a) The permittee must operate and maintain the stationary RICE according to:

(1) The manufacturer's emission-related written instructions; or

(2) Develop a site-specific maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 CFR 63.6625(f) and 40 CFR 63.6640(f)]

(a) Each generator must have a non-resettable hour meter and record the hours of operation and document the hours spent in emergency or non-emergency operation. To continue to be considered an emergency engine, the hours of operation cannot exceed:

(1) Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for up to 50 hours per year is prohibited.

(2) The permittee may operate each emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the

**SECTION D. Source Level Requirements**

insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year.

(3) The permittee may operate each emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Note: there is no limit on hours of operation under true emergency conditions.

[40 CFR 63.6625(h)]

(a) During startup the permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

**IV. RECORDKEEPING REQUIREMENTS.**

**# 007 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

(a) The permittee shall keep records of the number of hours that the diesel generators operate on a monthly basis to verify compliance with the operation hours restriction in any 12 consecutive month period.

(b) Records shall be kept for a period of five (5) years and shall be made available to the Department upon request.

**# 008 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

The permittee must keep records of any maintenance performed on each engine.

**V. REPORTING REQUIREMENTS.**

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

**VI. WORK PRACTICE REQUIREMENTS.**

**# 009 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

[Authority for this condition is also derived from 25 Pa. Code, Section 129.93]

To optimize combustion efficiency, the permittee shall operate and maintain these sources in accordance with the manufacturer's specifications and good air pollution control practices.

**VII. ADDITIONAL REQUIREMENTS.**

**# 010 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

This source includes the following diesel-fired units:

(1) CAT 600 KW Generator, 3412 (engine)/SR4B (generator), Built 11/2/2004, Installed 03/23/2005, used for Office, Garage, etc.

(2) CAT 455 KW Generator, 3456 (engine)/SR4 (generator), Built 05/10/2003, Installed 06/01/2003, used for Waste Water Treatment Plant.

These Engines are exempt from plan approval requirements under § 127.11 and §127.12, however, they are subject to all



**SECTION D. Source Level Requirements**

applicable requirements in 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. The applicable Subparts are § 63.6595(a), § 63.6603(a), § 63.6640, and Table 2d.

**# 011 [25 Pa. Code §127.512]**

**Operating permit terms and conditions.**

These engines are subject to the requirements of 40 CFR Part 63 Subpart ZZZZ. The permittee shall comply with all applicable requirements specified in 40 CFR Part 63 Subpart ZZZZ.

**# 012 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6580]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What is the purpose of subpart ZZZZ?**

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions.

This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: GROUP 01

Group Description: ENCLOSED FLARES

Sources included in this group

ID	Name
C01H	ENCLOSED FLARE H - 6,000 CFM
C01I	ENCLOSED FLARE I - 3,300 CFM

**I. RESTRICTIONS.****Control Device Efficiency Restriction(s).****# 001 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

Pursuant to the Best Available Control Technology (BAT) 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 flares shall be designed such that there are no visible flames during normal operations.
- (2) Enclosed flares 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 flares 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 flares may be operated at a lower temperature provided that the company has demonstrated, by a stack test, that the flare will achieve the 98% destruction/removal efficiency or 20 ppm<sub>dv</sub>, measured as hexane and corrected to 3% oxygen, at the lower temperature and complies with all the emission limits established in this operating permit. If compliance has been demonstrated at the lower temperature, the owner or operator of the landfill requires 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 through a permit modification. Under no circumstance the flare(s) shall be operated with an operating temperature less than 1200°F.
- (5) The enclosed flares shall be equipped with an automatic pilot ignition source using an auxiliary fuel (e.g. propane or natural gas).
- (6) The enclosed flares 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 62.17622(b) requirements.

**II. TESTING REQUIREMENTS.****# 002 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

- (1) Source tests shall be conducted on each flare within 180 days after start-up 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 % O<sub>2</sub>; and (b) NO<sub>x</sub> (measured as NO<sub>2</sub>). The Department reserves the right to require the owner or operator to conduct further tests at any time after the initial compliance tests.
- (2) All performance tests shall be conducted in accordance with 40 CFR §62.16718 and the Department's source testing

**SECTION E. Source Group Restrictions.**

procedurings 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 §127.512]****Operating permit 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 §127.512]****Operating permit 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 in accordance with Condition #001 for the enclosed flares.

(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 62 Approval and Promulgation of State Plans §40 CFR 62.16722]****Subpart OOO - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014****Monitoring of operations.**

(b) Each owner or operator seeking to comply with § 62.16714(c) 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  $\pm 1$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 0.5$  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.

**IV. RECORDKEEPING REQUIREMENTS.****# 006 [25 Pa. Code §127.512]****Operating permit 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

**SECTION E. Source Group Restrictions.**

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 (5) 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 (5) years.

**# 007 [25 Pa. Code §127.512]****Operating permit 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 §127.512]****Operating permit terms and conditions.**

(a) Any changes in the process or control equipment would be considered 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.

(b) All flares are subject to Subpart 000 of the Approval and Promulgation of State Plans for Designated Facilities and Pollutants 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 forwarded to:

Director, Air Protection Division (3AP00)  
United States Environmental Protection Agency  
Region 3  
1650 Arch Street  
Philadelphia, PA 19103-2029

**VI. WORK PRACTICE REQUIREMENTS.****# 009 [25 Pa. Code §127.512]****Operating permit 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 if necessary to support combustion.

(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 in the combustion zone of the flare stack. 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 degrees Fahrenheit or the temperature determined during the most recent performance test, 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 unless a lower operating temperature has been established.

(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.

**SECTION E. Source Group Restrictions.****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: GROUP 02  
 Group Description: OPEN FLARES  
 Sources included in this group

ID	Name
C01J	UTILITY FLARE J - 500 CFM

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

(a) Pursuant to the Best Available Control Technology (BAT) 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 flare shall be limited to 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).
- (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 open flare shall be designed and operated in accordance with the requirements of 40 CFR Section 60.18 (40 CFR Section 62.16714(c)(1)).
- (4) The open flare shall be equipped with an automatic pilot ignition source.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.****# 002 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

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

**# 003 [40 CFR Part 62 Approval and Promulgation of State Plans §40 CFR 62.16722]**

**Subpart 000 - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014**  
**Monitoring of operations.**

- (c) Each owner or operator seeking to comply with § 62.16714(c) 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.

**SECTION E. Source Group Restrictions.****IV. RECORDKEEPING REQUIREMENTS.****# 004 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

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

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 005 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

(1) The Department may approve, through permit modification, the use of an open flare 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) Operate the control system at all times when the collected gas is routed to the system.

(3) In addition to the requirements listed in 40 C.F.R. Section 60.18, the 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 flare with screening or plantings;
- (b) Erecting a berm or similar earthwork barrier (berm);
- (c) Locating the open flare 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 permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: GROUP 03

Group Description: LANDFILL AREAS I &amp; II

Sources included in this group

ID	Name
101	GAS EXTRACTION/COLLECTION SYSTEM (AREA I)
101A	GAS EXTRACTION/COLLECTION SYSTEM (AREA II)

**I. RESTRICTIONS.****Emission Restriction(s).**

# 001 [25 Pa. Code §127.512]

**Operating permit terms and conditions.**

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

The active gas collection system may not have a collection efficiency of less than 75% for Landfill Gas.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

# 002 [25 Pa. Code §127.511]

**Monitoring and related recordkeeping and reporting requirements.**

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

The permittee shall, on an annual basis, determine the total amount of landfill gas generated by the landfill and the total amount of landfill gas combusted by the 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.

# 003 [25 Pa. Code §127.511]

**Monitoring and related recordkeeping and reporting requirements.**

The permittee shall comply with its Updated Monitoring Design Plan dated October 2011 (and as subsequently revised or amended by EPA and Department approval), which addresses the procedures for conducting quarterly methane surface monitoring and corrective action measures associated with any detected exceedances.

**IV. RECORDKEEPING REQUIREMENTS.**

# 004 [25 Pa. Code §127.511]

**Monitoring and related recordkeeping and reporting requirements.**

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

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

**V. REPORTING REQUIREMENTS.**

# 005 [25 Pa. Code §127.511]

**Monitoring and related recordkeeping and reporting requirements.**

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

The permittee shall, on a quarterly basis, submit to the Department a report demonstrating that the collection/capture efficiency of the landfill gas collection system was in compliance with the limitation during the preceding twelve (12) months.



**SECTION E. Source Group Restrictions.****VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: GROUP 04

Group Description: 40 CFR Part 62, OOO and 40 CFR Part 63, AAAA

Sources included in this group

ID	Name
101	GAS EXTRACTION/COLLECTION SYSTEM (AREA I)
101A	GAS EXTRACTION/COLLECTION SYSTEM (AREA II)
101B	GAS EXTRACTION/COLLECTION SYSTEM (AREA 2A)

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [40 CFR Part 62 Approval and Promulgation of State Plans §40 CFR 62.16714]****Subpart OOO - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014  
Standards for municipal solid waste landfill emissions.**

(a) Landfills. Each owner or operator of an MSW landfill having a design capacity greater than or equal to 2.5 million megagrams by mass and 2.5 million cubic meters by volume must collect and control MSW landfill emissions at each MSW landfill that meets the following conditions:

(1) Waste acceptance date. The landfill has accepted waste at any time since November 8, 1987, or has additional design capacity available for future waste deposition.

(2) Construction commencement date. The landfill commenced construction, reconstruction, or modification on or before July 17, 2014.

(3) NMOC emission rate. The landfill has an NMOC emission rate greater than or equal to 34 megagrams per year or Tier 4 SEM shows a surface emission concentration of 500 parts per million methane or greater.

(4) Closed subcategory. The landfill is in the closed landfill subcategory and has an NMOC emission rate greater than or equal to 50 megagrams per year.

(b) Collection system. Install a gas collection and control system meeting the requirements in paragraphs (b)(1) through (3) and (c) of this section at each MSW landfill meeting the conditions in paragraph (a) of this section.

(1) Collection system. Install and start up a collection and control system that captures the gas generated within the landfill within 30 months after:

(i) 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 § 62.16724(d)(4), or

(ii) The first annual report in which the NMOC emission rate equals or exceeds 50 megagrams per year submitted under previously applicable regulations 40 CFR part 60, subpart WWW, 40 CFR part 62, subpart GGG, or a state plan implementing 40 CFR part 60, subpart Cc for a legacy controlled landfill or landfill in the closed landfill subcategory, or

(iii) 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 SEM shows a surface methane emission concentration of 500 parts per million methane or greater as specified in § 62.16724 (d)(4)(iii).

(2) Active. An active collection system must:

(i) 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.

(ii) 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.

(iii) Collect gas at a sufficient extraction rate.

