INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To: Interested Parties

Date: September 25, 2014

From: Matthew Stuckey, Chief
Permits Branch
Office of Air Quality

Source Name: Gary Sanitary Landfill

Permit Level: Title V Operating Permit Renewal

Permit Number: 089-34007-00143

Source Location: 1900 Burr Street, Gary, Indiana

Type of Action Taken: Permit Renewal

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 34007.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

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Commissioner

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Gary Sanitary Landfill
1900 Burr Street
Gary, Indiana 46406

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the 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. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T089-34007-00143	
Issued by: Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 25, 2014 Expiration Date: September 25, 2019

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary municipal solid waste landfill.

Source Address:	1900 Burr Street, Gary, Indiana 46406
General Source Phone Number:	219-882-3000
SIC Code:	4953
County Location:	Lake
Source Location Status:	Nonattainment for 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) closed solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul road), and improvements on the land used for disposal of solid waste that opened in 1955, closed in 1997 and has a design capacity of 3.6 million Megagram. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

(b) Twenty-three (23) individual flares, installed in 1999 on gas wells installed in 1997, identified as GW-1 through GW-11 and GW-14 through GW-25 and each with a maximum gas flow rate of 60 scfm of landfill gas. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

(c) One (1) open gas vent flare, constructed in 1990, with a maximum gas flow rate of 200 scfm of landfill gas. Ten (10) active system gas collection wells (eight installed in March 1990, two installed in 1999 and modified in 2002), each with a maximum gas flow rate of 60 scfm of landfill gas, with the landfill gas controlled by the open gas vent flare. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21).

(a) Paved and unpaved roads and parking lots with public access [326 IAC 6-4].

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]

(a) This permit, T089-34007-00143, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance

causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ or Northwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553**.**

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable

requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

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

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

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T089-34007-00143 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

C.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.10 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]

C.11 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.12 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2007 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1 (32) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]:

(a) One (1) closed solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul road), and improvements on the land used for disposal of solid waste that opened in 1955, closed in 1997 and has a design capacity of 3.6 million Megagram. [40 CFR 63, Subpart AAAA] [40 CFR 62, Subpart GGG]

(b) Twenty-three (23) individual flares, installed in 1999 on gas wells installed in 1997, identified as GW-1 through GW-11 and GW-14 through GW-25 and each with a maximum gas flow rate of 60 scfm of landfill gas. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

(c) One (1) open gas vent flare, constructed in 1990, with a maximum gas flow rate of 200 scfm of landfill gas. Ten (10) active system gas collection wells (eight installed in March 1990, two installed in 1999 and modified in 2002), each with a maximum gas flow rate of 60 scfm of landfill gas, with the landfill gas controlled by the open gas vent flare. [40 CFR 63, Subpart AAAA] [40 CFR 62, Subpart GGG]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Gas Collection and Control System Compliance Schedule [326 IAC 8-8]

(a) Pursuant to 326 IAC 8-8 (Municipal Waste Landfills Located in Clark, Floyd, Lake, and Porter Counties) the following conditions shall apply to the source.

(1) Pursuant to 326 IAC 8-8-3, the following provisions of 40 CFR 60, Subpart WWW - Standard of Performance for Municipal Solid Waste Landfill (included as Attachment A to this permit) shall be applicable to this landfill.

(A) 40 CFR 60.751 Definitions
(B) 40 CFR 60.752 Standard for air emissions from MSW landfills
(C) 40 CFR 60.753 Operational Standards for collection and control systems
(D) 40 CFR 60.754 Test methods and procedures
(E) 40 CFR 60.755 Compliance Provisions
(F) 40 CFR 60.756 Monitoring Operations
(G) 40 CFR 60.757 Reporting requirements
(H) 40 CFR 60.758 Record Keeping requirements
(I) 40 CFR 60.759 Specifications for active collection systems

(2) An MSW landfill subject to the requirements of this rule may be subject to permit requirements under 326 IAC 2. A MSW landfill that makes modification to comply with the requirements of this rule may be subject to permit requirements contained in 326 IAC 10.

(b) Pursuant to 326 IAC 8-8-4 (Municipal Solid Waste Landfills - Compliance Deadlines), the Permittee shall install and operate an air emission collection and control system capable of meeting the emission guidelines established in 326 IAC 8-8-3(a)(2) and 40 CFR 60.752. This system shall be installed according to the following compliance schedule:

(1) Within six (6) months of providing notification to IDEM that construction has commenced, but no later than 18 months of issuance of this Significant Part Modification 089-28695-00143, the Permittee shall install and commence operation of the emission collection and control system required by this condition.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) closed solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul road), and improvements on the land used for disposal of solid waste that opened in 1955, closed in 1997 and has a design capacity of 3.6 million Megagram. [40 CFR 63, Subpart AAAA] [40 CFR 62, Subpart GGG]

(b) Twenty-three (23) individual flares, installed in 1999 on gas wells installed in 1997, identified as GW-1 through GW-11 and GW-14 through GW-25 and each with a maximum gas flow rate of 60 scfm of landfill gas. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

(c) One (1) open gas vent flare, constructed in 1990, with a maximum gas flow rate of 200 scfm of landfill gas. Ten (10) active system gas collection wells (eight installed in March 1990, two installed in 1999 and modified in 2002), each with a maximum gas flow rate of 60 scfm of landfill gas, with the landfill gas controlled by the open gas vent flare. [40 CFR 63, Subpart AAAA] [40 CFR 62, Subpart GGG]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.1.1 General Provision Relating to Approval and Promulgation of State Plans For Designated Facilities and Pollutants [40 CFR 62, Subpart A]

(a) Pursuant to 40 CFR 62, the Permittee shall comply with the provisions of 40 CFR Part 62 Subpart A – General Provisions for the landfill and flares except as otherwise specified in 40 CFR Part 62, Subpart GGG.

(b) Pursuant to 40 CFR 62.10, the Permittee shall submit all required notifications and reports to:

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.1.2 Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction Prior to May 30, 1991 and Have Not Been Modified or Reconstructed Since May 30, 1991 [40 CFR 62, Subpart GGG]

Pursuant to 40 CFR 60 Subpart GGG, the Permittee shall comply with the following provisions of the Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction Prior to May 30, 1991 and Have Not Been Modified or Reconstructed Since May 30, 1991 (included as Attachment C to this permit) for the landfill and flares:

(1) 40 CFR 62.14350
(2) 40 CFR 62.14351
(3) 40 CFR 62.14352
(4) 40 CFR 62.14353
(5) 40 CFR 62.14354
(6) 40 CFR 62.14355
(7) 40 CFR 62.14356
(8) Table 1 to Subpart GGG of Part 62

(9) Table 1 to Subpart GGG of Part 62
(10) Table 1 to Subpart GGG of Part 62
(11) Table 1 to Subpart GGG of Part 62

E.1.3 Gas Collection and Control System Compliance Schedule [326 IAC 8-8]

Within six (6) months of providing notification to IDEM that construction has commenced, but no later than 18 months of issuance of this Significant Part Modification 089-28695-00143, the Permittee shall install and commence operation of the emission collection and control system required by this condition.

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) closed solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul road), and improvements on the land used for disposal of solid waste that opened in 1955, closed in 1997 and has a design capacity of 3.6 million Megagram. [40 CFR 63, Subpart AAAA] [40 CFR 62, Subpart GGG]

(b) Twenty-three (23) individual flares, installed in 1999 on gas wells installed in 1997, identified as GW-1 through GW-11 and GW-14 through GW-25 and each with a maximum gas flow rate of 60 scfm of landfill gas. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

(c) One (1) open gas vent flare, constructed in 1990, with a maximum gas flow rate of 200 scfm of landfill gas. Ten (10) active system gas collection wells (eight installed in March 1990, two installed in 1999 and modified in 2002), each with a maximum gas flow rate of 60 scfm of landfill gas, with the landfill gas controlled by the open gas vent flare. [40 CFR 63, Subpart AAAA] [40 CFR 62, Subpart GGG]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.2.1 General Provision Relating to National Emission Standards for Hazardous Air Pollutants [326 IAC 20-1] [40 CFR 63, Subpart A]

(a) Pursuant to 40 CFR 63.1, the Permittee shall comply with the provisions of 40 CFR Part 63 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the landfill and flares except as otherwise specified in 40 CFR Part 63, Subpart AAAA.

(b) Pursuant to 40 CFR 63.12, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue,
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.2.2 National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills [326 IAC 20-67] [40 CFR 63, Subpart AAAA]

Pursuant to 40 CFR 63 Subpart AAAA, the Permittee shall comply with the following provisions of 40 CFR 63 Subpart AAAA National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (included as Attachment B to this permit), which are incorporated by reference as 326 IAC 20-67, for the landfill and flares:

(1) 40 CFR 63.1930
(2) 40 CFR 63.1935
(3) 40 CFR 63.1940
(4) 40 CFR 63.1945
(5) 40 CFR 63.1947
(6) 40 CFR 63.1950
(7) 40 CFR 63.1952

(8) 40 CFR 63.1955
(9) 40 CFR 63.1960
(10) 40 CFR 63.1965
(11) 40 CFR 63.1975
(12) 40 CFR 63.1980
(13) 40 CFR 63.1985
(14) 40 CFR 63.1990
(15) Table 1 to Subpart AAAA of Part 63

E.2.3 Gas Collection and Control System Compliance Schedule [326 IAC 8-8]

Within six (6) months of providing notification to IDEM that construction has commenced, but no later than 18 months of issuance of this Significant Part Modification 089-28695-00143, the Permittee shall install and commence operation of the emission collection and control system required by this condition.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Gary Sanitary Landfill
Source Address: 1900 Burr Street, Gary, Indiana 46406
Part 70 Permit No.: T089-34007-00143

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify) _____.

☐ Report (specify) _____.

☐ Notification (specify) _____.

☐ Affidavit (specify) _____.

☐ Other (specify) _____.

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Gary Sanitary Landfill
Source Address: 1900 Burr Street, Gary, Indiana 46406
Part 70 Permit No.: T089-34007-00143

This form consists of 2 pages **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12) • The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and • The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Gary Sanitary Landfill
Source Address: 1900 Burr Street, Gary, Indiana 46406
Part 70 Permit No.: T089-34007-00143

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attachment A

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

40 CFR 60, Subpart WWW-Municipal Solid Waste Landfills

SOURCE: 61 FR 9919, Mar. 12, 1996, unless otherwise noted.

§ 60.750 Applicability, designation of affected facility, and delegation of authority.

(a) The provisions of this subpart apply to each municipal solid waste landfill that commenced construction, reconstruction or modification on or after May 30, 1991. Physical or operational changes made to an existing MSW landfill solely to comply with subpart Cc of this part are not considered construction, reconstruction, or modification for the purposes of this section.

(b) The following authorities shall be retained by the Administrator and not transferred to the State: §60.754(a)(5).

(c) Activities required by or conducted pursuant to a CERCLA, RCRA, or State remedial action are not considered construction, reconstruction, or modification for purposes of this subpart.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32750, June 16, 1998]

§ 60.751 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act or in subpart A of this part.

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

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

Closed landfill means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under §60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.

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

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

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

Design capacity means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the State, local, or Tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. 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.

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

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

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

Flare means an open combustor without enclosure or shroud.

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

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

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

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

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

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

Modification means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of May 30, 1991. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion.

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

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

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

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

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

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

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

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

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

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32750, June 16, 1998; 64 FR 9262, Feb. 24, 1999]

§ 60.752 Standards for air emissions from municipal solid waste landfills.

(a) Each owner or operator of an MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume shall submit an initial design capacity report to the Administrator as provided in §60.757(a). The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. Submittal of the initial design capacity report shall fulfill the requirements of this subpart except as provided for in paragraphs (a)(1) and (a)(2) of this section.

(1) The owner or operator shall submit to the Administrator an amended design capacity report, as provided for in §60.757(a)(3).

(2) When an increase in the maximum design capacity of a landfill exempted from the provisions of §60.752(b) through §60.759 of this subpart on the basis of the design capacity exemption in paragraph (a) of this section results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator shall comply with the provision of paragraph (b) of this section.

(b) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, shall either comply with paragraph (b)(2) of this section or calculate an NMOC emission rate for the landfill using the procedures specified in §60.754. The NMOC emission rate shall be recalculated annually, except as provided in §60.757(b)(1)(ii) of this subpart. The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to part 70 or 71 permitting requirements.

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

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

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

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

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

(2) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:

(i) Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year:

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

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

(C) The collection and control system design plan shall either conform with specifications for active collection systems in §60.759 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to §60.759.

(D) The Administrator shall review the information submitted under paragraphs (b)(2)(i) (A),(B) and (C) 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.

(ii) Install a collection and control system that captures the gas generated within the landfill as required by paragraphs (b)(2)(ii)(A) or (B) and (b)(2)(iii) of this section within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in §60.757(c)(1) or (2).

(A) An active collection system shall:

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

(*2*) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of:

(*i*) 5 years or more if active; or

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

(*3*) Collect gas at a sufficient extraction rate;

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

(B) A passive collection system shall:

(*1*) Comply with the provisions specified in paragraphs (b)(2)(ii)(A)(*1*), (*2*), and (2)(ii)(A)(*4*) of this section.

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

(iii) 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) An open flare designed and operated in accordance with §60.18 except as noted in §60.754(e);

(B) A control system designed and operated to reduce NMOC by 98 weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in §60.754(d).

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

(*2*) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in §60.756;

(C) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii) (A) or (B) of this section.

(iv) Operate the collection and control device installed to comply with this subpart in accordance with the provisions of §§60.753, 60.755 and 60.756.

(v) The collection and control system may be capped or removed provided that all the conditions of paragraphs (b)(2)(v) (A), (B), and (C) of this section are met:

(A) The landfill shall be a closed landfill as defined in §60.751 of this subpart. A closure report shall be submitted to the Administrator as provided in §60.757(d);

(B) The collection and control system shall have been in operation a minimum of 15 years; and

(C) Following the procedures specified in §60.754(b) of this subpart, the calculated NMOC gas produced by the landfill shall be less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

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

(1) June 10, 1996 for MSW landfills that commenced construction, modification, or reconstruction on or after May 30, 1991 but before March 12, 1996;

(2) Ninety days after the date of commenced construction, modification, or reconstruction for MSW landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

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

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

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

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 18908, Apr. 10, 2000; 71 FR 55127, Sept. 21, 2006]

§ 60.753 Operational standards for collection and control systems.

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

(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 shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in §60.757(f)(1);

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

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

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

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

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

(i) The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;

(ii) A data recorder is not required;

(iii) Only two calibration gases are required, a zero and span, and ambient air may be used as the span;

(iv) A calibration error check is not required;

(v) The allowable sample bias, zero drift, and calibration drift are ±10 percent.

(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 shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

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

(f) Operate the control or treatment 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 shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 61778, Oct. 17, 2000]

§ 60.754 Test methods and procedures.

(a)(1) The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in paragraph (a)(1)(i) of this section or the equation provided in paragraph (a)(1)(ii) of this section. Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i), 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), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_O, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty 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) The following equation shall be used if the actual year-to-year solid waste acceptance rate is known.

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o M_i \left(e^{-kt_i}\right)\left(C_{NMOC}\right)\left(3.6\times10^{-9}\right)$$

where,

M_{NMOC}=Total NMOC emission rate from the landfill, megagrams per year

k=methane generation rate constant, $year^{-1}$

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

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

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

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

3.6×10^{-9}=conversion factor

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

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

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

Where:

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

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

R=average annual acceptance rate, megagrams per year

k=methane generation rate constant, $year^{-1}$

t = age of landfill, years

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

c=time since closure, years; for active landfill c=O and $e^{-kc}1$

3.6×10−9=conversion factor

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

(2) *Tier 1.* The owner or operator shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC emission rate calculated in paragraph (a)(1) of this section is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in §60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under §60.752(b)(1).

(ii) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the landfill owner shall either comply with §60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in paragraph (a)(3) of this section.

(3) *Tier 2.* The landfill owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of appendix A of this part. Method 18 of appendix A of this part may be used to analyze the samples collected by the Method 25 or 25C sampling procedure. 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 using Method 18, the owner or operator must identify all compounds in the sample and, as a minimum, test for those compounds published in the most recent Compilation of Air Pollutant Emission Factors (AP–42), minus carbon monoxide, hydrogen sulfide, and mercury. As a minimum, the instrument must be calibrated for each of the compounds on the list. Convert the concentration of each Method 18 compound to C_{NMOC}as hexane by multiplying by the ratio of its carbon atoms divided by six. If more than the required number of samples are taken, all samples must be used in the analysis. The landfill owner or operator must divide the NMOC concentration from Method 25 or 25C of appendix A of this part by six to convert from C_{NMOC}as carbon to C_{NMOC}as hexane. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three samples must be collected from the header pipe.

(i) The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in paragraph (a)(1) of this section.

(ii) If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the landfill owner or operator shall either comply with §60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in paragraph (a)(4) of this section.

(iii) If the resulting NMOC mass emission rate is less than 50 megagrams per year, the owner or operator shall submit a periodic estimate of the emission rate report as provided in §60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in this section.

(4) *Tier 3.* The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of this part. The landfill owner or operator shall estimate the NMOC mass emission rate using equations in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using a site-specific methane generation rate constant k, and the site-specific NMOC concentration as determined in paragraph (a)(3) of this section instead of the default values provided in paragraph (a)(1) of this section. The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

(i) If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the owner or operator shall comply with §60.752(b)(2).

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

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

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

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

where,

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

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

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

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

(2) The average NMOC concentration, C_{NMOC}, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of this part. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42). The sample location on the common header pipe shall be before any condensate removal or other gas

refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C of appendix A of this part by six to convert from C_{NMOC}as carbon to C_{NMOC}as hexane.

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

(c) When calculating emissions for PSD purposes, the owner or operator of each MSW landfill subject to the provisions of this subpart shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in §§51.166 or 52.21 of this chapter using AP–42 or other approved measurement procedures.

(d) For the performance test required in §60.752(b)(2)(iii)(B), Method 25, 25C, or Method 18 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 §60.752(b)(2)(i)(B). Method 3 or 3A shall be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42). The following equation shall be used to calculate efficiency:

Control Efficiency = $(NMOC_{in} - NMOC_{out})/(NMOC_{in})$

where,

$NMOC_{in}$= mass of NMOC entering control device

$NMOC_{out}$= mass of NMOC exiting control device

(e) For the performance test required in §60.752(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in §60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under §60.18(f)(4).

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32751, June 16, 1998; 65 FR 18908, Apr. 10, 2000; 65 FR 61778, Oct. 17, 2000; 71 FR 55127, Sept. 21, 2006]

§ 60.755 Compliance provisions.

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

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

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

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

where,

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

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

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, $year^{-1}$

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

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

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

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

where,

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

k=methane generation rate constant, $year^{-1}$

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

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

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

(iii) If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in 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 the equations in paragraphs (a)(1) (i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

(2) For the purposes of determining sufficient density of gas collectors for compliance with §60.752(b)(2)(ii)(A)(*2*), the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Administrator, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with §60.752(b)(2)(ii)(A)(*3*), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under §60.753(b). If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

(4) Owners or operators are not required to expand the system as required in paragraph (a)(3) of this section during the first 180 days after gas collection system startup.

(5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in §60.753(c). If a well exceeds

one of these operating parameters, action shall be initiated to correct the exceedance within 5 calendar days. If correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

(6) An owner or operator seeking to demonstrate compliance with §60.752(b)(2)(ii)(A)(*4*) through the use of a collection system not conforming to the specifications provided in §60.759 shall provide information satisfactory to the Administrator as specified in §60.752(b)(2)(i)(C) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with §60.753(a), each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in §60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of:

(1) 5 years or more if active; or

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

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

(1) After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a 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 shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells.

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

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

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

(ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be 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 shall be taken and the location shall 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 shall be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v) has been taken.

(iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph (c)(4) (ii) or (iii) of this section shall be re-monitored 1 month from the initial exceedance. If the 1-month remonitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month remonitoring shows an exceedance, the actions specified in paragraph (c)(4) (iii) or (v) shall be taken.

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

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

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

(1) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of this part, except that “methane” shall replace all references to VOC.

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

(3) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of this part, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of this part shall be used.

(4) The calibration procedures provided in section 4.2 of Method 21 of appendix A of this part shall be followed immediately before commencing a surface monitoring survey.

(e) The provisions of this subpart apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998]

§ 60.756 Monitoring of operations.

Except as provided in §60.752(b)(2)(i)(B),

(a) Each owner or operator seeking to comply with §60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:

(1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in §60.755(a)(3); and

(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in §60.755(a)(5); and

(3) Monitor temperature of the landfill gas on a monthly basis as provided in §60.755(a)(5).

(b) Each owner or operator seeking to comply with §60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment.

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

(2) A device that records flow to or bypass of the control device. The owner or operator shall either:

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

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

(c) Each owner or operator seeking to comply with §60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

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

(2) A device that records flow to or bypass of the flare. The owner or operator shall either:

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

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

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

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

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

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 60.757 Reporting requirements.

Except as provided in §60.752(b)(2)(i)(B),

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

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

(i) June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991 but before March 12, 1996 or

(ii) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.

(2) The initial design capacity report shall contain the following information:

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

(ii) The maximum design capacity of the landfill. Where the maximum design capacity is specified in the permit issued by the State, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with the relevant parameters as part of the report. The State, Tribal, local agency or Administrator may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

(3) An amended design capacity report shall 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 or above 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in §60.758(f).

(b) Each owner or operator subject to the requirements of this subpart shall submit an NMOC emission rate report to the Administrator initially and annually thereafter, except as provided for in paragraphs (b)(1)(ii) or (b)(3) of this section. The Administrator may request such additional information as may be necessary to verify the reported NMOC emission rate.

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

(i) The initial NMOC emission rate report may be combined with the initial design capacity report required in paragraph (a) of this section and shall be submitted no later than indicated in paragraphs (b)(1)(i)(A) and (B) of this section. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in paragraphs (b)(1)(ii) and (b)(3) of this section.

(A) June 10, 1996, for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or

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

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

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

(c) Each owner or operator subject to the provisions of §60.752(b)(2)(i) shall submit a collection and control system design plan to the Administrator within 1 year of the first report required under paragraph (b) of this section in which the emission rate equals or exceeds 50 megagrams per year, except as follows:

(1) If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in §60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year.

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

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

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

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

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

(ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and

(iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year.

(2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in §60.752(b)(2)(v) have been met.

(f) Each owner or operator of a landfill seeking to comply with §60.752(b)(2) using an active collection system designed in accordance with §60.752(b)(2)(ii) shall submit to the Administrator annual reports of the recorded information in (f)(1) through (f)(6) of this paragraph. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under §60.8. For enclosed combustion devices and flares, reportable exceedances are defined under §60.758(c).

(1) Value and length of time for exceedance of applicable parameters monitored under §60.756(a), (b), (c), and (d).

(2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under §60.756.

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

(4) All periods when the collection system was not operating in excess of 5 days.

(5) The location of each exceedance of the 500 parts per million methane concentration as provided in §60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(6) The date of installation and the location of each well or collection system expansion added pursuant to paragraphs (a)(3), (b), and (c)(4) of §60.755.

(g) Each owner or operator seeking to comply with §60.752(b)(2)(iii) shall include the following information with the initial performance test report required under §60.8:

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

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

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

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

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

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

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 60.758 Recordkeeping requirements.

(a) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of an MSW landfill subject to the provisions of §60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered §60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

(b) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs (b)(1) through (b)(4) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(ii):

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

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

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

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

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

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

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

(c) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The following constitute exceedances that shall be recorded and reported under §60.757(f):

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

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

(2) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under §60.756.

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

(4) Each owner or operator seeking to comply with the provisions of this subpart by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under §60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

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

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

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

(e) Except as provided in §60.752(b)(2)(i)(B), each owner or operator subject to the provisions of this subpart shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in §60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

(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", shall 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.

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32752, June 16, 1998; 65 FR 18909, Apr. 10, 2000]

§ 60.759 Specifications for active collection systems.

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

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

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

(3) The placement of gas collection devices determined in paragraph (a)(1) of this section shall control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

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

(ii) Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than 1 percent of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the Administrator upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

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

where,

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

k = methane generation rate constant, $year^{-1}$

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

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

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

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

3.6×10^{-9}= conversion factor

(iii) The values for k and C_{NMOC}determined in field testing shall be used if field testing has been performed in determining the NMOC emission rate or the radii of influence (this distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, $L_O$and C_{NMOC}provided in §60.754(a)(1) or the alternative values from §60.754(a)(5) shall be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in paragraph (a)(3)(i) of this section.

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

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

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

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

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

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

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

[61 FR 9919, Mar. 12, 1996, as amended at 63 FR 32753, June 16, 1998; 64 FR 9262, Feb. 24, 1999; 65 FR 18909, Apr. 10, 2000]

Attachment B

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart AAAA - National Emissions Standards for Municipal Solid Waste Landfills

SOURCE: 68 FR 2238, Jan. 16, 2003, unless otherwise noted.

§ 63.1930 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants for existing and new municipal solid waste (MSW) landfills. This subpart requires all landfills described in §63.1935 to meet the requirements of 40 CFR part 60, subpart Cc or WWW and requires timely control of bioreactors. This subpart also requires such landfills to meet the startup, shutdown, and malfunction (SSM) requirements of the general provisions of this part and provides that compliance with the operating conditions shall be demonstrated by parameter monitoring results that are within the specified ranges. It also includes additional reporting requirements.

§ 63.1935 Am I subject to this subpart?

You are subject to this subpart if you meet the criteria in paragraph (a) or (b) of this section.

(a) You are subject to this subpart if you own or operate a MSW landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition and meets any one of the three criteria in paragraphs (a)(1) through (3) of this section:

(1) Your MSW landfill is a major source as defined in 40 CFR 63.2 of subpart A.

(2) Your MSW landfill is collocated with a major source as defined in 40 CFR 63.2 of subpart A.

(3) Your MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m^3) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to §60.754(a) of the MSW landfills new source performance standards in 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan that applies to your landfill.

(b) You are subject to this subpart if you own or operate a MSW landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition, that includes a bioreactor, as defined in §63.1990, and that meets any one of the criteria in paragraphs (b)(1) through (3) of this section:

(1) Your MSW landfill is a major source as defined in 40 CFR 63.2 of subpart A.

(2) Your MSW landfill is collocated with a major source as defined in 40 CFR 63.2 of subpart A.

(3) Your MSW landfill is an area source landfill that has a design capacity equal to our greater than 2.5 million Mg and 2.5 million m^3 and that is not permanently closed as of January 16, 2003.

§ 63.1940 What is the affected source of this subpart?

(a) An affected source of this subpart is a MSW landfill, as defined in §63.1990, that meets the criteria in §63.1935(a) or (b). The affected source includes the entire disposal facility in a contiguous geographic space where household waste is placed in or on land, including any portion of the MSW landfill operated as a bioreactor.

(b) A new affected source of this subpart is an affected source that commenced construction or reconstruction after November 7, 2000. An affected source is reconstructed if it meets the definition of reconstruction in 40 CFR 63.2 of subpart A.

(c) An affected source of this subpart is existing if it is not new.

§ 63.1945 When do I have to comply with this subpart?

(a) If your landfill is a new affected source, you must comply with this subpart by January 16, 2003 or at the time you begin operating, whichever is last.

(b) If your landfill is an existing affected source, you must comply with this subpart by January 16, 2004.

(c) If your landfill is a new affected source and is a major source or is collocated with a major source, you must comply with the requirements in §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW.

(d) If your landfill is an existing affected source and is a major source or is collocated with a major source, you must comply with the requirements in §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 13, 2004, whichever occurs later.

(e) If your landfill is a new affected source and is an area source meeting the criteria in §63.1935(a)(3), you must comply with the requirements of §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW.

(f) If your landfill is an existing affected source and is an area source meeting the criteria in §63.1935(a)(3), you must comply with the requirements in §§63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 16, 2004, whichever occurs later.

§ 63.1947 When do I have to comply with this subpart if I own or operate a bioreactor?

You must comply with this subpart by the dates specified in §63.1945(a) or (b) of this subpart. If you own or operate a bioreactor located at a landfill that is not permanently closed as of January 16, 2003 and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3 , then you must install and operate a collection and control system that meets the criteria in 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW, the Federal plan, or EPA approved and effective State plan according to the schedule specified in paragraph (a), (b), or (c) of this section.

(a) If your bioreactor is at a new affected source, then you must meet the requirements in paragraphs (a)(1) and (2) of this section:

(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.

(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content instead of 180 days after liquids addition, use the procedures in §63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.

(b) If your bioreactor is at an existing affected source, then you must install and begin operating the gas collection and control system for the bioreactor by January 17, 2006 or by the date your bioreactor is required to install a gas collection and control system under 40 CFR part 60, subpart WWW, the Federal plan, or EPA approved and effective State plan or tribal plan that applies to your landfill, whichever is earlier.

(c) If your bioreactor is at an existing affected source and you do not initiate liquids addition to your bioreactor until later than January 17, 2006, then you must meet the requirements in paragraphs (c)(1) and (2) of this section:

(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.

(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content instead of 180 days after liquids addition, use the procedures in §63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.

§ 63.1950 When am I no longer required to comply with this subpart?

You are no longer required to comply with the requirements of this subpart when you are no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v) of subpart WWW, or the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to your landfill.

§ 63.1952 When am I no longer required to comply with the requirements of this subpart if I own or operate a bioreactor?

If you own or operate a landfill that includes a bioreactor, you are no longer required to comply with the requirements of this subpart for the bioreactor provided you meet the conditions of either paragraphs (a) or (b).