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

(3) Passive. A passive collection system must:

**SECTION E. Source Group Restrictions.**

- (i) Comply with the provisions specified in paragraphs (b)(2)(i), (ii), and (iv) of this section.
  - (ii) 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.
- (c) Control system. Control the gas collected from within the landfill through the use of control devices meeting the following requirements, except as provided in 40 CFR 60.24.
- (1) A non-enclosed flare designed and operated in accordance with the parameters established in 40 CFR 60.18 except as noted in § 62.16722(d); or
  - (2) 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 or less. The reduction efficiency or concentration in 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 § 62.16718(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.
    - (i) If a boiler or process heater is used as the control device, the landfill gas stream must be introduced into the flame zone.
    - (ii) 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 § 62.16722.
    - (iii) Legacy controlled landfills or landfills in the closed landfill subcategory that have already installed control systems and completed initial or subsequent performance tests may comply with this subpart using the initial or most recent performance test conducted to comply with 40 CFR part 60, subpart WWW; subpart GGG of this part; or a state plan implementing subpart Cc of part 60, is sufficient for compliance with this subpart.
  - (3) 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 (c)(1) or (2) of this section.
  - (4) All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of paragraph (b) or (c) 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) or (c) of this section.
- (d) Not Applicable
- (e) Emissions. The 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 install a collection and control system as provided in paragraphs (b) and (c) of this section or calculate an initial NMOC emission rate for the landfill using the procedures specified in § 62.16718(a). The NMOC emission rate must be recalculated annually, except as provided in § 62.16724(c)(3).
- (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 report according to § 62.16724(c), except as provided in § 62.16724(c)(3); and
    - (ii) Recalculate the NMOC emission rate annually using the procedures specified in § 62.16724(a) 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 (e)(1)(ii) of this section, is equal to or greater than 34 megagrams per year, the owner or operator must either: Comply with paragraphs (b) and (c) of this section; calculate NMOC emissions using the next higher tier in § 62.16718; or conduct a surface emission monitoring demonstration using the procedures specified in § 62.16718(a)(6).
  - (B) If the landfill is permanently closed, a closure report must be submitted to the Administrator as provided in § 62.16724(f), except for exemption allowed under § 62.16711(g)(4).

**SECTION E. Source Group Restrictions.**

(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: Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year as specified in § 62.16724(d), except for exemptions allowed under § 62.16711(g)(3); calculate NMOC emissions using a higher tier in § 62.16718; or conduct a surface emission monitoring demonstration using the procedures specified in § 62.16718(a)(6).

(3) For the closed landfill subcategory, if the calculated NMOC emission rate submitted under previously applicable regulations 40 CFR part 60, subpart WWW; 40 CFR part 62, subpart GGG; or a state plan implementing 40 CFR part 60, subpart Cc is equal to or greater than 50 megagrams per year using Tier 1, 2, or 3 procedures, the owner or operator must either: submit a collection and control system design plan as specified in § 62.16724(d), except for exemptions allowed under § 62.16711(g)(3); or calculate NMOC emissions using a higher tier in § 62.16718.

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

(1) The landfill is a closed landfill (as defined in § 62.16730). A closure report must be submitted to the Administrator as provided in § 62.16724(f).

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

(3) Following the procedures specified in § 62.16718(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.

(4) For the closed landfill subcategory (as defined in § 62.16730), following the procedures specified in § 62.16718(b), the calculated NMOC emission rate at the landfill is less than 50 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.

**II. TESTING REQUIREMENTS.****# 002 [40 CFR Part 62 Approval and Promulgation of State Plans §40 CFR 62.16718]****Subpart OOO - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014****Test methods and procedures.**

Calculate the landfill NMOC emission rate and conduct a surface emission monitoring demonstration according to the provisions in this section.

(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  $L_o$ , 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 meteorological 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.

Where:

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

k = Methane generation rate constant, year<sup>-1</sup>.

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

$M_i$  = Mass of solid waste in the ith section, megagrams.

$t_i$  = Age of the ith section, years.

**SECTION E. Source Group Restrictions.**

CNMOC = Concentration of NMOC, parts per million by volume as hexane.  
 $3.6 \times 10^{-9}$  = 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  $M_i$  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.

Where:

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

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

$R$  = Average annual acceptance rate, megagrams per year.

$k$  = Methane generation rate constant, year<sup>-1</sup>.

$t$  = Age of landfill, years.

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

$c$  = Time since closure, years; for an active landfill  $c = 0$  and  $e^{-kc} = 1$ .

$3.6 \times 10^{-9}$  = 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 owner or operator must submit an NMOC emission rate report according to § 62.16724(c) and must recalculate the NMOC mass emission rate annually as required under § 62.16714(e).

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

(A) Submit a gas collection and control system design plan within 1 year as specified in § 62.16724(d) and install and operate a gas collection and control system within 30 months according to § 62.16714(b) and (c);

(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 EPA Method 25 or 25C of appendix A-7 of 40 CFR part 60. 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 is taken, all samples must be used in the analysis. The landfill owner or operator must divide the NMOC concentration from EPA Method 25 or 25C of appendix A-7 of 40 CFR part 60 by 6 to convert from CNMOC as carbon to CNMOC as hexane. If the landfill has an active or passive gas removal system in place, EPA 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 probes 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

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collection systems, a minimum of three samples must be collected from the header pipe.

(i) Within 60 days after the date of determining the NMOC concentration and corresponding NMOC emission rate, the owner or operator must submit the results according to § 62.16724(j)(2).

(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 (ii) of this section 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 § 62.16724(c) and must recalculate the NMOC mass emission rate annually as required under § 62.16714(e). 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 owner or operator must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 62.16724(d) and install and operate a gas collection and control system within 30 months according to § 62.16714(b) and (c);

(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 EPA Method 2E of appendix A-1 of 40 CFR part 60. 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 § 62.16724(d) and install and operate a gas collection and control system within 30 months according to § 62.16714(b) and (c); 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 § 62.16724(c). 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) Alternative 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. 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 megagrams per year but less than 50 megagrams per year using Tier 1 or Tier 2. If both Tier 1 and Tier 2 indicate NMOC emissions are megagrams per year 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) 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 § 62.16720(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.

**SECTION E. Source Group Restrictions.**

(iii) Surface emission monitoring must be performed in accordance with section 8.3.1 of EPA Method 21 of appendix A-7 of 40 CFR part 60, 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.

(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. The 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 § 62.16720(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 § 62.16726(g) and submit a Tier 4 surface emissions report as provided in § 62.16724(d)(4)(iii).

(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 § 62.16724(d) and install and operate a gas collection and control system according to § 62.16714(b) and (c) 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 at least 6,570 out of 8,760 hours preceding the Tier 4 SEM demonstration.

(B) During the Tier 4 SEM 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 § 62.16714(f), using Equation 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) Flow rate. 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 EPA Method 2E of appendix A-1 of 40 CFR part 60.

(2) NMOC concentration. 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 EPA Method 25 or EPA Method 25C of appendix A-7 of 40 CFR part 60. 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 EPA Method 25 or EPA Method 25C of appendix A-7 of 40 CFR part 60 by six to convert from



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CNMOC as carbon to CNMOC as hexane.

(3) Gas flow rate method. 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 calculating the NMOC emission rate for purposes of determining when the system can be capped or removed, the owner or operator must submit the results according to § 62.16724(j)(2).

(ii) [Reserved]

(c) When calculating emissions for Prevention of Significant Deterioration purposes, the owner or operator of each MSW 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 § 62.16714(c)(1), the net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) of this chapter is calculated from the concentration of methane in the landfill gas as measured by EPA Method 3C. A minimum of three 30-minute EPA Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. EPA Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4) of this chapter.

(1) Performance test results. Within 60 days after the date of completing each performance test (as defined in § 60.8 of this chapter), the owner or operator must submit the results of the performance tests required by paragraph (b) or (d) of this section, including any associated fuel analyses, according to § 62.16724(j)(1).

(2) [Reserved]

(e) For the performance test required in § 62.16714(c)(2), EPA Method 25 or 25C (EPA Method 25C may be used at the inlet only) of appendix A-7 of 40 CFR part 60 must be used to determine compliance with the 98 weight-percent efficiency or the 20 parts-per-million by volume outlet NMOC concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by § 62.16724(d)(2). EPA Method 3, 3A, or 3C of appendix A-2 of 40 CFR part 60 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 parts-per-million NMOC as carbon (8 parts-per-million NMOC as hexane), EPA Method 25A should be used in place of EPA Method 25. EPA Method 18 of appendix A-6 of 40 CFR part 60 may be used in conjunction with EPA Method 25A on a limited basis (compound specific, e.g., methane) or EPA Method 3C may be used to determine methane. The methane as carbon should be subtracted from the EPA Method 25A total hydrocarbon value as carbon to give NMOC concentration as carbon. The landfill owner or operator must divide the NMOC concentration as carbon by 6 to convert the CNMOC as carbon to CNMOC as hexane. Equation 4 must be used to calculate efficiency.

Where:

NMOC<sub>in</sub> = Mass of NMOC entering control device.

NMOC<sub>out</sub> = Mass of NMOC exiting control device.

(1) Performance test submission. Within 60 days after the date of completing each performance test (as defined in § 60.8 of this chapter), the owner or operator must submit the results of the performance tests, including any associated fuel analyses, according to § 62.16724(j)(1).

(2) [Reserved]

**III. MONITORING REQUIREMENTS.**

**# 003 [40 CFR Part 62 Approval and Promulgation of State Plans §40 CFR 62.16722]**

**Subpart OOO - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014**

**Monitoring of operations.**

Follow the monitoring provisions in this section (as well as the provisions in §§ 62.16716 and 62.16720), except as provided in § 62.16724(d)(2), or the monitoring provisions in § 63.1961 of this chapter (as well as the provisions in §§



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63.1958 and 63.1960 of this chapter), or both as alternative means of compliance, for an MSW landfill with a gas collection and control system used to comply with the provisions of § 62.16714(b) and (c). Once the owner or operator begins to comply with the provisions of § 63.1961 of this chapter, the owner or operator must continue to operate the collection and control device according to those provisions and cannot return to the provisions of this section.

(a) Each owner or operator seeking to comply with § 62.16714(b)(2) 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 § 62.16720(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 EPA Method 3C of appendix A-2 of 40 CFR part 60, unless an alternative test method is established as allowed by § 62.16724(d)(2).

(ii) Unless an alternative test method is established as allowed by § 62.16724(d)(2), the oxygen level must be determined by an oxygen meter using EPA Method 3A of appendix A-7 of 40 CFR part 60, EPA Method 3C of appendix A-7 of 40 CFR part 60, or ASTM D6522-11. Determine the oxygen level by an oxygen meter using EPA 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  $\pm 10$  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 EPA Method 3A or ASTM D6522-11.

(3) Monitor temperature of the landfill gas on a monthly basis as provided in § 62.16720(a)(4). The temperature measuring device must be calibrated annually using the procedure in 40 CFR part 60, appendix A-1, EPA Method 2, section 10.3.

(b) Each owner or operator seeking to comply with § 62.16714(c) 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  $\pm 1$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 0.5$  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 § 62.16714(c) 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.

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(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 § 62.16714(c) 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 § 62.16724(d)(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 § 62.16728 or seeking to monitor alternative parameters to those required by § 62.16716 through § 62.16722 must provide information satisfactory to the Administrator as provided in § 62.16724(d)(2) and (3) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The 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 § 62.16716(d) must monitor surface concentrations of methane according to the procedures provided in § 62.16720(c) and the instrument specifications in § 62.16720(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 parts-per-million 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 the control system requirements in § 62.16714(c) using a landfill gas treatment 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 § 62.16726(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 designated facility 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.

(i) Incorporation by reference required material.

(1) The material required by this section was approved for incorporation by reference into this section by the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. You may inspect approved material at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave. NW, Washington, DC, (202) 566-1744, Docket ID No. EPA-HQ-OAR-2019-0338 and obtain it from the source(s) listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

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(2) ASTM International, 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-2959, (800) 262-1373, www.astm.org.

(i) ASTM D6522-11 Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, approved December 1, 2011.

(ii) [Reserved]

**# 004 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1961]****Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills Monitoring of operations.**

Except as provided in § 63.1981(d)(2):

(a) Each owner or operator seeking to comply with § 63.1959(b)(2)(ii)(B) 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 § 63.1960(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 EPA Method 3C of appendix A-2 to part 60 of this chapter, unless an alternative test method is established as allowed by § 63.1981(d)(2).

(ii) Unless an alternative test method is established as allowed by § 63.1981(d)(2), the oxygen level must be determined by an oxygen meter using EPA Method 3A or 3C of appendix A-2 to part 60 of this chapter or ASTM D6522-11 (incorporated by reference, see § 63.14). Determine the oxygen level by an oxygen meter using EPA Method 3A or 3C of appendix A-2 to part 60 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; and
- (E) The allowable sample bias, zero drift, and calibration drift are  $\pm 10$  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 EPA Method 3A of appendix A-2 to part 60 of this chapter or ASTM D6522-11 (incorporated by reference, see § 63.14).

(3) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c), the owner or operator must follow the procedures as specified in § 60.756(a)(2) and (3) of this chapter. Monitor temperature of the landfill gas on a monthly basis as provided in § 63.1960(a)(4). The temperature measuring device must be calibrated annually using the procedure in Section 10.3 of EPA Method 2 of appendix A-1 to part 60 of this chapter.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), monitor temperature of the landfill gas on a monthly basis as provided in § 63.1960(a)(4). The temperature measuring device must be calibrated annually using the procedure in Section 10.3 of EPA Method 2 of appendix A-1 to part 60 of this chapter. Keep records specified in § 63.1983(e).

(5) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), unless a higher operating temperature value has been approved by the Administrator under this subpart or under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a federal plan or EPA-approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf, you must initiate enhanced monitoring at each well with a measurement of landfill gas temperature

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greater than 62.8 degrees Celsius (145 degrees Fahrenheit) as follows:

- (i) Visual observations for subsurface oxidation events (smoke, smoldering ash, damage to well) within the radius of influence of the well.
- (ii) Monitor oxygen concentration as provided in paragraph (a)(2) of this section;
- (iii) Monitor temperature of the landfill gas at the wellhead as provided in paragraph (a)(4) of this section.
- (iv) Monitor temperature of the landfill gas every 10 vertical feet of the well as provided in paragraph (a)(6) of this section.
- (v) Monitor the methane concentration with a methane meter using EPA Method 3C of appendix A-6 to part 60, EPA Method 18 of appendix A-6 to part 60 of this chapter, or a portable gas composition analyzer to monitor the methane levels provided that the analyzer is calibrated and the analyzer meets all quality assurance and quality control requirements for EPA Method 3C or EPA Method 18.

(vi) Monitor and determine carbon monoxide concentrations, as follows:

(A) Collect the sample from the wellhead sampling port in a passivated canister or multi-layer foil gas sampling bag (such as the Cali-5-Bond Bag) and analyze that sample using EPA Method 10 of appendix A-4 to part 60 of this chapter, or an equivalent method with a detection limit of at least 100 ppmv of carbon monoxide in high concentrations of methane; or

(B) Collect and analyze the sample from the wellhead using EPA Method 10 of appendix A-4 to part 60 to measure carbon monoxide concentrations.

(C) When sampling directly from the wellhead, you must sample for 5 minutes plus twice the response time of the analyzer. These values must be recorded. The five 1-minute averages are then averaged to give you the carbon monoxide reading at the wellhead.

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

(vii) The enhanced monitoring described in this paragraph (a)(5) must begin 7 calendar days after the first measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit); and

(viii) The enhanced monitoring in this paragraph (a)(5) must be conducted on a weekly basis. If four consecutive weekly carbon monoxide readings are under 100 ppmv, then enhanced monitoring may be decreased to monthly. However, if carbon monoxide readings exceed 100 ppmv again, the landfill must return to weekly monitoring.

(ix) The enhanced monitoring in this paragraph (a)(5) can be stopped once a higher operating value is approved, at which time the monitoring provisions issued with the higher operating value should be followed, or once the measurement of landfill gas temperature at the wellhead is less than or equal to 62.8 degrees Celsius (145 degrees Fahrenheit).

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

(b) Each owner or operator seeking to comply with § 63.1959(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  $\pm 1$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 0.5$  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 § 63.1959(b)(2)(iii) using a non-enclosed flare must install, calibrate,

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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; and
  - (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 § 63.1959(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 § 63.1981(d)(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 § 63.1962 or seeking to monitor alternative parameters to those required by §§ 63.1958 through 63.1961 must provide information satisfactory to the Administrator as provided in § 63.1981(d)(2) and (3) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Administrator may specify additional appropriate monitoring procedures.
- (f) Each owner or operator seeking to demonstrate compliance with the 500-ppm surface methane operational standard in § 63.1958(d) must monitor surface concentrations of methane according to the procedures in § 63.1960(c) and the instrument specifications in § 63.1960(d). If you are complying with the 500-ppm surface methane operational standard in § 63.1958(d)(2), for location, you must determine the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters and the coordinates must be in decimal degrees with at least five decimal places. In the semi-annual report in § 63.1981(h), you must report the location of each exceedance of the 500-ppm methane concentration as provided in § 63.1958(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. 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 § 63.1959(b)(2)(iii)(C) using a landfill gas treatment system 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). Beginning no later than September 27, 2021, each owner or operator must maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in § 63.1983(b)(5)(ii). 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 (a), (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

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monitoring system to operation as expeditiously as practicable. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c)(1), (d)(2), and (e)(1), the standards apply at all times.

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64401, Oct. 13, 2020; 87 FR 8203, Feb. 14, 2022]

**IV. RECORDKEEPING REQUIREMENTS.****# 005 [40 CFR Part 62 Approval and Promulgation of State Plans §40 CFR 62.16726]****Subpart 000 - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014****Recordkeeping guidelines.**

Follow the recordkeeping provisions in this section.

(a) Except as provided in § 62.16724(d)(2), each owner or operator of an MSW landfill subject to the provisions of § 62.16714(e) must keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered § 62.16714(e), 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 § 62.16724(d)(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.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 62.16714(b):

(i) The maximum expected gas generation flow rate as calculated in § 62.16720(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 § 62.16728(a)(1).

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 62.16714(c) 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 § 62.16714(c)(2) achieved by the control device.

(3) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 62.16714(c)(2)(i) 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 § 62.16714(c)(1) through use of a non-enclosed flare, the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18 of this chapter; and continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame or the flare flame is absent.

(5) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 62.16714(c)(3) 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. A site-specific treatment monitoring plan, to include:



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(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 § 62.16724(d)(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 § 62.16722 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The following constitute exceedances that must be recorded and reported under § 62.16724:

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average 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 § 62.16714(c) 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 § 62.16722.

(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 § 62.16714(c) 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 § 62.16722(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 § 62.16714(e) using an active collection system designed in accordance with § 62.16714(b) must keep records of periods when the collection system or control device is not operating.

(d) Except as provided in § 62.16724(d)(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 on each collector that matches the labeling on the plot map.

(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 § 62.16720(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 § 62.16728(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in § 62.16728(a)(3)(ii).

(e) Except as provided in § 62.16724(d)(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 items in paragraphs (e)(1) through (5) of this section. Each owner

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or operator that chooses to comply with the provisions in §§ 63.1958, 63.1960, and 63.1961 of this chapter, as allowed in §§ 62.16716, 62.16720, and 62.16722, must keep the records in paragraph (e)(6) of this section and must keep records according to § 63.1983(e)(1) through (5) of this chapter in lieu of paragraphs (e)(1) through (5) of this section.

(1) All collection and control system exceedances of the operational standards in § 62.16716, 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 § 62.16720(a)(3) or § 62.16720(a)(4), 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 § 62.16720(a)(3)(ii) or § 62.16720(a)(4)(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.

(5) For any root cause analysis for which corrective actions are required in § 62.16720(a)(3)(iii) or § 62.16720(a)(4)(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.

(6) Each owner or operator that chooses to comply with the provisions in §§ 63.1958, 63.1960, and 63.1961 of this chapter, as allowed in §§ 62.16716, 62.16720, and 62.16722, must keep records of the date upon which the owner or operator started complying with the provisions in §§ 63.1958, 63.1960, and 63.1961 of this chapter.

(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 SEM under the Tier 4 procedures specified in § 62.16718(a)(6) must keep for at least 5 years up-to-date, readily accessible records of all SEM and information related to monitoring instrument calibrations conducted according to sections 8 and 10 of EPA Method 21 of appendix A-7 of 40 CFR part 60 of this chapter, 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. 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.



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- (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 § 62.16724(d)(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 all collection and control system monitoring data for parameters measured in § 62.16722(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 § 62.16724(l), 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.

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1983]****Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills  
What records must I keep?**

You must keep records as specified in this subpart. You must also keep records as specified in the general provisions of 40 CFR part 63 as shown in Table 1 to this subpart.

- (a) Except as provided in § 63.1981(d)(2), each owner or operator of an MSW landfill subject to the provisions of § 63.1959(b)(2)(ii) and (iii) of this chapter must keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered § 63.1959(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 § 63.1981(d)(2), each owner or operator of a controlled landfill must keep up-to-date, readily accessible records for the life of the control 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.
  - (1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(ii):
    - (i) The maximum expected gas generation flow rate as calculated in § 63.1960(a)(1).
    - (ii) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in § 63.1962(a)(1) and (2).
  - (2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat

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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 § 63.1959(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 § 63.1959(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 § 63.1959(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 § 63.11; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame or the flare flame is absent.