(a) Your affected source meets the control system removal criteria in 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW or the bioreactor meets the criteria for a nonproductive area of the landfill in 40 CFR 60.759(a)(3)(ii) of part 60, subpart WWW.

(b) The bioreactor portion of the landfill is a closed landfill as defined in 40 CFR 60.751, subpart WWW, you have permanently ceased adding liquids to the bioreactor, and you have not added liquids to the bioreactor for at least 1 year. A closure report for the bioreactor must be submitted to the Administrator as provided in 40 CFR 60.757(d) of subpart WWW.

(c) Compliance with the bioreactor control removal provisions in this section constitutes compliance with 40 CFR part 60, subpart WWW or the Federal plan, whichever applies to your bioreactor.

Standards

§ 63.1955 What requirements must I meet?

(a) You must fulfill one of the requirements in paragraph (a)(1) or (2) of this section, whichever is applicable:

(1) Comply with the requirements of 40 CFR part 60, subpart WWW.

(2) Comply with the requirements of the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR part 60, subpart Cc.

(b) If you are required by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan to install a collection and control system, you must comply with the requirements in §§63.1960 through 63.1985 and with the general provisions of this part specified in table 1 of this subpart.

(c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, you must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 60 subpart WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the SSM requirements in Subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every 6 months as specified in §63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average.

(d) If you own or operate a bioreactor that is located at a MSW landfill that is not permanently closed and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m^3 , then you must meet the requirements of paragraph (a) and the additional requirements in paragraphs (d)(1) and (2) of this section.

(1) You must comply with the general provisions specified in Table 1 of this subpart and §§63.1960 through 63.1985 starting on the date you are required to install the gas collection and control system.

(2) You must extend the collection and control system into each new cell or area of the bioreactor prior to initiating liquids addition in that area, instead of the schedule in 40 CFR 60.752(b)(2)(ii)(A)(*2*).

General and Continuing Compliance Requirements

§ 63.1960 How is compliance determined?

Compliance is determined in the same way it is determined for 40 CFR part 60, subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, you have failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Finally, you must develop a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

[68 FR 2238, Jan. 16, 2003, as amended at 71 FR 20462, Apr. 20, 2006]

§ 63.1965 What is a deviation?

A deviation is defined in §63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in paragraphs (a) through (c) of this section.

(a) A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) of subpart WWW are exceeded.

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

(c) A deviation occurs when a SSM plan is not developed or maintained on site.

[68 FR 2238, Jan. 16, 2003, as amended at 71 FR 20462, Apr. 20, 2006]

§ 63.1975 How do I calculate the 3-hour block average used to demonstrate compliance?

Averages are calculated in the same way as they are calculated in 40 CFR part 60, subpart WWW, except that the data collected during the events listed in paragraphs (a), (b), (c), and (d) 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.

Notifications, Records, and Reports

§ 63.1980 What records and reports must I keep and submit?

(a) Keep records and reports as specified in 40 CFR part 60, subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to your landfill, with one exception: You must submit the annual report described in 40 CFR 60.757(f) every 6 months.

(b) You must also keep records and reports as specified in the general provisions of 40 CFR part 60 and this part as shown in Table 1 of this subpart. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

(c) For bioreactors at new affected sources you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by §63.1947(a)(2) of this subpart.

(d) For bioreactors at existing affected sources, you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the compliance date

specified in §63.1947(b) of this subpart, unless you have previously submitted a compliance report for the bioreactor required by 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State plan or tribal plan.

(e) For bioreactors that are located at existing affected sources, but do not initiate liquids addition until later than the compliance date in §63.1947(b) of this subpart, you must submit the initial semiannual compliance report and performance tests results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by §63.1947(c) of this subpart.

(f) If you must submit a semiannual compliance report for a bioreactor as well as a semiannual compliance report for a conventional portion of the same landfill, you may delay submittal of a subsequent semiannual compliance report for the bioreactor according to paragraphs (f)(1) through (3) of this section so that the reports may be submitted on the same schedule.

(1) After submittal of your initial semiannual compliance report and performance test results for the bioreactor, you may delay submittal of the subsequent semiannual compliance report for the bioreactor until the date the initial or subsequent semiannual compliance report is due for the conventional portion of your landfill.

(2) You may delay submittal of your subsequent semiannual compliance report by no more than 12 months after the due date for submitting the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) for the bioreactor. The report shall cover the time period since the previous semiannual report for the bioreactor, which would be a period of at least 6 months and no more than 12 months.

(3) After the delayed semiannual report, all subsequent semiannual reports for the bioreactor must be submitted every 6 months on the same date the semiannual report for the conventional portion of the landfill is due.

(g) If you add any liquids other than leachate in a controlled fashion to the waste mass and do not comply with the bioreactor requirements in §§63.1947, 63.1955(c) and 63.1980(c) through (f) of this subpart, you must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. You must document the calculations and the basis of any assumptions. Keep the record of the calculations until you cease liquids addition.

(h) If you calculate moisture content to establish the date your bioreactor is required to begin operating the collection and control system under §63.1947(a)(2) or (c)(2), keep a record of the calculations including the information specified in paragraph (g) of this section for 5 years. Within 90 days after the bioreactor achieves 40 percent moisture content, report the results of the calculation, the date the bioreactor achieved 40 percent moisture content by weight, and the date you plan to begin collection and control system operation.

Other Requirements and Information

§ 63.1985 Who enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. 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 U.S. 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 standards in §63.1955. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

§ 63.1990 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, 40 CFR part 60, subparts A, Cc, and WWW; 40 CFR part 62, subpart GGG, and subpart A of this part, and this section that follows:

Bioreactor means a MSW landfill or portion of a MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation, (including any operating limit), or work practice standard in this subpart during SSM, regardless of whether or not such failure is permitted by this subpart.

Emissions limitation means any emission limit, opacity limit, operating limit, or visible emissions limit.

EPA approved State plan means a State plan that EPA has approved based on the requirements in 40 CFR part 60, subpart B to implement and enforce 40 CFR part 60, subpart Cc. An approved State plan becomes effective on the date specified in the notice published in the Federal Register announcing EPA's approval.

Federal plan means the EPA plan to implement 40 CFR part 60, subpart Cc for existing MSW landfills located in States and Indian country where State plans or tribal plans are not currently in effect. On the effective date of an EPA approved State or tribal plan, the Federal plan no longer applies. The Federal plan is found at 40 CFR part 62, subpart GGG.

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

Tribal plan means a plan submitted by a tribal authority pursuant to 40 CFR parts 9, 35, 49, 50, and 81 to implement and enforce 40 CFR part 60, subpart Cc.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

As stated in §§63.1955 and 63.1980, you must meet each requirement in the following table that applies to you.

Table 1 to Subpart AAAA of Part 63—Applicability of NESHAP General Provisions to Subpart AAAA

Part 63 Citation	Description	Explanation
63.1(a)	Applicability: general applicability of NESHAP in this part	Affected sources are already subject to the provisions of paragraphs (a)(10)–(12) through the same provisions under 40 CFR, part 60 subpart A.
63.1(b)	Applicability determination for stationary sources	
63.1(e)	Title V permitting	
63.2	Definitions	
63.4	Prohibited activities and circumvention	Affected sources are already subject to the provisions of paragraph (b) through the same provisions under 40 CFR, part 60 subpart A.
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	
63.6(e)	Operation and maintenance requirements, startup, shutdown and malfunction plan provisions	
63.6(f)	Compliance with nonopacity emission standards	Affected sources are already subject to the provisions of paragraphs (f)(1) and (2)(i) through the same provisions under 40 CFR, part 60 subpart A.
63.10(b)(2)(i)–(b)(2)(v)	General recordkeeping requirements	

Part 63 Citation	Description	Explanation
63.10(d)(5)	If actions taken during a startup, shutdown and malfunction plan are consistent with the procedures in the startup, shutdown and malfunction plan, this information shall be included in a semi-annual startup, shutdown and malfunction plan report. Any time an action taken during a startup, shutdown and malfunction plan is not consistent with the startup, shutdown and malfunction plan, the source shall report actions taken within 2 working days after commencing such actions, followed by a letter 7 days after the event	
63.12(a)	These provisions do not preclude the State from adopting and enforcing any standard, limitation, etc., requiring permits, or requiring emissions reductions in excess of those specified	
63.15	Availability of information and confidentiality	

Attachment C

Title 40: Protection of Environment

PART 62- APPROVAL AND PROMULGATION OF STATE PLANS FOR DESIGNATED FACILITIES AND POLLUTANTS

Subpart GGG —Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction Prior to May 30, 1991 and Have Not Been Modified or Reconstructed Since May 30, 1991

Source: 64 FR 60703, Nov. 8, 1999, unless otherwise noted.

§ 62.14350 Scope and delegation of authority.

(a) This subpart contains emission requirements and compliance schedules for the control of designated pollutants from certain municipal solid waste landfills in accordance with section 111(d) of the Clean Air Act and 40 CFR part 60, subpart B. This municipal solid waste landfills Federal plan applies to each designated facility as defined in §62.14352 of this subpart that is not covered by an EPA approved and currently effective State or Tribal plan.

(b) The following authorities shall be retained by the Administrator and not transferred to the State or Tribe upon delegation of authority to the State or Tribe to implement and enforce the Federal plan pursuant to sections 101(a)(3) and 111 of the Clean Air Act:

(1) Approval of alternative methods to determine site-specific NMOC concentration (C_{NMOC}) or site-specific methane generation rate constant (k) used in calculating the annual NMOC emission rate (as provided in 40 CFR 60.754(a)(5) of subpart WWW),

(2) Alternative emission standards,

(3) Major alternatives[1] to test methods,

[1] Major changes to test methods or to monitoring are modifications made to a federally enforceable test method or to a federal monitoring requirement. These changes would involve the use of unproven technology or procedures or an entirely new method (which is sometimes necessary when the required test method or monitoring requirement is unsuitable).

(4) Major alternatives to monitoring, or

(5) Waivers of recordkeeping.

§ 62.14351 Definitions.

Terms used but not defined in this subpart have the meaning given them in the Clean Air Act and 40 CFR part 60, subparts A, B, and WWW.

Achieve final compliance means to connect and operate the collection and control system as specified in the final control plan. Within 180 days after the date the landfill is required to achieve final compliance, the initial performance test must be conducted.

Award contract means the MSW landfill owner or operator enters into legally binding agreements or contractual obligations that cannot be canceled or modified without substantial financial loss to the MSW landfill owner or operator. The MSW landfill owner or operator may award a number of contracts to install the collection and control system. To meet this increment of progress, the MSW landfill owner or operator must award a contract or contracts to initiate on-site construction or installation of the collection and control system.

Complete on-site construction means that all necessary collection system components and air pollution control devices identified in the final control plan are on site, in place, and ready for operation.

Design capacity means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the State, local, or Tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. 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.

EPA approved State plan means a State plan that EPA has approved based on the requirements in 40 CFR part 60, subpart B to implement and enforce 40 CFR part 60, subpart Cc. An approved State plan becomes effective on the date specified in the notice published in theFederal Registerannouncing EPA's approval.

Federal Indian Reservation means for purposes of the Clean Air Act, all land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation.

Final control plan (Collection and control system design plan) means a plan that describes the collection and control system that will capture the gas generated within an MSW landfill. The collection and control system design plan must be prepared by a professional engineer and must describe a collection and control system that meets the requirements of 40 CFR 60.752(b)(2)(ii). The final control plan must contain engineering specifications and drawings of the collection and control system. The final control plan must include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed by the owner or operator. The final control plan must either conform with the specifications for active collection systems in 40 CFR 60.759 or include a demonstration that shows that based on the size of the landfill and the amount of waste expected to be accepted, the system is sized properly to collect the gas, control emissions of NMOC to the required level and meet the operational standards for a landfill.

Indian Country means all land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation; all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State; and all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

Initiate on-site construction means to begin any of the following: installation of the collection and control system to be used to comply with the emission limits as outlined in the final control plan; physical preparation necessary for the installation of the collection and control system to be used to comply with the final emission limits as outlined in the final control plan; or, alteration of an existing collection and control system to be used to comply with the final emission limits as outlined in the final control plan.

Modification means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of May 30, 1991. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion.

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

Negative declaration letter means a letter to EPA declaring that there are no existing MSW landfills in the State or that there are no existing MSW landfills in the State that must install collection and control systems according to the requirements of 40 CFR part 60, subpart Cc. The negative declaration letter must include the design capacities of any existing MSW landfills with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters.

Protectorate means American Samoa, the Commonwealth of Puerto Rico, the District of Columbia, Guam, the Northern Mariana Islands, and the Virgin Islands.

State means any of the 50 United States and the protectorates of the United States.

State plan means a plan submitted pursuant to section 111(d) of the Clean Air Act and 40 CFR part 60, subpart B that implements and enforces 40 CFR part 60, subpart Cc. State plans include plans developed by States, local agencies, and protectorates.

Tribal plan means a plan submitted by a Tribal Authority pursuant to 40 CFR parts 9, 35, 49, 50, and 81 that implements and enforces 40 CFR part 60, subpart Cc.

§ 62.14352 Designated facilities.

(a) The designated facility to which this subpart applies is each municipal solid waste landfill in all States, protectorates, and Indian Country that meets the conditions of paragraphs (a)(1) and (a)(2) of this section, except for landfills exempted by paragraphs (b) and (c) of this section.

(1) The municipal solid waste landfill commenced construction, reconstruction, or modification before May 30, 1991 (landfills that commence construction, modification, or reconstruction on or after May 30, 1991 are subject to 40 CFR part 60, subpart WWW), and

(2) The municipal solid waste landfill has accepted waste at any time since November 8, 1987 or the landfill has additional capacity for future waste deposition.

(b) A municipal solid waste landfill regulated by an EPA approved and currently effective State or Tribal plan is not subject to the requirements of this subpart. States that have an approved and effective State plan are listed in table 1 of this subpart. Notwithstanding the exclusions in table 1 of this subpart, any MSW landfill located in a State or portion of Indian country that does not have an EPA approved and currently effective State or Tribal plan is subject to the requirements of this subpart.

(c) A municipal solid waste landfill located in a State, locality, or portion of Indian country that submitted a negative declaration letter is not subject to the requirements of this subpart other than the requirements in the definition of design capacity to recalculate the site-specific density annually and in §62.14355 to submit an amended design capacity report in the event that the recalculated design capacity is equal to or greater than 2.5 million megagrams and 2.5 million cubic meters. However, if the existing municipal solid waste landfill already has a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, then it is subject to the requirements of the Federal plan. States, localities, or portions of Indian country that submitted negative declaration letters are listed in table 2 of this subpart.

(d) Physical or operational changes made to an existing municipal solid waste landfill solely to comply with an emission guideline are not considered a modification or reconstruction and would not subject an existing municipal solid waste landfill to the requirements of 40 CFR part 60, subpart WWW.