(5) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with § 63.1959(b)(2)(iii)(C) 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. Beginning no later than September 27, 2021, the owner or operator must prepare a 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) List of responsible staff (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 (CMS).

(c) Except as provided in § 63.1981(d)(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 § 63.1961 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The following constitute exceedances that must be recorded and reported under § 63.1981(h):

(i) For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million Btu 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 § 63.1959(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 § 63.1961(b)(2)(ii), (c)(2)(ii), and (g)(2).

(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 § 63.1959(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

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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 § 63.1961(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 § 63.1959(b)(2) using an active collection system designed in accordance with § 63.1959(b)(2)(ii) must keep records of periods when the collection system or control device is not operating.

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

(7) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard in § 63.1958(e)(1), in the event that an affected unit fails to meet an applicable standard, record the information below in this paragraph:

- (i) For each failure record the date, time and duration of each failure and the cause of such events (including unknown cause, if applicable).
- (ii) For each failure to meet an applicable standard; record and retain a list of the affected sources or equipment.
- (iii) Record actions taken to minimize emissions in accordance with the general duty of § 63.1955(c) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(8) Beginning no later than September 27, 2021, in lieu of the requirements specified in § 63.8(d)(3) of subpart A you must keep the written procedures required by § 63.8(d)(2) on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, you must keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under § 63.8(d)(2).

(d) Except as provided in § 63.1981(d)(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 § 63.1960(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 § 63.1962(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in § 63.1962(a)(3)(ii).

(e) Except as provided in § 63.1981(d)(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 § 63.1958, 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 control provisions of this subpart must keep records of each wellhead temperature monitoring value of greater than 55 degrees Celsius (131 degrees Fahrenheit), each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above 5 percent, except:

(i) When an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the compliance provisions for wellhead temperature in § 63.1958(c)(1), but no later than September 27, 2021, the records of each wellhead temperature monitoring value of 62.8 degrees Celsius (145 degrees Fahrenheit) or above instead of values

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greater than 55 degrees Celsius (131 degrees Fahrenheit).

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

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

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

(5) For any root cause analysis for which corrective actions are required in § 63.1960(a)(3)(i)(C) or (a)(4)(i)(C), 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 Administrator.

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

(g) Except as provided in § 63.1981(d)(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 all collection and control system monitoring data for parameters measured in § 63.1961(a)(1) through (6).

(h) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), you must keep the following records.

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

(2) Records of enhanced monitoring data at each well with a measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) as gathered in § 63.1961(a)(5) and (6).

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

(ii) [Reserved]

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64401, Oct. 13, 2020]

**V. REPORTING REQUIREMENTS.**

**# 007 [40 CFR Part 62 Approval and Promulgation of State Plans §40 CFR 62.16724]**

**Subpart 000 - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014**

**Reporting guidelines**

Follow the reporting provisions listed in this section, as applicable, except as provided under 40 CFR 60.24 and §§ 62.16711(g), (h), and 62.16724(d)(2).

(a) Design capacity report. Submit the initial design capacity report no later than September 20, 2021. The initial design capacity report must contain the following information:

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(1) 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.

(2) 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 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, local, or tribal agency or the Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

(b) Amended design capacity report. An amended design capacity report must be submitted 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 § 62.16726(f).

(c) NMOC emission rate report. For existing MSW landfills covered by this subpart with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the NMOC emission rate report must be submitted following the procedure specified in paragraph (j)(2) of this section no later than 90 days after the effective date of this subpart. The NMOC emission rate report must be submitted to the Administrator annually following the procedure specified in paragraph (j)(2) of this section, except as provided for in paragraph (c)(3) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

(1) The NMOC emission rate report must contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in § 62.16718(a) or (b), as applicable.

(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) 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 (j)(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.

(4) 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 § 62.16714(b) and (c), during such time as the collection and control system is in operation and in compliance with §§ 62.16716 and 62.16720.

(d) Collection and control system design plan. 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 § 62.16714(b) and (c).

(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 §§ 62.16716 through 62.16726 proposed by the owner or operator.

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(3) The collection and control system design plan must either conform to specifications for active collection systems in § 62.16728 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to § 62.16728.

(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 copy of the collection and control system design plan cover page that contains the engineer's seal to the Administrator 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 § 62.16718(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 NMOC 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 NMOC emission rate based on NMOC sampling and analysis, must be submitted, following the procedures in paragraph (j)(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 § 62.16718(a)(4), and the resulting NMOC emission rate is less than 34 megagrams per year, annual periodic reporting must be resumed. The resulting site-specific methane generation rate constant  $k$  must be used in the NMOC 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 § 62.16718(a)(4) and the resulting site-specific methane generation rate constant  $k$  must be submitted, following the procedure specified in paragraph (j)(2) of this section, to the Administrator within 1 year of the first calculated NMOC 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 § 62.16718(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 (j)(2) of this section until a surface emissions reading 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 the 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 should 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 megagrams per year 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 SEM that demonstrates that site-specific surface methane emissions are below 500 parts-per-million methane, and following the procedure specified in paragraph (j)(2) of this section

(B) The Tier 4 surface emissions rate 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 (j)(2) of this section.

(iv) If the landfill is in the closed landfill subcategory, the owner or operator is exempt from submitting a collection and control system design plan to the Administrator provided that conditions in § 62.16711(g)(3) are met. If not, the owner or operator shall follow the submission procedures and timing in § 62.16724(d)(ii) and (iii) using a level of 50 Mg/yr instead of 34 Mg/yr.

(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 (d)(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 § 62.16726(b)(5). Legacy controlled landfills must prepare the monitoring plan no later than May 23, 2022.

(e) Revised design plan. The owner or operator who has already been required to submit a design plan under paragraph (d) of this section, or under subpart GGG of this part; 40 CFR part 60, subpart WWW; or a state plan implementing subpart Cc of 40 CFR part 60, 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 (d) of this section.

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

(g) 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 the following items:

(i) A copy of the closure report submitted in accordance with paragraph (f) of this section; and  
(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 Central Data Exchange (CDX), or information that demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's CDX; and

(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; or

(iv) For the closed landfill subcategory, dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year, 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 § 62.16714(f) have been met.

(h) Annual report. The owner or operator of a landfill seeking to comply with § 62.16714(e)(2) using an active collection

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system designed in accordance with § 62.16714(b) must submit to the Administrator, following the procedures specified in paragraph (j)(2) of this section, an annual report of the recorded information in paragraphs (h)(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 except for legacy controlled landfills that have already submitted an initial report under 40 CFR part 60, subpart WWW; subpart GGG of this part; or a state plan implementing 40 CFR part 60, subpart Cc. Except for legacy controlled landfills, the initial annual report must include the initial performance test report required under 40 CFR 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. Legacy controlled landfills are exempted from submitting performance test reports in EPA's CDX provided that those reports were submitted under 40 CFR part 60, subpart WWW; subpart GGG of this part; or a state plan implementing 40 CFR part 60, subpart Cc. 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. The initial performance test report must be submitted, following the procedure specified in paragraph (j)(1) of this section, no later than the date that the initial annual report is submitted. For enclosed combustion devices and flares, reportable exceedances are defined under § 62.16726(c)(1). Legacy controlled landfills are required to submit the annual report no later than one year after the most recent annual report submitted. If complying with the operational provisions of §§ 63.1958, 63.1960, and 63.1961 of this chapter, as allowed at §§ 62.16716, 62.16720, and 62.16722, the owner or operator must follow the semi-annual reporting requirements in § 63.1981(h) of this chapter in lieu of this paragraph.

- (1) Value and length of time for exceedance of applicable parameters monitored under § 62.16722(a)(1), (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 § 62.16722.
  - (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 § 62.16716(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 § 62.16720(a)(3), (4), (b), and (c)(4).
  - (7) For any corrective action analysis for which corrective actions are required in § 62.16720(a)(3) or (4) and that take more than 60 days to correct the exceedance, the root cause analysis conducted, including a description of the recommended corrective action(s), the date for corrective action(s) already completed following the positive pressure or elevated temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.
- (i) Initial performance test report. Each owner or operator seeking to comply with § 62.16714(c) must include the following information with the initial performance test report required under 40 CFR 60.8 of this chapter:
- (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



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nonproductivity and the calculations of gas generation flow rate for each excluded area;

(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.

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

(1) Within 60 days after the date of completing each performance test (as defined in 40 CFR 60.8 of this chapter), 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 website ([https://www3.epa.gov/ttn/chief/ert/ert\\_info.html](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). The CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). Performance test data must be submitted in a file 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 website, 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 website, 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 website at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 60.4 of this chapter.

(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 website (<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 40 CFR 60.4 of this chapter. 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.

(k) Corrective action and the corresponding timeline. The owner or operator must submit according to paragraphs (k)(1) and (2) of this section. If complying with the operational provisions of 40 CFR 63.1958, 63.1960, and 63.1961 of this chapter, as allowed at §§ 62.16716, 62.16720, and 62.16722, the owner or operator must follow the corrective action and the corresponding timeline reporting requirements in § 63.1981(j) of this chapter in lieu of paragraphs (k)(1) and (2) of this section.

(1) For corrective action that is required according to § 62.16720(a)(3)(iii) or 62.16720(a)(4)(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) or above. The Administrator must approve the plan for corrective action and the corresponding timeline.

(2) For corrective action that is required according to § 62.16720(a)(3)(iii) or § 62.16720(a)(4)(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.

(l) Liquids addition. The owner or operator of a designated facility 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 (RCRA), subtitle D, part

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258) within the last 10 years must submit to the Administrator, annually, following the procedure specified in paragraph (j)(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.

(7) The initial report must contain items in paragraph (l)(1) through (6) of this section per year for the most recent 365 days 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 June 21, 2022.

(8) Subsequent annual reports must contain items in paragraph (l)(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 in the closed landfill subcategory are exempt from reporting requirements contained in paragraphs (l)(1) through (7) of this section.

(10) Landfills may cease annual reporting of items in paragraphs (l)(1) through (6) of this section once they have submitted the closure report in § 62.16724(f).

(m) Tier 4 notification.

(1) The owner or operator of a designated facility 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 § 62.16718(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 § 62.16718(a)(6)(A), the owner or operator of a landfill shall notify the Administrator by email or telephone no later than 48 hours before any known delay in the original test date, and arrange an updated date with the Administrator by mutual agreement.

(n) Notification of meeting Tier 4. The owner or operator of a designated facility must submit a notification to the EPA Regional office within 10 business days of completing each increment of progress. Each notification must indicate which increment of progress specified in § 62.16712 has been achieved. The notification must be signed by the owner or operator of the landfill.

(1) For the first increment of progress (submit control plan), you must follow paragraph (p) of this section in addition to submitting the notification described in paragraph (n) of this section. A copy of the design plan must also be kept on site at the landfill.

(2) For the second increment of progress, a signed copy of the contract(s) awarded must be submitted in addition to the notification described in paragraph (n) of this section.

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(o) Notification of failing to meet an increment of progress. The owner or operator of a designated facility who fails to meet any increment of progress specified in § 62.16712(a)(1) through (5) according to the applicable schedule in § 62.16712 must submit notification that the owner or operator failed to meet the increment to the EPA Regional office within 10 business days of the applicable date in § 62.16712.

(p) Alternate dates for increments 2 and 3. The owner or operator (or the state or tribal air pollution control authority) that is submitting alternative dates for increments 2 and 3 according to § 62.16712(d) must do so by the date specified for submitting the final control plan. The date for submitting the final control plan is specified in § 62.16712(c), as applicable. The owner or operator (or the state or tribal air pollution control authority) must submit a justification if any of the alternative dates are later than the increment dates in table 1 of this subpart. In addition to submitting the alternative dates to the appropriate EPA Regional office, the owner or operator must also submit the alternative dates to the state or tribe.

(q) 24-hour high temperature report. Each owner or operator that chooses to comply with the provisions in §§ 63.1958, 63.1960, and 63.1961 of this chapter, as allowed in §§ 62.16716, 62.16720, and 62.16722, must submit the 24-hour high temperature report according to § 63.1981(k) of this chapter.

**# 008 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1981]****Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills  
What reports must I submit?**

You must submit the reports specified in this section and the reports specified in Table 1 to this subpart. If you have previously submitted a design capacity report, amended design capacity report, initial NMOC emission rate report, initial or revised collection and control system design plan, closure report, equipment removal report, or initial performance test under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a federal plan or EPA-approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf, then that submission constitutes compliance with the design capacity report in paragraph (a) of this section, the amended design capacity report in paragraph (b) of this section, the initial NMOC emission rate report in paragraph (c) of this section, the initial collection and control system design plan in paragraph (d) of this section, the revised design plan in paragraph (e) of this section, the closure report in paragraph (f) of this section, the equipment removal report in paragraph (g) of this section, and the initial performance test report in paragraph (i) of this section. You do not need to re-submit the report(s). However, you must include a statement certifying prior submission of the respective report(s) and the date of submittal in the first semi-annual report required in this section.

(a) Initial design capacity report. The initial design capacity report must contain the information specified in § 60.757(a)(2) of this chapter, except beginning no later than September 28, 2021, the report must contain:

(1) 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.

(2) 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 provided, along with the relevant parameters as part of the report. The landfill may calculate design capacity in either Mg or m<sup>3</sup> 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 Mg or 2.5 million m<sup>3</sup>, 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.

(b) 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 Mg and 2.5 million m<sup>3</sup>. 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 § 63.1983(f).

(c) NMOC emission rate report. Each owner or operator subject to the requirements of this subpart must submit a copy of the latest NMOC emission rate report that was submitted according to § 60.757(b) of this chapter or submit an NMOC

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emission rate report to the Administrator initially and annually thereafter, except as provided for in paragraph (c)(1)(ii)(A) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate. If you have submitted an annual report under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a Federal plan or EPA-approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf, then that submission constitutes compliance with the annual NMOC emission rate report in this paragraph. You do not need to re-submit the annual report for the current year. Beginning no later than September 27, 2021, the report must meet the following requirements:

(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 § 63.1959(a) or (b), as applicable.

(i) The initial NMOC emission rate report must be submitted no later than 90 days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

(ii) Subsequent NMOC emission rate reports must be submitted annually thereafter, except as provided for in paragraph (c)(1)(ii)(A) of this section.

(A) If the estimated NMOC emission rate as reported in the annual report to the Administrator is less than 50 Mg/yr in each of the next 5 consecutive years, the owner or operator may elect to submit, an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate 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.

(B) The report must be submitted following the procedure specified in paragraph (l)(2) of this section.

(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 § 63.1959(b)(2), during such time as the collection and control system is in operation and in compliance with §§ 63.1958 and 63.1960.

(d) Collection and control system design plan. Each owner or operator subject to the provisions of § 63.1959(b)(2) must submit a collection and control system design plan to the Administrator for approval according to § 60.757(c) of this chapter and the schedule in § 60.757(c)(1) and (2). Beginning no later than September 27, 2021, each owner or operator subject to the provisions of § 63.1959(b)(2) must submit a collection and control system design plan to the Administrator according to paragraphs (d)(1) through (6) of this section. The collection and control system design plan must be prepared and approved by a professional engineer.

(1) The collection and control system as described in the design plan must meet the design requirements in § 63.1959(b)(2).

(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 §§ 63.1957 through 63.1983 proposed by the owner or operator.

(3) The collection and control system design plan must either conform with specifications for active collection systems in § 63.1962 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to § 63.1962.

(4) Each owner or operator of an MSW landfill affected by this subpart must submit a collection and control system design plan to the Administrator for approval within 1 year of becoming subject to this subpart.

(5) The landfill owner or operator must notify the Administrator that the design plan is completed and submit a copy of the

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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 (d)(6) of this section. 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.

(6) Upon receipt of an initial or revised design plan, the Administrator must review the information submitted under paragraphs (d)(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.

(e) Revised design plan. Beginning no later than September 27, 2021, the owner or operator who has already been required to submit a design plan under paragraph (d) 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 (d) of this section.

(f) 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 § 258.60 of this chapter. 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 § 63.9(b) of subpart A.

(g) Equipment removal report. Each owner or operator of a controlled landfill must submit an equipment removal report as provided in § 60.757(e) of this chapter. 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) Beginning no later than September 27, 2021, the equipment removal report must contain all of the following items:

- (i) A copy of the closure report submitted in accordance with paragraph (f) of this section;
- (ii) A copy of the initial performance test report demonstrating that the 15-year minimum control period has expired, or information that demonstrates that the gas collection and control system will be unable to operate for 15 years due to declining gas flows. In the equipment removal report, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in lieu of the performance test report if the report has been previously submitted to the EPA's Central Data Exchange (CDX); and
- (iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 Mg or greater of NMOC per year. 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 § 63.1957(b) have been met.

(h) Semi-annual report. The owner or operator of a landfill seeking to comply with § 63.1959(b)(2) using an active collection system designed in accordance with § 63.1959(b)(2)(ii) must submit to the Administrator semi-annual reports. Beginning no later than September 27, 2021, you must submit the report, following the procedure specified in paragraph (l) of this section. The initial 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 § 63.7 of subpart A, as applicable. In the initial 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 and flares, reportable exceedances are defined under § 63.1983(c). The semi-annual reports must contain the information in paragraphs (h)(1) through (8) of this section.

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(1) Number of times that applicable parameters monitored under § 63.1958(b), (c), and (d) were exceeded and when the gas collection and control system was not operating under § 63.1958(e), including periods of SSM. For each instance, report the date, time, and duration of each exceedance.

(i) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c), provide a statement of the wellhead operational standard for temperature and oxygen you are complying with for the period covered by the report. Indicate the number of times each of those parameters monitored under § 63.1961(a)(3) were exceeded. For each instance, report the date, time, and duration of each exceedance.

(ii) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), provide a statement of the wellhead operational standard for temperature and oxygen you are complying with for the period covered by the report. Indicate the number of times each of those parameters monitored under § 63.1961(a)(4) were exceeded. For each instance, report the date, time, and duration of each exceedance.

(iii) Beginning no later than September 27, 2021, number of times the parameters for the site-specific treatment system in § 63.1961(g) were exceeded.

(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 § 63.1961.

(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-ppm methane concentration as provided in § 63.1958(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month. Beginning no later than September 27, 2021, for location, you record the latitude and longitude coordinates of each exceedance using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

(6) The date of installation and the location of each well or collection system expansion added pursuant to § 63.1960(a)(3) and (4), (b), and (c)(4).

(7) For any corrective action analysis for which corrective actions are required in § 63.1960(a)(3)(i) or (a)(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 or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(8) Each owner or operator required to conduct enhanced monitoring in §§ 63.1961(a)(5) and (6) must include the results of all monitoring activities conducted during the period.

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

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

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

(i) Initial performance test report. Each owner or operator seeking to comply with § 63.1959(b)(2)(iii) must include the following information with the initial performance test report required under § 63.7 of subpart A:

(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;



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(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;

(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.

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

(1) For corrective action that is required according to § 63.1960(a)(3) or (4) 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.

(2) For corrective action that is required according to § 63.1960(a)(3) or (4) 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 62.8 degrees Celsius (145 degrees Fahrenheit) or above unless a higher operating temperature value has been approved by the Administrator for the well under this subpart or under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a Federal plan or EPA approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf. The Administrator must approve the plan for corrective action and the corresponding timeline.

(k) 24-hour high temperature report. Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1) and a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7 degrees Celsius (170 degrees Fahrenheit) and the carbon monoxide concentration measured is greater than or equal to 1,000 ppmv, then you must report the date, time, well identifier, temperature and carbon monoxide reading via email to the Administrator within 24 hours of the measurement unless a higher operating temperature value has been approved by the Administrator for the well under this subpart or under 40 CFR part 60, subpart WWW; 40 CFR part 60, subpart XXX; or a Federal plan or EPA approved and effective state plan or tribal plan that implements either 40 CFR part 60, subpart Cc or 40 CFR part 60, subpart Cf.

(l) Electronic reporting. Beginning no later than September 27, 2021, the owner or operator must submit reports electronically according to paragraphs (l)(1) and (2) of this section.

(1) Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (l)(1)(i) through (iii) of this section.

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

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

(iii) Confidential business information (CBI). If you claim some of the information submitted under paragraph (a) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be

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generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (l)(1)(i) of this section.

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

(m) Claims of EPA system outage. Beginning no later than September 27, 2021, if you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to comply timely with the reporting requirement. To assert a claim of EPA system outage, you must meet the following requirements:

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning 5 business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

- (i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;
- (ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;
- (iii) Measures taken or to be taken to minimize the delay in reporting; and
- (iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(n) Claims of force majeure. Beginning no later than September 27, 2021, if you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to comply timely with the reporting requirement. To assert a claim of force majeure, you must meet the following requirements:

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).