(e) For purposes of obtaining an operating permit under title V of the Clean Air Act, the owner or operator of a municipal solid waste landfill subject to this subpart with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not subject to the requirement to obtain an operating permit for the landfill under part 70 or 71 of this chapter, unless the landfill is otherwise subject to either part 70 or 71. For purposes of submitting a timely application for an operating permit under part 70 or 71, the owner or operator of a municipal solid waste landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters on January 7, 2,000 and not otherwise subject to either part 70 or 71, becomes subject to the requirements of §70.5(a)(1)(i) or §71.5(a)(1)(i) of this chapter April 6, 2000, even if the initial design capacity report is submitted earlier. In addition, the owner or operator of a municipal solid waste landfill subject to this subpart with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters on January 7, 2000, and not otherwise subject to either part 70 or 71, but whose design capacity subsequently increases to equal or exceed 2.5 million megagrams and 2.5 million cubic meters by a change that is not a modification or reconstruction becomes subject to the requirements of §70.5(a)(1)(i) or §71.5(a)(1)(i) of this chapter upon the date the amended design capacity report is due.

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

(1) The landfill was never subject to the requirement for a control system under §62.14353 of this subpart; or

(2) The owner or operator meets the conditions for control system removal specified in 40 CFR 60.752(b)(2)(v).

§ 62.14353 Standards for municipal solid waste landfill emissions.

(a) The owner or operator of a designated facility having a design capacity less than 2.5 million megagrams or 2.5 million cubic meters must comply with the requirements of 40 CFR 60.752(a) in addition to the applicable reporting and recordkeeping requirements specified in this subpart.

(b) The owner or operator of a designated facility having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters must comply with the requirements of 40 CFR 60.752(b) in addition to the applicable reporting and recordkeeping requirements specified in this subpart.

§ 62.14354 Procedures, test methods, and monitoring.

(a) The owner or operator of a designated facility having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters must calculate the landfill nonmethane organic compounds emission rate using the procedures listed in 40 CFR 60.754, as applicable, to determine whether the landfill nonmethane organic compounds emission rate equals or exceeds 50 megagrams per year.

(b) The owner or operator of a designated facility with a gas collection and control system used to comply with §62.14353(b) must comply with the operational standards in 40 CFR 60.753; the test procedures in 40 CFR 60.754(b) and (d); the compliance provisions in 40 CFR 60.755; and the monitoring provisions in 40 CFR 60.756, unless alternative procedures have been approved.

§ 62.14355 Reporting and recordkeeping requirements.

(a) The owner or operator of a designated facility must comply with the recordkeeping and reporting provisions listed in 40 CFR 60.757 and 60.758, except as provided for under paragraphs (a)(1) and (a)(2) of this section.

(1) The initial design capacity report for a designated facility is due within 90 days of the effective date of this subpart. Existing MSW landfills with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters that are located in States that submitted a negative declaration letter are not required to submit an initial design capacity report provided that the MSW landfill's design capacity was included in the negative declaration letter.

(2) The initial nonmethane organic compounds emission rate report for a designated facility is due within 90 days of the effective date of this subpart.

(b) The owner or operator of a designated facility must submit 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 §62.14356(a)(1) through (a)(5) of this subpart has been achieved. The notification must be signed by the owner or operator of the landfill.

(1) For the first increment of progress, the final control plan (collection and control system design plan) must be submitted in addition to the notification. 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.

(c) The owner or operator of a designated facility who fails to meet any increment of progress specified in §62.14356(a)(1) through (a)(5) of this subpart according to the applicable schedule in §62.14356 of this subpart 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 §62.14356.

(d) 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 §62.14356(d) of this subpart must do so by the date specified for submitting the final control plan. The date for submitting the final control plan is specified in §62.14356(c)(1) and (c)(2) of this subpart, 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 3 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.

§ 62.14356 Compliance schedules and increments of progress.

(a) Increments of progress. The owner or operator of a designated facility that has a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and a nonmethane organic compound emission rate greater than or equal to 50 megagrams per year must achieve the increments of progress specified in paragraphs (a)(1) through (a)(5) of this section to install air pollution control devices to meet the emission standards specified in §62.14353(b) of this subpart. (Refer to §62.14351 for a definition of each increment of progress.)

(1) Submit control plan: Submit a final control plan (collection and control system design plan) according to the requirements of §62.14353(b) of this subpart and 40 CFR 60.752(b)(2).

(2) Award contract(s): Award contract(s) to initiate on-site construction or initiate on-site installation of emission collection and/or control equipment.

(3) Initiate on-site construction: Initiate on-site construction or initiate on-site installation of emission collection and/or control equipment as described in the EPA-approved final control plan.

(4) Complete on-site construction: Complete on-site construction and installation of emission collection and/or control equipment.

(5) Achieve final compliance: Complete construction in accordance with the design specified in the EPA-approved final control plan and connect the landfill gas collection system and air pollution control equipment such that they are fully operating. The initial performance test must be conducted within 180 days after the date the facility is required to achieve final compliance.

(b) Compliance date. For each designated facility that has a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and a nonmethane organic compound emission rate greater than or equal to 50 Mg per year, planning, awarding of contracts, and installation of municipal solid waste landfill air emission collection and control equipment capable of meeting the standards in §62.14353(b) must be accomplished within 30 months after the date the initial emission rate report (or the annual emission rate report) first shows that the nonmethane organic compounds emission rate equals or exceeds 50 megagrams per year.

(c) Compliance schedules. The owner or operator of a designated facility that has a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters and a nonmethane organic compound emission rate greater than or equal to 50 megagrams per year must achieve the increments of progress specified in paragraphs (a)(1) through (a)(5) of this section according to the schedule specified in paragraph (c)(1) or (c)(2) of this section, unless a site-specific schedule is approved by EPA.

(1) The owner or operator of a designated facility must achieve the increments of progress according to the schedule in table 3 of this subpart, except for those affected facilities specified in paragraph (c)(2) of this section. Once this subpart becomes effective on January 7, 2000, any designated facility to which this subpart applies will remain subject to the schedule in table 3 if a subsequently approved State or Tribal plan contains a less stringent schedule, (i.e., a schedule that provides more time to comply with increments 1, 4 and/or 5 than does this Federal plan).

(2) The owner or operator of the specified designated facility in table 4 of this subpart must achieve the increments of progress according to the schedule in table 4 of this subpart.

(d) For designated facilities that are subject to the schedule requirements of paragraph (c)(1) of this section, the owner or operator (or the State or Tribal air pollution control authority) may submit to the appropriate EPA Regional Office for approval alternative dates for achieving increments 2 and 3.

Table 1 to Subpart GGG of Part 62—States That Have an Approved and Effective State Plan[a]

State plan	Effective date of state plan[b]
Alabama	12/07/98
Allegheny County, Pennsylvania	04/16/99
Arizona	11/19/99
California	11/22/99
Colorado	09/28/98

State plan	Effective date of state plan[b]
Delaware	11/16/99
Florida	08/03/99
Georgia	01/12/99
Illinois	01/22/99
Iowa	06/22/98
Kansas	05/19/98
Kentucky	06/21/99
Louisiana	10/28/97
Maryland	11/8/99
Minnesota	09/25/98
Missouri	06/23/98
Montana	09/08/98
Nashville, Tennessee	02/16/99
Nebraska	06/23/98
Nevada	11/19/99
New Mexico	02/10/98
New York	09/17/99
North Dakota	02/13/98
Ohio	10/06/98
Oklahoma	05/18/99
Oregon	08/25/98
South Carolina	10/25/99
South Dakota	08/02/99
Tennessee	11/29/99
Texas	08/16/99
Utah	03/16/98
Wyoming	07/31/98

[a]This table is provided as a matter of convenience and is not controlling in determining whether a MSW landfill is subject to the Federal plan. A MSW landfill is subject to this Federal plan if it commenced construction before May 30, 1991 and has not been modified or reconstructed on or after that date and is not covered by an approved and currently effective State or Tribal plan.

[b]The State plan is expected to become effective on the date indicated. However, if the State plan does not become effective on the date indicated, the Federal plan applies until the State plan becomes effective.

Table 2 to Subpart GGG of Part 62—States That Submitted a Negative Declaration Letter[a]

State, locality, or portion of Indian country	Date of negative declaration
District of Columbia	09/11/97
New Hampshire	07/22/98
Philadelphia, Pennsylvania	02/27/96
Rhode Island	05/27/98
Vermont	08/20/96

[a]A MSW landfill with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters located in an area for which a negative declaration letter was submitted is subject to the Federal plan, notwithstanding the negative declaration letter and this table 2.

Table 3 to Subpart GGG of Part 62—Generic Compliance Schedule and Increments of Progress[a]

Increment	Date
Increment 1—Submit final control plan	1 year after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 50 Mg/yr.[b]
Increment 2—Award Contracts	20 months after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 50 Mg/yr.[b]
Increment 3—Begin on-site construction	24 months after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 50 Mg/yr.[b]
Increment 4—Complete on-site construction	30 months after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 50 Mg/yr.[b]
Increment 5—Final compliance	30 months after initial NMOC emission rate report or the first annual emission rate report showing NMOC emissions ≥ 50 Mg/yr.[b]

[a]Table 3 of subpart GGG applies to landfills with design capacities ≥2.5 million megagrams and 2.5 million cubic meters that are subject to this subpart except those with site-specific compliance schedules shown in table 4 of subpart GGG.

[b]NMOC = nonmethane organic compounds Mg/yr = megagrams per year

Table 4 to Subpart GGG of Part 62—Site-Specific Compliance Schedules and Increments of Progress [Reserved]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Gary Sanitary Landfill
Source Location:	1900 Burr Street, Gary, IN 46406
County:	Lake
SIC Code:	4953 (Refuse Systems)
Permit Renewal No.:	T089-34007-00143
Permit Reviewer:	Heath Hartley

On August 4, 2014, the Office of Air Quality (OAQ) had a notice published in The Post Tribune in Merrillville, Indiana and The Times in Munster, Indiana, stating that Gary Sanitary Landfill had applied for a Part 70 Operating Permit Renewal. The notice also stated that the OAQ proposed to issue a Part 70 Operating Permit Renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

On September 3, 2014, Gary Sanitary Landfill submitted comments to IDEM, OAQ on the draft Part 70 Operating Permit Renewal.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

Gary Sanitary Landfill requests to revise the emission unit descriptions throughout the permit as indicated below. As described in the Landfill Gas Collection and Control System Design Plan for the Gary Sanitary Landfill (September 2002), the landfill closed in 1997 with approximately 3.6 million Megagram of in place waste. A proposed expansion (Phase I and Phase II) which would have increased the capacity to approximately 4.367 million Megagram was never completed.

(a) One (1) closed solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul road), and improvements on the land used for disposal of solid waste that opened in the 1955, closed in 1997 and has a design capacity of 3.6 million Megagram;

(b) Originally, twenty-five (25) individual flares exited, installed in 1999, identified as GW-1 through GW-25. As of April 2003, twenty-three (23) individual flares exit since G-12 and G-13 were routed to the open gas main flare header.

(c) One (1) open gas main flare, constructed in 1990, with a maximum gas flow rate of 200 scfm of landfill gas. As of April 2003, ten (10) individual collection wells connect to the open gas main flare system.

Response to Comment 1:

The permit has been revised as follows:

A.2 Emission Units and Pollution Control Equipment Summary
[326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

This stationary source consists of the following emission units and pollution control devices:

~~(c)~~**(a)** One (1) closed solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul road), and improvements on the land used for disposal of solid waste that opened in ~~the 1950's~~**1955**, closed in 1997 and has a design capacity of ~~4.367~~**3.6** million Megagram. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

~~(a)~~**(b)** Twenty-three (23) individual ~~gas vent~~ flares, installed in 1999 on gas wells installed in 1997, identified as GW-1 through GW-~~23~~**11 and GW-14 through GW-25** and each with a maximum gas flow rate of 60 scfm of landfill gas. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

~~(b)~~**(c)** One (1) open gas vent flare, constructed in ~~1996~~**1990**, with a maximum gas flow rate of 200 scfm of landfill gas. **Ten (10) active system gas collection wells (eight installed in March 1990, two installed in 1999 and modified in 2002), each with a maximum gas flow rate of 60 scfm of landfill gas, with the landfill gas controlled by the open gas vent flare.** [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

~~(d) Ten (10) active system gas collection wells (eight installed in March 1990, two installed in 1999 and modified in 2002), identified as GW-1 through GW-10, each with a maximum gas flow rate of 60 scfm of landfill gas, with the landfill gas controlled by the open gas vent flare. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]~~

Note: This change has also been made in Sections D.1, E.1 and E.2.

Comment 2:

In my opinion, I do not believe the requirement 40 CFR 60.750 apply to Gary Landfill because it does not meet the applicability requirement; no construction, reconstruction or modification made as of May 30, 1991.

Response to Comment 2:

This source is subject to 326 IAC 8-8 (Municipal Solid Waste Landfills), because it is an existing municipal soild waste landfill and has a design capacity greater than 100,000 Mg. Pursuant to 326 IAC 8-8-3, the source complies with 326 IAC 8-8 by complying with the following provisions of 40 CFR 60, Subpart WWW:

(1) 40 CFR 60.751
(2) 40 CFR 60.752
(3) 40 CFR 60.753
(4) 40 CFR 60.754
(5) 40 CFR 60.755
(6) 40 CFR 60.756
(7) 40 CFR 60.757
(8) 40 CFR 60.758
(9) 40 CFR 60.759

No changes were made as a result of this comment.

Comment 3:

Gary Sanitary Landfill requests to remove the following section in the permit as follows:

D.1.1 Gas Collection and Control System Compliance Schedule [326 IAC 8-8]

(a) Pursuant to 326 IAC 8-8 (Municipal Waste Landfills Located in Clark, Floyd, Lake, and Porter Counties) the following conditions shall apply to the source.

.....

(b) Pursuant to 326 IAC 8-8-4 (Municipal Solid Waste Landfills - Compliance Deadlines), the Permittee shall install and operate an air emission collection and control system capable of meeting the emission guidelines established in 326 IAC 8-8-3(a)(2) and 40 CFR 60.752. This system shall be installed according to the following compliance schedule:

(1) ~~Within six (6) months of providing notification to IDEM that construction has commenced, but no later than 18 months of issuance of this Significant Part Modification 089-28695-00143,~~ the Permittee shall install and commence operation of the emission collection and control system required ~~by this condition~~.

Response to Comment 3:

Currently, the collection and control system has not been installed; therefore this condition is still required. No changes were made as a result of this comment.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Heath Hartley at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8217 or toll free at 1-800-451-6027 extension 2-8217.

(b) A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Gary Sanitary Landfill
Source Location:	1900 Burr Street, Gary, IN 46406
County:	Lake
SIC Code:	4953 (Refuse Systems)
Permit Renewal No.:	T089-34007-00143
Permit Reviewer:	Heath Hartley

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Gary Sanitary Landfill relating to the continued operation of a closed municipal solid waste landfill. On December 18, 2013, Gary Sanitary Landfill submitted an application to the OAQ requesting to renew its operating permit. Gary Sanitary Landfill was issued a Part 70 Operating Permit (T089-11966-00143) on October 5, 2009.