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(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

- (i) A written description of the force majeure event;
- (ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;
- (iii) Measures taken or to be taken to minimize the delay in reporting; and
- (iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

[85 FR 17261, Mar. 26, 2020, as amended at 87 FR 8204, Feb. 14, 2022]

**VI. WORK PRACTICE REQUIREMENTS.****# 009 [40 CFR Part 62 Approval and Promulgation of State Plans §40 CFR 62.16716]****Subpart 000 - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014****Operational standards for collection and control systems.**

Each owner or operator must comply with the provisions for the operational standards in this section (as well as the provisions in §§ 62.16720 and 62.16722), or the operational standards in § 63.1958 of this chapter (as well as the provisions in §§ 63.1960 and 63.1961 of this chapter), or both as alternative means of compliance, for an MSW landfill with a gas collection and control system used to comply with the provisions of § 62.16714(b) and (c). Once the owner or operator begins to comply with the provisions of § 63.1958 of this chapter, the owner or operator must continue to operate the collection and control device according to those provisions and cannot return to the provisions of this section. Each owner or operator of an MSW landfill with a gas collection and control system used to comply with the provisions of § 62.16714(b) and (c) 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 § 62.16724(h)(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 § 62.16724(d);

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

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(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 § 62.16720(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 § 62.16714(c). 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.

(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 § 62.16720(a)(3) and (5) or § 62.16720(c). If corrective actions are taken as specified in § 62.16720, the monitored exceedance is not a violation of the operational requirements in this section.

**# 010 [40 CFR Part 62 Approval and Promulgation of State Plans §40 CFR 62.16720]**

**Subpart 000 - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014**

**Compliance provisions.**

Follow the compliance provisions in this section (as well as the provisions in §§ 62.16716 and 62.16722), or the compliance provisions in § 63.1960 of this chapter (as well as the provisions in §§ 63.1958 and 63.1961 of this chapter), or both as alternative means of compliance, for an MSW landfill with a gas collection and control system used to comply with the provisions of § 62.16714(b) and (c). Once the owner or operator begins to comply with the provisions of § 63.1960 of this chapter, the owner or operator must continue to operate the collection and control device according to those provisions and cannot return to the provisions of this section.

(a) Except as provided in § 62.16724(d)(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 § 62.16714(b)(2).

(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with § 62.16714(b)(2)(i), 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 AP-42 or other site-specific values demonstrated to be appropriate and approved by the Administrator. If k has been determined as specified in § 62.16718(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:

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.

k = Methane generation rate constant, year<sup>-1</sup>.

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).

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

Where:

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

k = Methane generation rate constant, year<sup>-1</sup>.

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

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

ti = Age of the ith 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 § 62.16714(b)(2)(ii), 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 § 62.16714(b)(2)(iii), 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 § 62.16716(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 not later than 60 days after positive pressure was first measured. The owner or operator must keep records according to § 62.16726(e)(3).

(ii) If corrective actions cannot be fully implemented within 60 days following the positive pressure or elevated temperature 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) or positive pressure. The owner or operator must submit the items listed in § 62.16724(h)(7) as part of the next annual report. The owner or operator must keep records according to § 62.16726(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 § 62.16724(h)(7) and (k). The owner or operator must keep records according to § 62.16726(e)(5).

(4) 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 § 62.16716(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 § 62.16726(e)(3).

(ii) If corrective actions cannot be fully implemented within 60 days following the measurement of landfill gas temperature greater than 55 degrees Celsius (131 degrees Fahrenheit) 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

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than 55 degrees Celsius (131 degrees Fahrenheit). The owner or operator must submit the items listed in § 62.16724(h)(7) as part of the next annual report. The owner or operator must keep records according to § 62.16726(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 § 62.16724(h)(7) and § 62.16724(k). The owner or operator must keep records according to § 62.16726(e)(5).

(5) An owner or operator seeking to demonstrate compliance with § 62.16714(b)(2)(iv) through the use of a collection system not conforming to the specifications provided in § 62.16728 must provide information satisfactory to the Administrator as specified in § 62.16724(d)(3) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with § 62.16716(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 § 62.16724(d). 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) 5 years or more if active; or

(2) 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 § 62.16716(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 no more than 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 EPA Method 21 of appendix A-7 of 40 CFR part 60, except that the probe inlet must be placed within 5 to 10 centimeters of the ground. Monitoring must be performed during typical meteorological conditions.

(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 § 62.16716(d).

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

(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 parts-per-million 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,

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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 § 62.16718(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 EPA Method 21 of appendix A-7 of 40 CFR part 60, 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 EPA Method 21 of appendix A-7 of 40 CFR part 60, the instrument evaluation procedures of section 8.1 of EPA Method 21 of appendix A-7 of 40 CFR part 60 must be used.

(4) The calibration procedures provided in sections 8 and 10 of EPA Method 21 of appendix A-7 of 40 CFR part 60 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 § 62.16716(e) in lieu of the compliance provisions in § 62.16720.

**# 011 [40 CFR Part 62 Approval and Promulgation of State Plans §40 CFR 62.16728]**

**Subpart 000 - Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014**

**Specifications for active collection systems.**

Follow the specifications for active collection systems in this section.

(a) Each owner or operator seeking to comply with § 62.16714(b) 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.

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

(2) The sufficient density of gas collection devices determined in paragraph (a)(1) 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 § 62.16726(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:

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Where:

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

$k$  = Methane generation rate constant, year<sup>-1</sup>.

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

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

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

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

$3.6 \times 10^{-9}$  = Conversion factor.

(B) If the owner or 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 § 62.16718 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 (the distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for  $k$ ,  $L_o$ , and CNMOC provided in § 62.16718 or the alternative values from § 62.16718 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 § 62.16714(b) must construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components must be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: Convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system must extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors must be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations must be situated with regard to the need to prevent excessive air infiltration.

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

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

(c) Each owner or operator seeking to comply with § 62.16714(c) must convey the landfill gas to a control system in compliance with § 62.16714(c) through the collection header pipe(s). The gas mover equipment must be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

(1) For existing collection systems, the flow data must be used to project the maximum flow rate. If no flow data exist, 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 § 62.16720(a)(1).

**SECTION E. Source Group Restrictions.****# 012 [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?**

(c) At all times, beginning no later than September 27, 2021, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if the requirements of this subpart have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

**# 013 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1957]****Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills****Requirements for gas collection and control system installation and removal.**

(a) Operation. Operate the collection and control device in accordance with the provisions of §§ 63.1958, 63.1960, and 63.1961.

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

(1) The landfill is a closed landfill (as defined in § 63.1990). A closure report must be submitted to the Administrator as provided in § 63.1981(f);

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

(3) Following the procedures specified in § 63.1959(c), the calculated NMOC emission rate at the landfill is less than 50 Mg/yr on three successive test dates. The test dates must be no less than 90 days apart, and no more than 180 days apart.

**# 014 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1958]****Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills****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 § 63.1957 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 semi-annual reports as provided in § 63.1981(h);

(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 § 63.1981(d)(2);

(c) Operate each interior wellhead in the collection system as specified in 40 CFR 60.753(c), until the landfill owner or operator elects to meet the operational standard for temperature in paragraph (c)(1) of this section.



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(1) Beginning no later than September 27, 2021, operate each interior wellhead in the collection system with a landfill gas temperature less than 62.8 degrees Celsius (145 degrees Fahrenheit).

(2) 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)(1) Operate the collection system so that the methane concentration is less than 500 parts per million (ppm) above background at the surface of the landfill. To determine if this level is exceeded, the 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. 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.

(2) Beginning no later than September 27, 2021, the owner or operator must:

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

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

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

(e) Operate the system as specified in § 60.753(e) of this chapter, except:

(1) Beginning no later than September 27, 2021, operate the system in accordance to § 63.1955(c) such that all collected gases are vented to a control system designed and operated in compliance with § 63.1959(b)(2)(iii). In the event the collection or control system is not operating:

(i) 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

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

(2) [Reserved]

(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 paragraph (b), (c), or (d) of this section are not met, corrective action must be taken as specified in § 63.1960(a)(3) and (5) or (c). If corrective actions are taken as specified in § 63.1960, the monitored exceedance is not a deviation of the operational requirements in this section.

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64400, Oct. 13, 2020]

**# 015 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1959]**

**Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills NMOC calculation procedures.**

(a) Calculate the NMOC emission rate using the procedures specified in § 60.754(a) of this chapter, except:

(1) NMOC emission rate. Beginning no later than September 27, 2021 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



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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 (m<sup>3</sup>/Mg) for LO, and 4,000 parts per million by volume (ppmv) 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.

Where:

MNMOC = Total NMOC emission rate from the landfill, Mg/yr.

k = Methane generation rate constant, year<sup>-1</sup>.

Lo = Methane generation potential, m<sup>3</sup>/Mg solid waste.

Mi = Mass of solid waste in the ith section, Mg.

ti = Age of the ith section, years.

CNMOC = Concentration of NMOC, ppmv as hexane.

$3.6 \times 10^{-9}$  = 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.

Where:

MNMOC = Mass emission rate of NMOC, Mg/yr.

Lo = Methane generation potential, m<sup>3</sup>/Mg solid waste.

R = Average annual acceptance rate, Mg/yr.

k = Methane generation rate constant, year<sup>-1</sup>.

t = Age of landfill, years.

CNMOC = Concentration of NMOC, ppmv as hexane.

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

$3.6 \times 10^{-9}$  = 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 50 Mg/yr.

(i) If the NMOC emission rate calculated in paragraph (a)(1) of this section is less than 50 Mg/yr, then the landfill owner or operator must submit an NMOC emission rate report according to § 63.1981(c) and must recalculate the NMOC mass emission rate annually as required under paragraph (b) of this section.

(ii) If the calculated NMOC emission rate as calculated in paragraph (a)(1) of this section is equal to or greater than 50 Mg/yr, then the landfill owner must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 63.1981(d) and install and operate a gas collection and control system within 30 months of the first annual report in which the NMOC emission rate equals or exceeds 50 Mg/yr, according to paragraphs (b)(2)(ii) and (iii) of this section;

(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

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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 EPA Method 25 or 25C of appendix A-7 to part 60. 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 EPA Method 25 or 25C of appendix A-7 to part 60 by 6 to convert from CNMOC as carbon to CNMOC as hexane. If the landfill has an active or passive gas removal system in place, EPA 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 § 63.7 of subpart A), the owner or operator must submit the results according to § 63.1981(l)(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 (ii) of this section and use 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 50 Mg/yr, then the owner or operator must submit a periodic estimate of NMOC emissions in an NMOC emission rate report according to § 63.1981(c) and must recalculate the NMOC mass emission rate annually as required under paragraph (b) of this section. 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 50 Mg/yr, the landfill owner or operator must either:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 63.1981(d) and install and operate a gas collection and control system within 30 months according to paragraphs (b)(2)(ii) and (iii) of this section; or

(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.

(4) Tier 3. The site-specific methane generation rate constant must be determined using the procedures provided in EPA Method 2E of appendix A-1 to part 60 of this chapter. 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 50 Mg/yr.

(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 50 Mg/yr, the owner or operator must:

(A) Submit a gas collection and control system design plan within 1 year as specified in § 63.1981(d) and install and operate a gas collection and control system within 30 months of the first annual report in which the NMOC emission rate equals or exceeds 50 Mg/yr, according to paragraphs (b)(2)(ii) and (iii) of this section.

(B) [Reserved]

(ii) If the NMOC mass emission rate is less than 50 Mg/yr, 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 § 63.1981(c). 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

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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.

(b) Each owner or operator of an affected source having a design capacity equal to or greater than 2.5 million Mg and 2.5 million m<sup>3</sup> must either comply with paragraph (b)(2) of this section or calculate an NMOC emission rate for the landfill using the procedures specified in paragraph (a) of this section. The NMOC emission rate must be recalculated annually, except as provided in § 63.1981(c)(1)(ii)(A).

(1) If the calculated NMOC emission rate is less than 50 Mg/yr, the owner or operator must:

(i) Submit an annual NMOC emission rate emission report to the Administrator, except as provided for in § 63.1981(c)(1)(ii); and

(ii) Recalculate the NMOC emission rate annually using the procedures specified in paragraph (a)(1) of this section until such time as the calculated NMOC emission rate is equal to or greater than 50 Mg/yr, 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 50 Mg/yr, the owner or operator must either: comply with paragraph (b)(2) of this section or calculate NMOC emissions using the next higher tier in paragraph (a) of this section.

(B) If the landfill is permanently closed, a closure report must be submitted to the Administrator as provided for in § 63.1981(f).

(2) If the calculated NMOC emission rate is equal to or greater than 50 Mg/yr using Tier 1, 2, or 3 procedures, the owner or operator must either:

(i) Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year as specified in § 63.1981(d) or calculate NMOC emissions using the next higher tier in paragraph (a) of this section. 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)(B) or (C) 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 50 Mg/yr, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 50 Mg.

(B) An active collection system must:

(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; and

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

(C) A passive collection system must:

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

(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 § 258.40 of this chapter.

(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 § 63.11(b) except as noted in paragraph (e) of this section; or

(B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion

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device is used for control, to either reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 ppmv, dry basis as hexane at 3-percent oxygen. The reduction efficiency or ppmv 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 paragraph (e) of this section. 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 §§ 63.1961(b) through (e);

(C) 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-British thermal unit (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.

(c) 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 § 63.1957(b)(3), using Equation 3:

Where:

MNMOC = Mass emission rate of NMOC, Mg/yr.

QLFG = Flow rate of landfill gas, m<sup>3</sup> per minute.

CNMOC = Average NMOC concentration, ppmv as hexane.

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

(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 EPA Method 2E of appendix A-1 of part 60.

(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 EPA Method 25 or 25C of appendix A-7 to part 60 of this chapter. 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 EPA Method 25 or 25C of appendix A-7 to part 60 by 6 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 § 63.7), the owner or operator must submit the results of the performance test, including any associated fuel analyses, according to § 63.1981(l)(1).

(ii) [Reserved]

(d) For the performance test required in § 63.1959(b)(2)(iii)(B), EPA Method 25 or 25C (EPA Method 25C of appendix A-7 to part 60 of this chapter 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- ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by § 63.1981(d)(2). EPA Method 3, 3A, or 3C of appendix A-7 to part 60 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), EPA Method 25A should be

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used in place of EPA Method 25. EPA Method 18 may be used in conjunction with EPA Method 25A on a limited basis (compound specific, e.g., methane) or EPA Method 3C may be used to determine methane. The methane as carbon should be subtracted from the EPA 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:

Where:

NMOC<sub>in</sub> = Mass of NMOC entering control device.

NMOC<sub>out</sub> = Mass of NMOC exiting control device.

(e) For the performance test required in § 63.1959(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in § 63.11(b)(6)(ii) is calculated from the concentration of methane in the landfill gas as measured by EPA Method 3C of appendix A to part 60 of this chapter. A minimum of three 30-minute EPA Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. EPA Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under § 63.11(b)(7) of subpart A.

(1) Within 60 days after the date of completing each performance test (as defined in § 63.7), the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by § 63.1959(c) or (e) according to § 63.1981(l)(1).

(2) [Reserved]

(f) The performance tests required in §§ 63.1959(b)(2)(iii)(A) and (B), must be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown unless specified by the Administrator. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64400, Oct. 13, 2020]

**# 016 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1960]**

**Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills Compliance provisions.**

(a) Except as provided in § 63.1981(d)(2), the specified methods in paragraphs (a)(1) through (5) of this section must be used to determine whether the gas collection system is in compliance with § 63.1959(b)(2)(ii).

(1) For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with § 63.1959(b)(2)(ii)(C)(1), either Equation 5 or Equation 6 must be used. 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. 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 § 63.1959(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:

Where:

Q<sub>m</sub> = Maximum expected gas generation flow rate, m<sup>3</sup>/yr.

Lo = Methane generation potential, m<sup>3</sup>/Mg solid waste.

R = Average annual acceptance rate, Mg/yr.

k = Methane generation rate constant, year<sup>-1</sup>.

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$t$  = 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  $e - kc = 1$ ).

$2$  = Constant.

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

Where:

$Q_m$  = Maximum expected gas generation flow rate,  $m^3/yr$ .

$k$  = Methane generation rate constant, year<sup>-1</sup>.

$L_o$  = Methane generation potential,  $m^3/Mg$  solid waste.

$M_i$  = Mass of solid waste in the  $i$ th section,  $Mg$ .

$t_i$  = Age of the  $i$ th section, years.

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, 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 paragraph (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 § 63.1959(b)(2)(ii)(B)(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 § 63.1959(b)(2)(ii)(B)(3), the owner or operator must measure gauge pressure in the gas collection header applied to each individual well monthly. Any attempted corrective measure must not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval. If a positive pressure exists, follow the procedures as specified in § 60.755(a)(3), except:

(i) Beginning no later than September 27, 2021, if a positive pressure exists, action must be initiated to correct the exceedance within 5 days, except for the three conditions allowed under § 63.1958(b).

(A) If negative pressure cannot be achieved without excess air infiltration within 15 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 § 63.1983(e)(3).

(B) 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 § 63.1981(h)(7) as part of the next semi-annual report. The owner or operator must keep records according to § 63.1983(e)(4).

(C) 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 § 63.1981(j). The owner or operator must keep records according to § 63.1983(e)(5).

(ii) [Reserved]

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the temperature and nitrogen or oxygen operational standards in introductory paragraph § 63.1958(c), for the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator must follow the procedures as specified in § 60.755(a)(5) of this chapter, except:

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(i) Once an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard for temperature in § 63.1958(c)(1), the owner or operator must monitor each well monthly for temperature for the purpose of identifying whether excess air infiltration exists. If a well exceeds the operating parameter for temperature as provided in § 63.1958(c)(1), action must be initiated to correct the exceedance within 5 days. Any attempted corrective measure must not cause exceedances of other operational or performance standards.

(A) If a landfill gas temperature less than or equal to 62.8 degrees Celsius (145 degrees Fahrenheit) cannot be achieved within 15 days of the first measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 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 62.8 degrees Celsius (145 degrees Fahrenheit) was first measured. The owner or operator must keep records according to § 63.1983(e)(3).

(B) If corrective actions cannot be fully implemented within 60 days following the temperature 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 62.8 degrees Celsius (145 degrees Fahrenheit). The owner or operator must submit the items listed in § 63.1981(h)(7) as part of the next semi-annual report. The owner or operator must keep records according to § 63.1983(e)(4).

(C) 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 § 63.1981(h)(7) and (j). The owner or operator must keep records according to § 63.1983(e)(5).

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

(5) An owner or operator seeking to demonstrate compliance with § 63.1959(b)(2)(ii)(B)(4) through the use of a collection system not conforming to the specifications provided in § 63.1962 must provide information satisfactory to the Administrator as specified in § 63.1981(d)(3) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with § 63.1958(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 § 63.1981(d). 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) 5 years or more if active; or
- (2) 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 § 63.1958(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 EPA Method 21 of appendix A-7 of part 60 of this chapter, 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 ppm 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 § 63.1958(d).



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(i) The location of each monitored exceedance must be marked and the location and concentration recorded. Beginning no later than September 27, 2021, the location must be recorded using an instrument with an accuracy of at least 4 meters. The coordinates must be in decimal degrees with at least five decimal places.

(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 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 ppm 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 ppm above background three times within a quarterly period, a new well or other collection device must be installed within 120 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 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 EPA Method 21 of appendix A of part 60 of this chapter, except that "methane" replaces all references to "VOC".

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

(3) To meet the performance evaluation requirements in section 8.1 of EPA Method 21 of appendix A of part 60 of this chapter, the instrument evaluation procedures of section 8.1 of EPA Method 21 of appendix A of part 60 must be used.

(4) The calibration procedures provided in sections 8 and 10 of EPA Method 21 of appendix A of part 60 of this chapter must be followed immediately before commencing a surface monitoring survey.

(e)(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standards in introductory paragraph § 63.1958(e), the provisions of this subpart apply at all times, except during periods of SSM, provided that the duration of SSM does not exceed 5 days for collection systems and does not exceed 1 hour for treatment or control devices. You must comply with the provisions in Table 1 to subpart AAAA that apply before September 28, 2021.

(2) Once an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with the operational standard in § 63.1958(e)(1), the provisions of this subpart apply at all times, including periods of SSM. During periods of SSM, you must comply with the work practice requirement specified in § 63.1958(e) in lieu of the compliance provisions in § 63.1960.

[85 FR 17261, Mar. 26, 2020, as amended at 85 FR 64400, Oct. 13, 2020; 87 FR 8203, Feb. 14, 2022]

**# 017 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1962]**

**Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills Specifications for active collection systems.**

(a) Each owner or operator seeking to comply with § 63.1959(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 § 63.1981(d)(2) and (3):

(1) The collection devices within the interior must be certified to achieve comprehensive control of surface gas emissions



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

(2) The sufficient density of gas collection devices determined in paragraph (a)(1) 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 § 63.1983(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:

Where:

$Q_i$  = NMOC emission rate from the  $i$ th section, Mg/yr.

$k$  = Methane generation rate constant, year<sup>-1</sup>.

$L_o$  = Methane generation potential, m<sup>3</sup>/Mg solid waste.

$M_i$  = Mass of the degradable solid waste in the  $i$ th section, Mg.

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

CNMOC = Concentration of NMOC, ppmv.