On July 1, 2014 and July 28, 2014, the source provide additional information regarding the gas wells and requested that the permit be revised to indicate that two (2) of the twenty-five (25) individual gas vent wells (passive wells) are now plumbed as active system gas collection wells (plumbed in 2002). Therefore, there are now twenty-three (23) individual gas vent wells (passive wells) and ten (10) active system gas collection wells.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) Twenty-three (23) individual gas vent flares, installed in 1999 on gas wells installed in 1997, identified as GW-1 through GW-23 and each with a maximum gas flow rate of 60 scfm of landfill gas. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

(b) One (1) open gas vent flare, constructed in 1996, with a maximum gas flow rate of 200 scfm of landfill gas. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

(c) One (1) closed solid waste disposal facility having the meaning described in 40 CFR 60.751 pertaining to all contiguous land and structures, other appurtenances (including haul road), and improvements on the land used for disposal of solid waste that opened in the 1950's, closed in 1997 and has a design capacity of 4.367 million Megagram. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

(d) Ten (10) active system gas collection wells (eight installed in March 1990, two installed in 1999 and modified in 2002), identified as GW-1 through GW-10, each with a maximum gas flow rate of 60 scfm of landfill gas, with the landfill gas controlled by the open gas vent flare. [40 CFR 63, Subpart AAAA][40 CFR 62, Subpart GGG]

Insignificant Activities

The source also consists of the following insignificant activities:

(a) Paved and unpaved roads and parking lots with public access [326 IAC 6-4].

(b) Activities or categories not previously identified with emission equal to or less than insignificant thresholds, consisting of the North pond lift station for the leachate system.

Existing Approvals

The source was issued Part 70 Operating Permit (T089-11966-00143) on October 5, 2009, the source has been operating under the following additional approval:

(a) Significant Permit Modification (Appeal Resolution) No. 089-28695-00143, issued July 11, 2012.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Lake County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O_3	40 CFR 81.315 as amended by 77 FR 34228.[1,2]
$PM_{2.5}$	Attainment effective February 6, 2012, for the annual PM2.5 standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM2.5 standard.
PM_{10}	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area for the 1-hour ozone standard which was revoked effective June 15, 2005.
[2]The department has filed a legal challenge to U.S. EPA's designation in 77 FR 34228.

(a) Ozone Standards

U.S. EPA, in the Federal Register Notice 77 FR 112 dated June 11, 2012, has designated Lake as nonattainment for ozone. On August 1, 2012, the air pollution control board issued an emergency rule adopting the U.S. EPA's designation. This rule became effective August 9, 2012. IDEM does not agree with U.S. EPA's designation of nonattainment. IDEM filed a suit against U.S. EPA in the U.S. Court of Appeals for the DC Circuit on July 19, 2012. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's designation. Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and NO_x emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(b) $PM_{2.5}$
Lake County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective June 28, 2011. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	3.5
PM_{10}	3.5
$PM_{2.5}$	3.5
SO_2	3.3
NO_x	8.3
VOC	9.9
CO	157.2
Biogenic GHGs as CO_2e	8,141
Non-Biogenic CO2 as CO_2e	74,182
HCl	1.7
Toluene	1.3
Total HAP	5.4

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of CO is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

(c) The unlimited/uncontrolled potential to emit greenhouse gases (GHGs) is 74,182 tons of non-biogenic GHGs per year and 8,141 tons of biogenic CO_2 per year.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)										
Process/ Emission Unit	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	Biogenic CO_2 (CO_2e)	Non-Biogenic GHG (CO_2e)	Total HAPs	Worst Single HAP
Landfill	0	0	0	0	0	0.2	1.5	8,141	see note***	0.07	0.03 Toluene
(23) gas vent flares	3.1	3.1	3.1	2.9	7.3	0	136.0	7,997	1,523	1.46	1.46 HCl
Open gas vent flare	0.4	0.4	0.4	0.4	1.1	0	19.7			0.21	0.21 HCl
Unpaved Roads	0.01	1.8E-3	1.8E-3	0	0	0	0	0	0	0	0
Total PTE of Entire Source	**3.5**	**3.5**	**3.5**	**3.3**	**8.3**	**0.2**	**157.2**	**16,138**	**1,523**	**1.7**	**1.7 HCl**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e		25	10
PSD Major Source Thresholds	250	250	250	250	NA	NA	250	100,000 CO_2e		NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	NA	NA	100	100	NA	NA	NA	NA	NA

* Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
***The controlled emissions from the Landfill are being controlled by flares and are therefore reflected in the calculations for the flares.

(a) This existing stationary source is not major for PSD because the emissions of each regulated pollutant, excluding GHGs, are less than two hundred fifty (<250) tons per year and it is not in one of the twenty-eight (28) listed source categories.

(b) This existing stationary source is not major for Emission Offset because the emissions of the nonattainment pollutants, NOx and VOC, are less than one hundred (<100) tons per year.

(c) The potential to emit (after controls) of greenhouse gases (GHGs) is 1,523 tons of non-biogenic GHGs per year and 16,138 tons of biogenic CO_2 per year. If the biogenic CO_2 emissions are included in the source-wide potential to emit (PTE) GHGs, the total PTE of GHGs would be 17,661 tons of CO_2 equivalent emissions (CO_2e) per year, which is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

Federal Rule Applicability

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The landfill and flares are exempt from Compliance Assurance Monitoring under 40 CFR 64.2(b)(i), as they are regulated under emission limitations or standards (NSPS and NESHAP) proposed by the Administrator after November 15, 1990 for NMOC. All other emissions do not have a control device or are less than major source thresholds.

NSPS:

(b) The landfill and flares at this source are not subject to the New Source Performance Standard for Municipal Solid Waste Landfills, 40 CFR 60, Subpart WWW (60.750 - 60.759) (326 IAC 12), because the landfill has not commenced construction, reconstruction or modification on or after May 30, 1991.

Pursuant to 40 CFR 60.751 (Definitions), "modification" means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of May 30, 1991. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion. This source installed gas vent flares after 1991, but has not increased the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of May 30, 1991. Therefore, this source has not commenced modification on or after May 30, 1991.

(c) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

NESHAP:

(d) The landfill and flares at this source are subject to the requirements of National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Municipal Solid Waste Landfills (40 CFR 63, Subpart AAAA (63.1930 - 63.1952) (326 IAC 20-67). This source has accepted waste since November 8, 1987, has a design capacity greater than 2.5 million megagrams, and has

uncontrolled NMOC emissions greater than 50 megagrams per year (Mg/yr). This landfill site does not include a bioreactor, as defined in 40 CFR 63.1990.

The landfill and flares are subject to the following portions of 40 CFR 63, Subpart AAAA, for an existing affected source:

(1) 40 CFR 63.1930
(2) 40 CFR 63.1935
(3) 40 CFR 63.1940
(4) 40 CFR 63.1945
(5) 40 CFR 63.1947
(6) 40 CFR 63.1950
(7) 40 CFR 63.1952
(8) 40 CFR 63.1955
(9) 40 CFR 63.1960
(10) 40 CFR 63.1965
(11) 40 CFR 63.1975
(12) 40 CFR 63.1980
(13) 40 CFR 63.1985
(14) 40 CFR 63.1990
(15) Table 1

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart AAAA.

(e) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 61, Subpart M National Emission Standard for Asbestos because this source is a closed landfill which is not an active waste disposal site that receives asbestos-containing waste material. Also, this inactive waste disposal site is not an asbestos mill and was not operated by a manufacturing or fabrication operation using commercial asbestos.

(f) The landfill and flares are subject to the Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction Prior to May 30, 1991 and Have Not Been Modified or Reconstructed Since May 30, 1991, 40 CFR 62, Subpart GGG, because it is municipal solid waste landfill that commenced construction prior to May 30, 1991, has not been modified after May 30, 1991, has accepted waste at any time since November 8, 1987 and has a design capacity that is greater than 2.5 million Megagrams. Pursuant to 40 CFR 62.14353, a municipal solid waste landfill with a design capacity greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters must comply with 40 CFR 60.752(b) in addition to the applicable reporting and recordkeeping requirements specified in 40 CFR 62, Subpart GGG.

Pursuant to 40 CFR 62.14351 (Definitions), "modification" means an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of May 30, 1991. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion. This source installed gas vent flares after 1991, but has not increased the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its permitted design capacity as of May 30, 1991. Therefore, this source has not commenced modification on or after May 30, 1991.

The landfill and flares are subject to the following portions of 40 CFR 62, Subpart GGG:

(1) 40 CFR 62.14350
(2) 40 CFR 62.14351
(3) 40 CFR 62.14352
(4) 40 CFR 62.14353
(5) 40 CFR 62.14354

(6) 40 CFR 62.14355
(7) 40 CFR 62.14356
(8) Table 1
(9) Table 2
(10) Table 3
(11) Table 4

(g) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

State Rule Applicability - Entire Source

(a) 326 IAC 2-2 (PSD)
PSD applicability is discussed under the Potential to Emit After Issuance section.

(b) 326 IAC 2-3 (Emission Offset)
Emission Offset applicability is discussed under the Potential to Emit After Issuance section.

(c) 326 IAC 2-6 (Emission Reporting)
This source, located in Lake County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM10 is less than 250 tons per year; and the potential to emit of CO, NOx, and SO2 is less than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 by July 1, 2016, and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

(d) 326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(2).

(e) 326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

(f) 326 IAC 6.8 PM Limitations for Lake County
This source is not subject to 326 IAC 6.8 because, even though it is located in Lake County, its PM PTE (or limited PM PTE) is less than 10 tons/year.

(g) 326 IAC 6.8-10 Lake County Fugitive Particulate Matter
The source has fugitive particulate emissions from unpaved roads less than 5 tons per year. Therefore, the requirements of 326 IAC 6.8-10 are no longer applicable. The requirements of 326 IAC 6.8-10 have been removed. This is a Title I change.

(h) 326 IAC 6-4 (Fugitive Dust Emissions)
Pursuant to 326 IAC 6-4, the source shall not generate fugitive dust to the extent that some portion of the material escapes beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located.

(i) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source is not subject to 326 IAC 6-5, because it is located in Lake County.

(j) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(k) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

State Rule Applicability – Individual Facilities

(a) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
This rule applies to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP) after July 27, 1997. This rule does not apply to a major source that is specifically regulated, or exempted from regulation, by a standard issued pursuant to section 112(d), 112(h), or 112(j) of the Clean Air Act. This source did not construct or reconstruct a major source of HAP after July 27, 1997, and this landfill is subject to 40 CFR 63, Subpart AAAA. Therefore, the landfill is not subject to 326 IAC 2-4.1.

(b) 326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
The landfill and flares are not subject to 326 IAC 326 IAC 7-1.1, because the potential to emit SO_2 for each unit is less than 25 tons/year and 10 pounds/hour, respectively.

(c) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The landfill and flares are not subject to 326 IAC 8-1-6, because they are regulated by another 326 IAC 8 rule and each have the potential to emit VOC of less than twenty-five (25) tons per year.

(d) 326 IAC 8-8-1 (Municipal Solid Waste Landfills - Lake County)
This source is subject to 326 IAC 8-8 (Municipal Solid Waste Landfills), because it is an existing municipal soild waste landfill and has a design capacity greater than 100,000 Mg. Pursuant to 326 IAC 8-8-3, the source complies with 326 IAC 8-8 by complying with the following provisions of 40 CFR 60, Subpart WWW:

(1) 40 CFR 60.751
(2) 40 CFR 60.752
(3) 40 CFR 60.753
(4) 40 CFR 60.754
(5) 40 CFR 60.755
(6) 40 CFR 60.756
(7) 40 CFR 60.757
(8) 40 CFR 60.758
(9) 40 CFR 60.759

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC *2-7* are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

No Compliance Determination Requirements or Compliance Monitoring Requirements are required beyond what is required by NSPS or NESHAPs.

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 18, 2013.

Conclusion

The operation of this municipal solid waste landfill shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T089-34007-00143.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Heath Hartley at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8217 or toll free at 1-800-451-6027 extension 2-8217.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emissions Calculations
Emission Summary

Source Name: Gary Sanitary Landfill
Source Location: 1900 Burr Street, Gary, IN 46406
Permit Number: T089-34007-00143
Permit Reviewer: Heath Hartley

Captured/Uncontrolled Potential Emissions (Non-Fugitive)

Emission Unit	PM (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	SO_2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Biogenic CO2*	Non-Bigenic CO2e	Single HAP (HCl) (tons/yr)	Single HAP (Toluene) (tons/yr)	Total HAPs (tons/yr)
Landfill	0	0	0	0	0	9.9	1.5	8,141	74,182	0	1.3	3.70
(23) gas vent flares	3.1	3.1	3.1	2.9	7.3	0	136.0	see note*	see note*	1.46	0	1.46
Open gas vent flare	0.4	0.4	0.4	0.4	1.1	0	19.7	see note*	see note*	0.21	0	0.21
Total (Non-Fugitive)	**3.5**	**3.5**	**3.5**	**3.3**	**8.3**	**9.9**	**157.2**	**8,141**	**74,182**	**1.7**	**1.3**	**5.4**
Unpaved Roads (Fugitive)	0.01	1.8E-03	1.8E-04	0	0	0	0	0	0	0	0	0

Captured/Controlled Potential to Emit (Non-Fugitive)

Emission Unit	PM (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	SO_2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Biogenic CO2	Non-Bigenic CO2e	Single HAP (HCl) (tons/yr)	Single HAP (Toluene) (tons/yr)	Total HAPs (tons/yr)
Landfill	0	0	0	0	0	0.2	1.5	8,141	see note**	0	0.03	0.07
(23) gas vent flares	3.1	3.1	3.1	2.9	7.3	0	136.0	7,997	1,523	1.46	0	1.46
Open gas vent flare	0.4	0.4	0.4	0.4	1.1	0	19.7			0.21	0	0.21
Total (Non-Fugitive)	**3.5**	**3.5**	**3.5**	**3.3**	**8.3**	**0.2**	**157.2**	**16,138**	**1,523**	**1.7**	**0.03**	**1.7**
Unpaved Roads (Fugitive)	0.01	1.8E-03	1.8E-04	0	0	0	0	0	0	0	0	0

*The flare can be treated as an emission unit and a control device. In terms of PM, PM_{10}, $PM_{2.5}$, SO_2, VOC, CO, NO_x and HAPs, IDEM is treating the flare as an emission unit. Controlled emissions are based on the maximum heat input to the flare. In terms of Greenhouse Gas (GHG) emissions, IDEM is treating the flare as a control device. For GHGs, the Uncontrolled Potential to Emit is based on the worst case scenario where the landfill gas is not controlled. The flare will not have significant GHG emissions in the uncontrolled case, because the only emissions would be those associated with natural gas combustion by the pilot in the flare. In the controlled case, the flare will have GHG emissions from the conversion of methane to carbon dioxide during combustion of the landfill gas.