$3.6 \times 10^{-9}$  = 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 § 63.1959(c) 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 (the distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for  $k$ ,  $L_o$  and CNMOC provided in § 63.1959(a)(1) or the alternative values from § 63.1959(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 § 63.1959(b)(2)(ii) must construct the gas collection devices using the following equipment or procedures:

(1) The landfill gas extraction components must be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to: Convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system must extend as necessary to comply with emission and migration standards. Collection devices such as wells and horizontal collectors must be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations must be situated with regard to the need to prevent excessive air infiltration.

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(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 § 63.1959(b)(2)(iii) must convey the landfill gas to a control system in compliance with § 63.1959(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 § 63.1960(a)(1).

**# 018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1964]****Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills****How is compliance determined?**

Compliance is determined using performance testing, collection system monitoring, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data collected under § 63.1961(b)(1), (c)(1), and (d) are used to demonstrate compliance with the operating standards for control systems. If a deviation occurs, you have failed to meet the control device operating standards described in this subpart and have deviated from the requirements of this subpart.

(a) N/A

(b) After September 27, 2021, the SSM provisions of § 63.6(e) of subpart A no longer apply to this subpart and the SSM plan developed under paragraph (a) of this section no longer applies. Compliance with the emissions standards and the operating standards of § 63.1958 of this subpart is required at all times.

**# 019 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1975]****Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills****How do I calculate the 3-hour block average used to demonstrate compliance?**

Before September 28, 2021, averages are calculated in the same way as they are calculated in § 60.758(b)(2)(i) of this subchapter for average combustion temperature and § 60.758(c) for 3-hour average combustion temperature for enclosed combustors, except that the data collected during the events listed in paragraphs (a) through (d) of this section are not to be included in any average computed under this subpart. Beginning no later than September 27, 2021, averages are calculated according to § 63.1983(b)(2)(i) for average combustion temperature and § 63.1983(c)(1)(i) for 3-hour average combustion temperature for enclosed combustors, except that the data collected during the event listed in paragraph (a) of this section are not to be included in any average computed under this subpart.

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

(b) Startups.

(c) Shutdowns.

(d) Malfunctions.

[85 FR 17261, Mar. 26, 2020, as amended at 87 FR 8204, Feb. 14, 2022]

**SECTION E. Source Group Restrictions.****VII. ADDITIONAL REQUIREMENTS.****# 020 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1985]****Subpart AAAA - National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills****Who enforces this subpart?**

(a) This subpart can be implemented and enforced by the EPA, or a delegated authority such as the applicable state, local, or tribal agency. If the EPA Administrator has delegated authority to a state, local, or tribal agency, then that agency as well as the EPA has the authority to implement and enforce this subpart. Contact the applicable EPA Regional office to find out if this subpart is delegated to a state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency.

(c) The authorities that will not be delegated to state, local, or tribal agencies are as follows. Approval of alternatives to the emission standards in §§ 63.1955 through 63.1962. Where this subpart references part 60, subpart WWW of this subchapter, the cited provisions will be delegated according to the delegation provisions of part 60, subpart WWW of this subchapter. For this subpart, the EPA also retains the authority to approve methods for determining the NMOC concentration in § 63.1959(a)(3) and the method for determining the site-specific methane generation rate constant  $k$  in § 63.1959(a)(4).

[85 FR 17261, Mar. 26, 2020, as amended at 87 FR 8204, Feb. 14, 2022]

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION E. Source Group Restrictions.**

Group Name: GROUP 05

Group Description: RACT II

Sources included in this group

ID	Name
103	TWO (2) DIESEL-FUEL ELECTRIC GENERATORS
C01H	ENCLOSED FLARE H - 6,000 CFM
C01I	ENCLOSED FLARE I - 3,300 CFM
C01J	UTILITY FLARE J - 500 CFM

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 001 [25 Pa. Code §129.100]****Compliance demonstration and recordkeeping requirements.**

(a) Except as provided in subsection (c), the owner and operator of an air contamination source subject to a NO<sub>x</sub> RACT requirement or RACT emission limitation or VOC RACT requirement or RACT emission limitation, or both, listed in § 129.97 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) shall demonstrate compliance with the applicable RACT requirement or RACT emission limitation by performing the following monitoring or testing procedures:

(1) For an air contamination source with a CEMS, monitoring and testing in accordance with the requirements of Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources) using a 30-day rolling average, except municipal waste combustors.

(i) A 30-day rolling average emission rate for an air contamination source that is a combustion unit shall be expressed in pounds per million Btu and calculated in accordance with the following procedure:

(A) Sum the total pounds of pollutant emitted from the combustion unit for the current operating day and the previous 29 operating days.

(B) Sum the total heat input to the combustion unit in million Btu for the current operating day and the previous 29 operating days.

(C) Divide the total number of pounds of pollutant emitted by the combustion unit for the 30 operating days by the total heat input to the combustion unit for the 30 operating days.

(ii) A 30-day rolling average emission rate for each applicable RACT emission limitation shall be calculated for an affected air contamination source for each consecutive operating day.

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(iii) Each 30-day rolling average emission rate for an affected air contamination source must include the emissions that occur during the entire operating day, including emissions from start-ups, shutdowns and malfunctions.

(2) For a Portland cement kiln with a CEMS, monitoring of clinker production rates in accordance with 40 CFR 63.1350(d) (relating to monitoring requirements).

(3) For a municipal waste combustor with a CEMS, monitoring and testing in accordance with the requirements in Chapter 139, Subchapter C, using a daily average.

(4) For an air contamination source without a CEMS, monitoring and testing in accordance with a Department-approved emissions source test that meets the requirements of Chapter 139, Subchapter A (relating to sampling and testing methods and procedures). The source test shall be conducted one time in each 5-year calendar period.

**# 002 [25 Pa. Code §129.97]****Presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule.**

(c) The owner and operator of a source specified in this subsection, which is located at a major NO<sub>x</sub> emitting facility or major VOC emitting facility subject to § 129.96 shall install, maintain and operate the source in accordance with the manufacturer's specifications and with good operating practices:

(1) A NO<sub>x</sub> air contamination source that has the potential to emit less than 5 TPY of NO<sub>x</sub>.

(2) A VOC air contamination source that has the potential to emit less than 2.7 TPY of VOC.

(3) A boiler or other combustion source with an individual rated gross heat input less than 20 million Btu/hour.

(4) A combustion turbine with a rated output less than 1,000 bhp.

(5) A stationary internal combustion engine rated at less than 500 bhp (gross).

(6) An incinerator, thermal oxidizer or catalytic oxidizer used primarily for air pollution control.

(7) A fuel-burning unit with an annual capacity factor of less than 5%.

(i) For a combustion unit, the annual capacity factor is the ratio of the unit's heat input (in million Btu or equivalent units of measure) to the unit's maximum rated hourly heat input rate (in million Btu/hour or equivalent units of measure) multiplied by 8,760 hours during a period of 12 consecutive calendar months.

(ii) For an electric generating unit, the annual capacity factor is the ratio of the unit's actual electric output (expressed in MWe/hr) to the unit's nameplate capacity (or maximum observed hourly gross load (in MWe/hr) if greater than the nameplate capacity) multiplied by 8,760 hours during a period of 12 consecutive calendar months.

(iii) For any other unit, the annual capacity factor is the ratio of the unit's actual operating level to the unit's potential operating level during a period of 12 consecutive calendar months.

(8) An emergency standby engine operating less than 500 hours in a 12-month rolling period.

**VII. ADDITIONAL REQUIREMENTS.****# 003 [25 Pa. Code §129.96]****Applicability**

(a) The NO<sub>x</sub> requirements of this section and § § 129.97—129.100 apply Statewide to the owner and operator of a major NO<sub>x</sub> emitting facility and the VOC requirements of this section and § § 129.97—129.100 apply Statewide to the owner and operator of a major VOC emitting facility that were in existence on or before July 20, 2012, for which a requirement or emission limitation, or both, has not been established in § § 129.51—129.52c, 129.54—129.63, 129.64—129.69, 129.71—129.75, 129.77, 129.101—129.107 and 129.301—129.310.

(b) The NO<sub>x</sub> requirements of this section and § § 129.97—129.100 apply Statewide to the owner and operator of a NO<sub>x</sub> emitting facility and the VOC requirements of this section and § § 129.97—129.100 apply Statewide to the owner and operator of a VOC emitting facility when the installation of a new source or a modification or change in operation of an existing source after July 20, 2012, results in the source or facility meeting the definition of a major NO<sub>x</sub> emitting facility or a

**SECTION E. Source Group Restrictions.**

major VOC emitting facility and for which a requirement or an emission limitation, or both, has not been established in §§ 129.51—129.52e, 129.54—129.69, 129.71—129.75, 129.77, 129.101—129.107 and 129.301—129.310.

(c) This section and § § 129.97—129.100 do not apply to the owner and operator of a NO<sub>x</sub> air contamination source located at a major NO<sub>x</sub> emitting facility that has the potential to emit less than 1 TPY of NO<sub>x</sub> or a VOC air contamination source located at a major VOC emitting facility that has the potential to emit less than 1 TPY of VOC.

(d) This section and § § 129.97—129.100 do not apply to the owner and operator of a facility which is not a major NO<sub>x</sub> emitting facility or a major VOC emitting facility on or before January 1, 2017.

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this Title V facility.

**SECTION G. Emission Restriction Summary.**

No emission restrictions listed in this section of the permit.





## SECTION H. Miscellaneous.

The Department received the Title V operating permit application for this facility on December 21, 2021. The Title V operating fees shall be paid in accordance with PA Code Title 25, Section 127.704 and Section 127.705. The annual maintenance fees are due no later than December 31, annually.

This operating permit includes conditions from Plan Approval 35-322-010A issued 06/24/2010 and Plan Approval 35-322-011 issued 10/28/2010.

The following is a list of sources that have been determined by the Department to be of minor significance under 25 Pa. Code, Chapter 127, Section 127.14(a)(8) and are not regulated in this Title V Operating Permit. However, this determination does not exempt the sources from compliance with all applicable air quality regulations specified in 25 Pa. Code Chapters 121-143:

- (1) Horizontal petroleum storage tanks with emissions estimated at less than 1 ton per year (1TPY).
- (2) Leachate collection tanks and leachate treatment system.
- (3) Heaters/Furnances with rated heating capacities less than 2.5 MMbtu/hr.
- (4) Five (5) Genset for light plants (<100 HP each).
- (5) Air Compressors.
- (6) Odor control misters/line sprayers utilizing an odor neutralizing product (not to exceed 2.7 tons VOC per year).
- (7) One (1) open flare - 3,000 scfm.
- (8) Two (2) portable Genset (20kW Units).
- (9) Compressor Station for Landfill Gas.
- (10) Gas derived liquid (condensate) collection and storage tanks.
- (11) Six (6) Carbtrol units at treatment plant and Gas derived liquid storage tanks.



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

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