**The controlled emissions from the Landfill are being controlled by the flares and are therefore reflected in the calculations for the flares.

Appendix A: Emissions Calculations
Landfill Gas Emissions
Landfill Gas Collection System

Source Name: Gary Sanitary Landfill
Source Location: 1900 Burr Street, Gary, IN 46406
Permit Number: T089-34007-00143
Permit Reviewer: Heath Hartley

Mnmoc = 2LoR [(e^-kc) - (e^-kt)] [Cnmoc] [3.6 x (10^-9)] *(from 40 CFR 60.754, Subpart WWW)*

Lo =	170	m^3/Mg solid waste = methane generation potential
R =	79,517	Mg/yr = average annual acceptance rate
k =	0.05	yr^{-1} = methane generation rate constant
c =	17	yrs = time since closure (2014.5 - 1997.5 = 17 years)
t =	59.5	yrs = age of landfill (2014.5 - 1955 = 59.5 years)
C_{NMOC} =	838	ppmv as Hexane = concentration of NMOC (supplied by source)

The annual acceptance rate, R, at the Gary Sanitary Landfill is unknown. Therefore, the following equation is used to estimated the average annual acceptance rate:

Average annual acceptance rate (R avg)

R avg= (WVnet x density x 1 ton/2000lbs x 0.907 Mg/1ton)/N

Wvnet = Net waste volume, which is assumed to be the entire net waste volume of existing landfill as of closure in June 1997

WVnet= 6,210,000 yd^3

*Density= 1,200 lbs/1yd3 = 0.6 tons/yd^3

N= Number of years that filling has occurred at the landfill since it is only believed that the landfill began accepting waste sometime during the 1950's. It is assumed that the year acceptance began was 1955. Closure year was 1997.5 (42.5 yrs).

Therefore, using the above equation, calculate ARavg

Ravg= (6,210,000 yd^3 x 0.6 tons/1yd^3 x 0.907 Mg/1ton)/ (42.5 years (1997.5-1955)

Ravg= 79,517.2 Mg/yr

*Solid Waste Association of North America, Manager of Landfill Operations Training and Certification Course. January 1989.

Calculations:

Mnmoc = 2LoR [(e^-kc) - (e^-kt)] [Cnmoc] [3.6 x (10^-9)]

Mnmoc= 30.7 Mg NMOC/yr

Total Landfill VOC Generation Rate	12.0	Mg/yr, uncontrolled (assumes 39% of NMOC is VOC)
Total Landfill VOC Generation Rate	13.2	tons/yr
Capture Efficiency	75%	
Captured/Uncontrolled VOC	9.9	tons/yr**
Control Efficiency	98%	
VOC Emissions (After Control)	0.2	tons/yr

**Note: The US EPA Landfill Gas Emissions Model (LandGEM) version 3.02 was used to model the landfill using the average annual acceptance rate (R) of 79,517 Mg/yr for 1955 to 1997 (See Appendix B and Appendix C of this TSD). The LandGEM results indicate a captured/uncontrolled VOC emission rate of 5.88 tons/yr for year 2014 (see page 3 of this Appendix A), which is lower that the value of 9.9 tons/yr obtain using the equation above. Therefore, a captured/uncontrolled VOC emission rate of 9.9 tons/yr is used as a worst case scenario.

Appendix A: Emissions Calculations
Total Uncontrolled Landfill Emissions
Captured (Non-Fugitive) and Uncaptured (Fugitive)

Source Name: Gary Sanitary Landfill
Source Location: 1900 Burr Street, Gary, IN 46406
Permit Number: T089-34007-00143
Permit Reviewer: Heath Hartley

Capture Efficiency: 75%

Year of emissions inventory: 2014

Gas / Pollutant	Total Landfill Emissions* (Mg/year)	Total Landfill Emissions (tons/year)	Captured (Non-Fugitive) Emissions (tons/year)	Control Efficiency	Controlled (Non-Fugitive) Emissions (tons/year)
Total landfill gas	13437.05	14811.66	11108.7	---	---
Methane	3589.18	3956.35	2967.3	98%	59.35
Carbon dioxide	9847.87	10855.31	8141.5	0%	8141.48
NMOC	32.32	35.63	26.72	98%	0.53
1,1,1-Trichloroethane (methyl chloroform) - HAP	0.03	0.03	0.02	98%	4.7E-04
1,1,2,2-Tetrachloroethane - HAP/VOC	0.08	0.09	0.07	98%	1.4E-03
1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	0.11	0.12	0.09	98%	1.8E-03
1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	0.01	0.01	0.01	98%	1.4E-04
1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	0.02	0.02	0.02	98%	3.0E-04
1,2-Dichloropropane (propylene dichloride) - HAP/VOC	0.01	0.01	0.01	98%	1.5E-04
2-Propanol (isopropyl alcohol) - VOC	1.35	1.48	1.11	98%	0.02
Acetone	0.18	0.20	0.15	98%	3.0E-03
Acrylonitrile - HAP/VOC	0.15	0.16	0.12	98%	2.5E-03
Benzene - Co-disposal - HAP/VOC	0.07	0.07	0.05	98%	1.1E-03
Bromodichloromethane - VOC	0.23	0.25	0.19	98%	3.8E-03
Butane - VOC	0.13	0.14	0.11	98%	2.2E-03
Carbon disulfide - HAP/VOC	0.02	0.02	0.02	98%	3.3E-04
Carbon Monoxide	1.75	1.93	1.45	0%	1.5E+00
Carbon tetrachloride - HAP/VOC	0.00	0.00	2.3E-04	98%	4.6E-06
Carbonyl sulfide - HAP/VOC	0.01	0.01	0.01	98%	2.2E-04
Chlorobenzene - HAP/VOC	0.01	0.01	0.01	98%	2.1E-04
Chlorodifluoromethane	0.05	0.06	0.04	98%	8.3E-04
Chloroethane (ethyl chloride) - HAP/VOC	0.04	0.04	0.03	98%	6.2E-04
Chloroform - HAP/VOC	0.00	0.00	1.3E-03	98%	2.7E-05
Chloromethane - VOC	0.03	0.03	0.02	98%	4.5E-04
Dichlorobenzene - (HAP for para isomer/VOC)	0.01	0.02	0.01	98%	2.3E-04
Dichlorodifluoromethane	0.87	0.95	0.72	98%	0.01
Dichlorofluoromethane - VOC	0.12	0.13	0.10	98%	2.0E-03
Dichloromethane (methylene chloride) - HAP	0.53	0.59	0.44	98%	8.8E-03
Dimethyl sulfide (methyl sulfide) - VOC	0.22	0.24	0.18	98%	3.6E-03
Ethane	11.98	13.20	9.90	98%	0.20
Ethanol - VOC	0.56	0.61	0.46	98%	0.01
Ethyl mercaptan (ethanethiol) - VOC	0.06	0.07	0.05	98%	1.1E-03
Ethylbenzene - HAP/VOC	0.22	0.24	0.18	98%	3.6E-03
Ethylene dibromide - HAP/VOC	0.00	0.00	7.0E-05	98%	1.4E-06
Fluorotrichloromethane - VOC	0.05	0.05	0.04	98%	7.7E-04
Hexane - HAP/VOC	0.25	0.28	0.21	98%	4.2E-03
Hydrogen sulfide	0.55	0.61	0.45	98%	0.01
Mercury (total) - HAP	0.00	0.00	2.2E-05	0%	2.2E-05
Methyl ethyl ketone - VOC	0.23	0.25	0.19	98%	3.8E-03
Methyl isobutyl ketone - HAP/VOC	0.09	0.09	0.07	98%	1.4E-03
Methyl mercaptan - VOC	0.05	0.06	0.04	98%	8.9E-04
Pentane - VOC	0.11	0.12	0.09	98%	1.8E-03
Perchloroethylene (tetrachloroethylene) - HAP	0.27	0.30	0.23	98%	4.5E-03
Propane - VOC	0.22	0.24	0.18	98%	3.6E-03
t-1,2-Dichloroethene - VOC	0.12	0.13	0.10	98%	2.0E-03
Toluene - Co-disposal - HAP/VOC	1.61	1.77	1.33	98%	0.03
Trichloroethylene (trichloroethene) - HAP/VOC	0.16	0.18	0.14	98%	2.7E-03
Vinyl chloride - HAP/VOC	0.20	0.23	0.17	98%	3.4E-03
Xylenes - HAP/VOC	0.57	0.63	0.47	98%	0.01
		VOC**	**5.88**		**0.12**
		Total HAPs	**3.70**		**0.07**
		Wost Single HAPs	**1.33**	**(Toluene)**	**0.03**

*Landfill emissions based on US EPA Landfill Gas Emissions Model (LandGEM) version 3.02.
(See Appendix B and Appendix C of this TSD)
Captured (Non-Fugitive) Emissions (tons/year) = Total Landfill Emissions (ton/yr) x Capture Efficiency
Controlled (Non-Fugitive) Emissions (tons/year) = Captured (Non-Fugitive) Emissions (tons/year) x (1-Control Eff.)

**Note: The US EPA Landfill Gas Emissions Model (LandGEM) version 3.02 was used to model the landfill using the average annual acceptance rate (R) of 79,517 Mg/yr for 1955 to 1997 (See Appendix B and Appendix C of this TSD). The LandGEM results indicate a captured/uncontrolled VOC emission rate of 5.88 tons/yr for year 2014, which is lower that the value of 9.9 tons/yr obtain using the equation on page 2 of this Appendix A. Therefore, a captured/uncontrolled VOC emission rate of 9.9 tons/yr is used as a worst case scenario.

Appendix A: Emissions Calculations
Greenhouse Gasses

Source Name: Gary Sanitary Landfill
Source Location: 1900 Burr Street, Gary, IN 46406
Permit Number: T089-34007-00143
Permit Reviewer: Heath Hartley

Captured/Uncontrolled GHG emissions from the landfill

Pollutant	Captured Emissions (tons/yr)	GWP	CO_2e (tons/yr)
Biogenic CO2	8,141	1	8,141
Non-CO2 GHG as CO2e (Methane)	2,967	25	74,182

			Mol Wt.	Mol Wt.	Flare
Max LFG Flow Rate (in 2014)	723	scfm	CO2	CH4	Control Eff.
LFG Heat Value	500	Btu/scf	44	16	98%

Biogenic CO2 (Controlled) - Combustion of Methane from Landfill

Pollutant	Captured CH4 Emissions (tons/yr)	PTE (tons/yr)	GWP	Emissions (TPY CO2e)
Biogenic CO2	2,967	7,997	1	7,997

Methane Uncombusted by Flare

Pollutant	Captured CH4 Emissions (tons/yr)	PTE (tons/yr)	GWP	Emissions (TPY CO2e)
CH_4	2,967	59	25	1,484

N2O from Landfill Gas Combustion in Flare

	Emission Factor (Kg/MMBtu)	PTE (tons/yr)	GWP	Emissions (TPY CO2e)
N_2O	6.30E-04	0.13	298	39
		Total Non-Biogenic GHG:		**1,523**

Methodology:
Bigoenic CO2 PTE (ton/yr) = Captured Methane (ton/yr) x Flare Control Eff. (%) x MW CO2 / MW CH4
Emissions CO2e (tons/yr) = PTE (ton/yr) x GWP
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Methane Uncombusted by Flare (ton/yr) = Captured Methane (ton/yr) x (1 - Flare Control Eff.)
N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
N_2O PTE (ton/yr) = Max flare capacity (scfm) x EF (kg/MMBtu) x 2.2 lb/kg x LFG Heat Value (Btu/scf) /1000000 Btu/MMBtu x 8760 / 2000 x 60 min/hr

Appendix A: Emissions Calculations
Combustion Emissions from the Open Gas Vent Flare and Passive Gas Vent Flares

Source Name: Gary Sanitary Landfill
Source Location: 1900 Burr Street, Gary, IN 46406
Permit Number: T089-34007-00143
Permit Reviewer: Heath Hartley

Facility Description:	Fuel Input MMBtu/hr	NMOC ppmv	Flow Rate scfm
Twenty-three (23) individual gas vent flares (open flares) with capacity of 60 scfm each	37.7	838	1,380
One (1) open gas vent flare with maximum capacity of 200 scfm	5.5	838	200

Pollutant Emission Factors					
PM[a]	PM10/PM2.5[a]	SO_2[b]	NOx[a]	CO[a]	HCl
17	17	46.9	40	750	42.0
(lb/10^6 dscf methane)	(lb/10^6 dscf methane)	(ppmv)	(lb/10^6 dscf methane)	(lb/10^6 dscf methane)	(ppmv)

	Potential To Emit (tons/year)					
Facility Description:	PM	PM10/PM2.5[a]	SO_2	NOx	CO	HCl
Twenty-three (23) individual gas vent flares (open flares) with capacity of 60 scfm each	3.1	3.1	2.9	7.3	136.0	1.5
One (1) open gas vent flare with maximum capacity of 200 scfm	0.4	0.4	0.4	1.1	19.7	0.2
PTE Total	**3.5**	**3.5**	**3.3**	**8.3**	**155.7**	**1.7**

[a] Emission Factors are from AP-42, Chapter 2.4 - Municipal Solid Waste Landfills, Table 2.4-4. (AP-42, 11/98).
Assume PM emissions equal to PM10 and PM2.5 emissions.
[b] The total inlet concentration of Sulfur content compounds in AP-42, Chapter 2.4 - Municipal Solid Waste Landfills - Table 2.4-1 (AP-42, 11/98)

Methodology

PM / PM10 / NOx / CO Emissions (tons/yr) = Flow Rate (scfm landfill gas) / 10^6 x Emission Factor (lb/10^6 dscf)
x 50% (Methane % in landfill gas) x 60 (min/hr) x 8760 (hr/yr) x .0005 (ton/lb)

SO_2/HCl Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) /1000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R)
/ Temp (60F+ 460) x Mole weight (lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs

Appendix A: Emissions Calculations
Fugitive Dust Emissions - Unpaved Roads

Source Name: Gary Sanitary Landfill
Source Location: 1900 Burr Street, Gary, IN 46406
Permit Number: T089-34007-00143
Permit Reviewer: Heath Hartley

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	1.0	0.2	0.2	1.0	0.2	500	0.095	0.02	6.9
Vehicle (leaving plant) (one-way trip)	1.0	0.2	0.2	1.0	0.2	500	0.095	0.02	6.9
		Totals	**0.4**		**0.4**			**0.04**	**13.8**

Average Vehicle Weight Per Trip = 1.0 tons/trip
Average Miles Per Trip = 0.09 miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	1.0	1.0	1.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

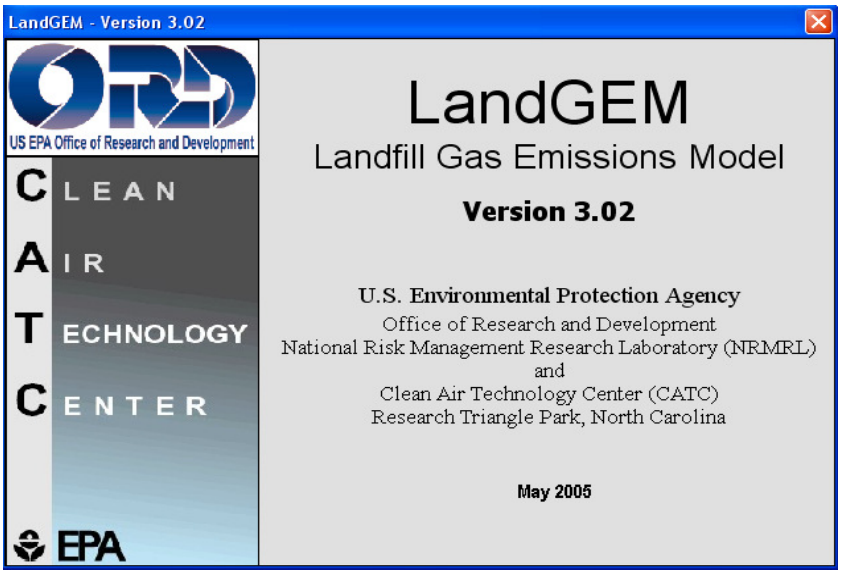
	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	1.57	0.40	0.04	lb/mile
Mitigated Emission Factor, Eext =	1.03	0.26	0.03	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.01	1.4E-03	1.4E-04	0.00	9.1E-04	9.1E-05
Vehicle (leaving plant) (one-way trip)	0.01	1.4E-03	1.4E-04	0.00	9.1E-04	9.1E-05
Totals	**0.01**	**2.8E-03**	**2.8E-04**	**0.01**	**1.8E-03**	**1.8E-04**

Methodology

Total Weight driven per day (ton/day)	= [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip)	= [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day)	= [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip)	= SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip)	= SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr)	= (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr)	= (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr)	= (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit



Summary Report

Landfill Name or Identifier: Gary Sanitary Landfill

Date: Thursday, May 22, 2014

Description/Comments:

About LandGEM:

First-Order Decomposition Rate Equation:

$$Q_{CH_4} = \sum_{i=1}^{n} \sum_{j=0.1}^{1} kL_o \left(\frac{M_i}{10} \right) e^{-kt_{ij}}$$

Where,

Q_{CH_4} = annual methane generation in the year of the calculation ($m^3/year$)
i = 1-year time increment
n = (year of the calculation) - (initial year of waste acceptance)
j = 0.1-year time increment
k = methane generation rate ($year^{-1}$)
L_o = potential methane generation capacity (m^3/Mg)
M_i = mass of waste accepted in the i^{th} year (Mg)
t_{ij} = age of the j^{th} section of waste mass M_i accepted in the i^{th} year (*decimal years*, e.g., 3.2 years)

LandGEM is based on a first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills. The software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at http://www.epa.gov/ttnatw01/landfill/landflpg.html.

LandGEM is considered a screening tool — the better the input data, the better the estimates. Often, there are limitations with the available data regarding waste quantity and composition, variation in design and operating practices over time, and changes occurring over time that impact the emissions potential. Changes to landfill operation, such as operating under wet conditions through leachate recirculation or other liquid additions, will result in generating more gas at a faster rate. Defaults for estimating emissions for this type of operation are being developed to include in LandGEM along with defaults for convential landfills (no leachate or liquid additions) for developing emission inventories and determining CAA applicability. Refer to the Web site identified above for future updates.

Input Review

LANDFILL CHARACTERISTICS

Landfill Open Year	**1955**	
Landfill Closure Year (with 80-year limit)	**1997**	
Actual Closure Year (without limit)	***1997***	
Have Model Calculate Closure Year?	**No**	
Waste Design Capacity		*megagrams*

MODEL PARAMETERS

Methane Generation Rate, k	**0.050**	*year^{-1}*
Potential Methane Generation Capacity, L_o	**170**	*m^3/Mg*
NMOC Concentration	**838**	*ppmv as hexane*
Methane Content	**50**	*% by volume*

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1:	**Total landfill gas**
Gas / Pollutant #2:	**Methane**
Gas / Pollutant #3:	**Carbon dioxide**
Gas / Pollutant #4:	**NMOC**

WASTE ACCEPTANCE RATES

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
1955	79,517	87,469	0	0
1956	79,517	87,469	79,517	87,469
1957	79,517	87,469	159,034	174,937
1958	79,517	87,469	238,551	262,406
1959	79,517	87,469	318,068	349,875
1960	79,517	87,469	397,585	437,344
1961	79,517	87,469	477,102	524,812
1962	79,517	87,469	556,619	612,281
1963	79,517	87,469	636,136	699,750
1964	79,517	87,469	715,653	787,218
1965	79,517	87,469	795,170	874,687
1966	79,517	87,469	874,687	962,156
1967	79,517	87,469	954,204	1,049,624
1968	79,517	87,469	1,033,721	1,137,093
1969	79,517	87,469	1,113,238	1,224,562
1970	79,517	87,469	1,192,755	1,312,031
1971	79,517	87,469	1,272,272	1,399,499
1972	79,517	87,469	1,351,789	1,486,968
1973	79,517	87,469	1,431,306	1,574,437
1974	79,517	87,469	1,510,823	1,661,905
1975	79,517	87,469	1,590,340	1,749,374
1976	79,517	87,469	1,669,857	1,836,843
1977	79,517	87,469	1,749,374	1,924,311
1978	79,517	87,469	1,828,891	2,011,780
1979	79,517	87,469	1,908,408	2,099,249
1980	79,517	87,469	1,987,925	2,186,718
1981	79,517	87,469	2,067,442	2,274,186
1982	79,517	87,469	2,146,959	2,361,655
1983	79,517	87,469	2,226,476	2,449,124
1984	79,517	87,469	2,305,993	2,536,592
1985	79,517	87,469	2,385,510	2,624,061
1986	79,517	87,469	2,465,027	2,711,530
1987	79,517	87,469	2,544,544	2,798,998
1988	79,517	87,469	2,624,061	2,886,467
1989	79,517	87,469	2,703,578	2,973,936
1990	79,517	87,469	2,783,095	3,061,405
1991	79,517	87,469	2,862,612	3,148,873
1992	79,517	87,469	2,942,129	3,236,342
1993	79,517	87,469	3,021,646	3,323,811
1994	79,517	87,469	3,101,163	3,411,279

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
1995	79,517	87,469	3,180,680	3,498,748
1996	79,517	87,469	3,260,197	3,586,217
1997	79,517	87,469	3,339,714	3,673,685
1998	0	0	3,419,231	3,761,154
1999	0	0	3,419,231	3,761,154
2000	0	0	3,419,231	3,761,154
2001	0	0	3,419,231	3,761,154
2002	0	0	3,419,231	3,761,154
2003	0	0	3,419,231	3,761,154
2004	0	0	3,419,231	3,761,154
2005	0	0	3,419,231	3,761,154
2006	0	0	3,419,231	3,761,154
2007	0	0	3,419,231	3,761,154
2008	0	0	3,419,231	3,761,154
2009	0	0	3,419,231	3,761,154
2010	0	0	3,419,231	3,761,154
2011	0	0	3,419,231	3,761,154
2012	0	0	3,419,231	3,761,154
2013	0	0	3,419,231	3,761,154
2014	0	0	3,419,231	3,761,154
2015	0	0	3,419,231	3,761,154
2016	0	0	3,419,231	3,761,154
2017	0	0	3,419,231	3,761,154
2018	0	0	3,419,231	3,761,154
2019	0	0	3,419,231	3,761,154
2020	0	0	3,419,231	3,761,154
2021	0	0	3,419,231	3,761,154
2022	0	0	3,419,231	3,761,154
2023	0	0	3,419,231	3,761,154
2024	0	0	3,419,231	3,761,154
2025	0	0	3,419,231	3,761,154
2026	0	0	3,419,231	3,761,154
2027	0	0	3,419,231	3,761,154
2028	0	0	3,419,231	3,761,154
2029	0	0	3,419,231	3,761,154
2030	0	0	3,419,231	3,761,154
2031	0	0	3,419,231	3,761,154
2032	0	0	3,419,231	3,761,154
2033	0	0	3,419,231	3,761,154
2034	0	0	3,419,231	3,761,154

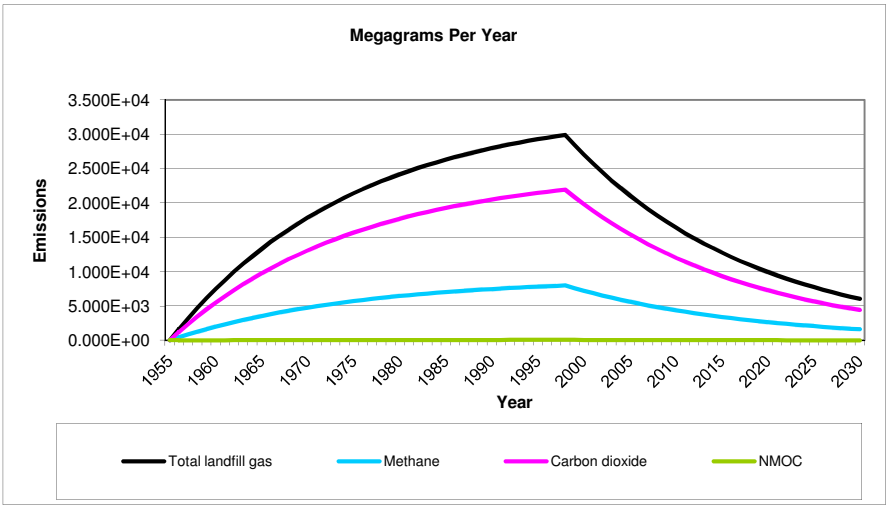
Pollutant Parameters

		Gas / Pollutant Default Parameters:		***User-specified Pollutant Parameters:***	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Gases	Total landfill gas		0.00		
	Methane		16.04		
	Carbon dioxide		44.01		
	NMOC	4,000	86.18		
Pollutants	1,1,1-Trichloroethane (methyl chloroform) - HAP	0.48	133.41		
	1,1,2,2-Tetrachloroethane - HAP/VOC	1.1	167.85		
	1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	2.4	98.97		
	1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	0.20	96.94		
	1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	0.41	98.96		
	1,2-Dichloropropane (propylene dichloride) - HAP/VOC	0.18	112.99		
	2-Propanol (isopropyl alcohol) - VOC	50	60.11		
	Acetone	7.0	58.08		
	Acrylonitrile - HAP/VOC	6.3	53.06		
	Benzene - No or Unknown Co-disposal - HAP/VOC	1.9	78.11		
	Benzene - Co-disposal - HAP/VOC	11	78.11		
	Bromodichloromethane - VOC	3.1	163.83		
	Butane - VOC	5.0	58.12		
	Carbon disulfide - HAP/VOC	0.58	76.13		
	Carbon monoxide	140	28.01		
	Carbon tetrachloride - HAP/VOC	4.0E-03	153.84		
	Carbonyl sulfide - HAP/VOC	0.49	60.07		
	Chlorobenzene - HAP/VOC	0.25	112.56		
	Chlorodifluoromethane	1.3	86.47		
	Chloroethane (ethyl chloride) - HAP/VOC	1.3	64.52		
	Chloroform - HAP/VOC	0.03	119.39		
	Chloromethane - VOC	1.2	50.49		
	Dichlorobenzene - (HAP for para isomer/VOC)	0.21	147		
	Dichlorodifluoromethane	16	120.91		
	Dichlorofluoromethane - VOC	2.6	102.92		
	Dichloromethane (methylene chloride) - HAP	14	84.94		
	Dimethyl sulfide (methyl sulfide) - VOC	7.8	62.13		
	Ethane	890	30.07		
	Ethanol - VOC	27	46.08		

Pollutant Parameters (Continued)

		Gas / Pollutant Default Parameters:		***User-specified Pollutant Parameters:***	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Pollutants	Ethyl mercaptan (ethanethiol) - VOC	2.3	62.13		
	Ethylbenzene - HAP/VOC	4.6	106.16		
	Ethylene dibromide - HAP/VOC	1.0E-03	187.88		
	Fluorotrichloromethane - VOC	0.76	137.38		
	Hexane - HAP/VOC	6.6	86.18		
	Hydrogen sulfide	36	34.08		
	Mercury (total) - HAP	2.9E-04	200.61		
	Methyl ethyl ketone - HAP/VOC	7.1	72.11		
	Methyl isobutyl ketone - HAP/VOC	1.9	100.16		
	Methyl mercaptan - VOC	2.5	48.11		
	Pentane - VOC	3.3	72.15		
	Perchloroethylene (tetrachloroethylene) - HAP	3.7	165.83		
	Propane - VOC	11	44.09		
	t-1,2-Dichloroethene - VOC	2.8	96.94		
	Toluene - No or Unknown Co-disposal - HAP/VOC	39	92.13		
	Toluene - Co-disposal - HAP/VOC	170	92.13		
	Trichloroethylene (trichloroethene) - HAP/VOC	2.8	131.40		
	Vinyl chloride - HAP/VOC	7.3	62.50		
	Xylenes - HAP/VOC	12	106.16		

Graphs


Megagrams Per Year
Emissions
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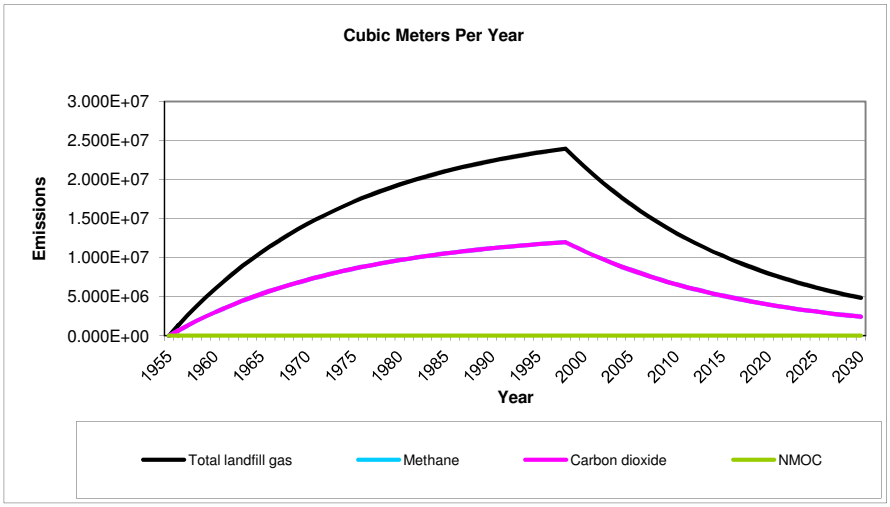
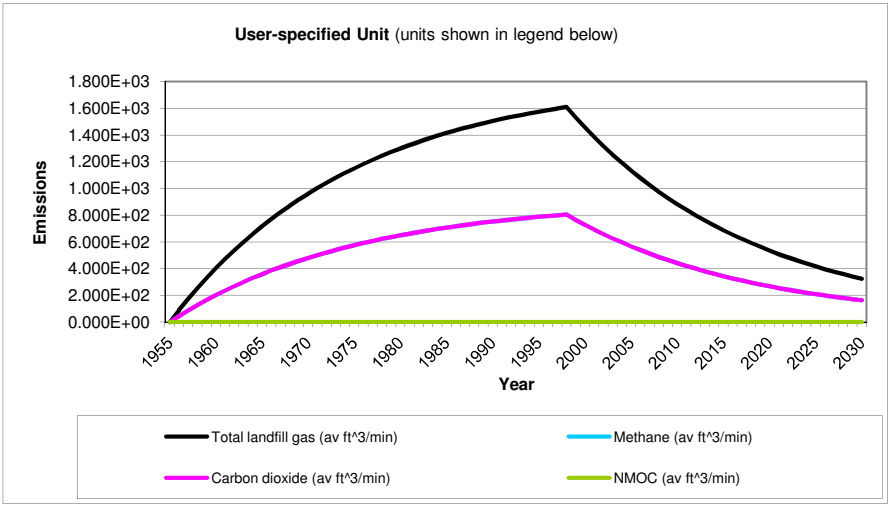
3.000E+04
2.500E+04
2.000E+04
1.500E+04
1.000E+04
5.000E+03
0.000E+00
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


Cubic Meters Per Year
Emissions
3.000E+07
2.500E+07
2.000E+07
1.500E+07
1.000E+07
5.000E+06
0.000E+00
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


User-specified Unit (units shown in legend below)
Emissions
1.800E+03
1.600E+03
1.400E+03
1.200E+03
1.000E+03
8.000E+02
6.000E+02
4.000E+02
2.000E+02
0.000E+00
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
2030
Year
Total landfill gas (av ft^3/min)
Methane (av ft^3/min)
Carbon dioxide (av ft^3/min)
NMOC (av ft^3/min)

Results

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
1955	0	0	0	0	0	0
1956	1.651E+03	1.322E+06	8.881E+01	4.409E+02	6.609E+05	4.441E+01
1957	3.221E+03	2.579E+06	1.733E+02	8.604E+02	1.290E+06	8.665E+01
1958	4.715E+03	3.775E+06	2.537E+02	1.259E+03	1.888E+06	1.268E+02
1959	6.135E+03	4.913E+06	3.301E+02	1.639E+03	2.457E+06	1.651E+02
1960	7.487E+03	5.995E+06	4.028E+02	2.000E+03	2.998E+06	2.014E+02
1961	8.773E+03	7.025E+06	4.720E+02	2.343E+03	3.512E+06	2.360E+02
1962	9.996E+03	8.004E+06	5.378E+02	2.670E+03	4.002E+06	2.689E+02
1963	1.116E+04	8.935E+06	6.004E+02	2.981E+03	4.468E+06	3.002E+02
1964	1.227E+04	9.822E+06	6.599E+02	3.276E+03	4.911E+06	3.300E+02
1965	1.332E+04	1.066E+07	7.165E+02	3.557E+03	5.332E+06	3.583E+02
1966	1.432E+04	1.147E+07	7.704E+02	3.825E+03	5.733E+06	3.852E+02
1967	1.527E+04	1.223E+07	8.216E+02	4.079E+03	6.114E+06	4.108E+02
1968	1.618E+04	1.295E+07	8.704E+02	4.321E+03	6.477E+06	4.352E+02
1969	1.704E+04	1.364E+07	9.168E+02	4.551E+03	6.822E+06	4.584E+02
1970	1.786E+04	1.430E+07	9.609E+02	4.770E+03	7.150E+06	4.804E+02
1971	1.864E+04	1.493E+07	1.003E+03	4.979E+03	7.463E+06	5.014E+02
1972	1.938E+04	1.552E+07	1.043E+03	5.177E+03	7.760E+06	5.214E+02
1973	2.009E+04	1.608E+07	1.081E+03	5.365E+03	8.042E+06	5.403E+02
1974	2.076E+04	1.662E+07	1.117E+03	5.544E+03	8.311E+06	5.584E+02
1975	2.140E+04	1.713E+07	1.151E+03	5.715E+03	8.566E+06	5.756E+02
1976	2.200E+04	1.762E+07	1.184E+03	5.877E+03	8.809E+06	5.919E+02
1977	2.258E+04	1.808E+07	1.215E+03	6.032E+03	9.041E+06	6.074E+02
1978	2.313E+04	1.852E+07	1.244E+03	6.178E+03	9.261E+06	6.222E+02
1979	2.365E+04	1.894E+07	1.273E+03	6.318E+03	9.470E+06	6.363E+02
1980	2.415E+04	1.934E+07	1.299E+03	6.451E+03	9.669E+06	6.497E+02
1981	2.462E+04	1.972E+07	1.325E+03	6.577E+03	9.858E+06	6.624E+02
1982	2.507E+04	2.008E+07	1.349E+03	6.697E+03	1.004E+07	6.745E+02
1983	2.550E+04	2.042E+07	1.372E+03	6.812E+03	1.021E+07	6.860E+02
1984	2.591E+04	2.075E+07	1.394E+03	6.920E+03	1.037E+07	6.970E+02
1985	2.630E+04	2.106E+07	1.415E+03	7.024E+03	1.053E+07	7.074E+02
1986	2.666E+04	2.135E+07	1.435E+03	7.122E+03	1.068E+07	7.173E+02
1987	2.701E+04	2.163E+07	1.453E+03	7.216E+03	1.082E+07	7.267E+02
1988	2.735E+04	2.190E+07	1.471E+03	7.305E+03	1.095E+07	7.357E+02
1989	2.766E+04	2.215E+07	1.488E+03	7.389E+03	1.108E+07	7.442E+02
1990	2.797E+04	2.239E+07	1.505E+03	7.470E+03	1.120E+07	7.523E+02
1991	2.825E+04	2.262E+07	1.520E+03	7.547E+03	1.131E+07	7.600E+02
1992	2.853E+04	2.284E+07	1.535E+03	7.619E+03	1.142E+07	7.674E+02
1993	2.878E+04	2.305E+07	1.549E+03	7.689E+03	1.152E+07	7.744E+02
1994	2.903E+04	2.325E+07	1.562E+03	7.755E+03	1.162E+07	7.810E+02
1995	2.927E+04	2.344E+07	1.575E+03	7.817E+03	1.172E+07	7.873E+02
1996	2.949E+04	2.361E+07	1.587E+03	7.877E+03	1.181E+07	7.933E+02
1997	2.970E+04	2.378E+07	1.598E+03	7.934E+03	1.189E+07	7.990E+02
1998	2.990E+04	2.395E+07	1.609E+03	7.988E+03	1.197E+07	8.045E+02
1999	2.845E+04	2.278E+07	1.530E+03	7.598E+03	1.139E+07	7.652E+02
2000	2.706E+04	2.167E+07	1.456E+03	7.228E+03	1.083E+07	7.279E+02
2001	2.574E+04	2.061E+07	1.385E+03	6.875E+03	1.031E+07	6.924E+02
2002	2.448E+04	1.961E+07	1.317E+03	6.540E+03	9.803E+06	6.586E+02
2003	2.329E+04	1.865E+07	1.253E+03	6.221E+03	9.325E+06	6.265E+02
2004	2.215E+04	1.774E+07	1.192E+03	5.918E+03	8.870E+06	5.960E+02

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2005	2.107E+04	1.687E+07	1.134E+03	5.629E+03	8.437E+06	5.669E+02
2006	2.005E+04	1.605E+07	1.079E+03	5.354E+03	8.026E+06	5.393E+02
2007	1.907E+04	1.527E+07	1.026E+03	5.093E+03	7.634E+06	5.130E+02
2008	1.814E+04	1.452E+07	9.759E+02	4.845E+03	7.262E+06	4.879E+02
2009	1.725E+04	1.382E+07	9.283E+02	4.609E+03	6.908E+06	4.641E+02
2010	1.641E+04	1.314E+07	8.830E+02	4.384E+03	6.571E+06	4.415E+02
2011	1.561E+04	1.250E+07	8.399E+02	4.170E+03	6.251E+06	4.200E+02
2012	1.485E+04	1.189E+07	7.990E+02	3.967E+03	5.946E+06	3.995E+02
2013	1.413E+04	1.131E+07	7.600E+02	3.773E+03	5.656E+06	3.800E+02
2014	1.344E+04	1.076E+07	7.229E+02	3.589E+03	5.380E+06	3.615E+02
2015	1.278E+04	1.024E+07	6.877E+02	3.414E+03	5.118E+06	3.438E+02
2016	1.216E+04	9.736E+06	6.542E+02	3.248E+03	4.868E+06	3.271E+02
2017	1.157E+04	9.261E+06	6.222E+02	3.089E+03	4.631E+06	3.111E+02
2018	1.100E+04	8.809E+06	5.919E+02	2.939E+03	4.405E+06	2.959E+02
2019	1.046E+04	8.380E+06	5.630E+02	2.795E+03	4.190E+06	2.815E+02
2020	9.954E+03	7.971E+06	5.356E+02	2.659E+03	3.986E+06	2.678E+02
2021	9.469E+03	7.582E+06	5.095E+02	2.529E+03	3.791E+06	2.547E+02
2022	9.007E+03	7.212E+06	4.846E+02	2.406E+03	3.606E+06	2.423E+02
2023	8.568E+03	6.861E+06	4.610E+02	2.289E+03	3.430E+06	2.305E+02
2024	8.150E+03	6.526E+06	4.385E+02	2.177E+03	3.263E+06	2.192E+02
2025	7.753E+03	6.208E+06	4.171E+02	2.071E+03	3.104E+06	2.086E+02
2026	7.374E+03	5.905E+06	3.968E+02	1.970E+03	2.953E+06	1.984E+02
2027	7.015E+03	5.617E+06	3.774E+02	1.874E+03	2.809E+06	1.887E+02
2028	6.673E+03	5.343E+06	3.590E+02	1.782E+03	2.672E+06	1.795E+02
2029	6.347E+03	5.083E+06	3.415E+02	1.695E+03	2.541E+06	1.707E+02
2030	6.038E+03	4.835E+06	3.248E+02	1.613E+03	2.417E+06	1.624E+02
2031	5.743E+03	4.599E+06	3.090E+02	1.534E+03	2.299E+06	1.545E+02
2032	5.463E+03	4.375E+06	2.939E+02	1.459E+03	2.187E+06	1.470E+02
2033	5.197E+03	4.161E+06	2.796E+02	1.388E+03	2.081E+06	1.398E+02
2034	4.943E+03	3.958E+06	2.660E+02	1.320E+03	1.979E+06	1.330E+02
2035	4.702E+03	3.765E+06	2.530E+02	1.256E+03	1.883E+06	1.265E+02
2036	4.473E+03	3.582E+06	2.406E+02	1.195E+03	1.791E+06	1.203E+02
2037	4.255E+03	3.407E+06	2.289E+02	1.136E+03	1.703E+06	1.145E+02
2038	4.047E+03	3.241E+06	2.177E+02	1.081E+03	1.620E+06	1.089E+02
2039	3.850E+03	3.083E+06	2.071E+02	1.028E+03	1.541E+06	1.036E+02
2040	3.662E+03	2.932E+06	1.970E+02	9.782E+02	1.466E+06	9.851E+01
2041	3.483E+03	2.789E+06	1.874E+02	9.305E+02	1.395E+06	9.371E+01
2042	3.314E+03	2.653E+06	1.783E+02	8.851E+02	1.327E+06	8.914E+01
2043	3.152E+03	2.524E+06	1.696E+02	8.419E+02	1.262E+06	8.479E+01
2044	2.998E+03	2.401E+06	1.613E+02	8.009E+02	1.200E+06	8.066E+01
2045	2.852E+03	2.284E+06	1.534E+02	7.618E+02	1.142E+06	7.672E+01
2046	2.713E+03	2.172E+06	1.460E+02	7.246E+02	1.086E+06	7.298E+01
2047	2.581E+03	2.066E+06	1.388E+02	6.893E+02	1.033E+06	6.942E+01
2048	2.455E+03	1.966E+06	1.321E+02	6.557E+02	9.828E+05	6.604E+01
2049	2.335E+03	1.870E+06	1.256E+02	6.237E+02	9.349E+05	6.281E+01
2050	2.221E+03	1.779E+06	1.195E+02	5.933E+02	8.893E+05	5.975E+01
2051	2.113E+03	1.692E+06	1.137E+02	5.644E+02	8.459E+05	5.684E+01
2052	2.010E+03	1.609E+06	1.081E+02	5.368E+02	8.047E+05	5.407E+01
2053	1.912E+03	1.531E+06	1.029E+02	5.106E+02	7.654E+05	5.143E+01
2054	1.819E+03	1.456E+06	9.784E+01	4.857E+02	7.281E+05	4.892E+01
2055	1.730E+03	1.385E+06	9.307E+01	4.621E+02	6.926E+05	4.653E+01

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2056	1.645E+03	1.318E+06	8.853E+01	4.395E+02	6.588E+05	4.426E+01
2057	1.565E+03	1.253E+06	8.421E+01	4.181E+02	6.267E+05	4.211E+01
2058	1.489E+03	1.192E+06	8.010E+01	3.977E+02	5.961E+05	4.005E+01
2059	1.416E+03	1.134E+06	7.620E+01	3.783E+02	5.670E+05	3.810E+01
2060	1.347E+03	1.079E+06	7.248E+01	3.598E+02	5.394E+05	3.624E+01
2061	1.281E+03	1.026E+06	6.895E+01	3.423E+02	5.131E+05	3.447E+01
2062	1.219E+03	9.761E+05	6.558E+01	3.256E+02	4.881E+05	3.279E+01
2063	1.160E+03	9.285E+05	6.239E+01	3.097E+02	4.642E+05	3.119E+01
2064	1.103E+03	8.832E+05	5.934E+01	2.946E+02	4.416E+05	2.967E+01
2065	1.049E+03	8.401E+05	5.645E+01	2.802E+02	4.201E+05	2.822E+01
2066	9.980E+02	7.992E+05	5.370E+01	2.666E+02	3.996E+05	2.685E+01
2067	9.493E+02	7.602E+05	5.108E+01	2.536E+02	3.801E+05	2.554E+01
2068	9.030E+02	7.231E+05	4.859E+01	2.412E+02	3.616E+05	2.429E+01
2069	8.590E+02	6.878E+05	4.622E+01	2.294E+02	3.439E+05	2.311E+01
2070	8.171E+02	6.543E+05	4.396E+01	2.183E+02	3.272E+05	2.198E+01
2071	7.773E+02	6.224E+05	4.182E+01	2.076E+02	3.112E+05	2.091E+01
2072	7.393E+02	5.920E+05	3.978E+01	1.975E+02	2.960E+05	1.989E+01
2073	7.033E+02	5.632E+05	3.784E+01	1.879E+02	2.816E+05	1.892E+01
2074	6.690E+02	5.357E+05	3.599E+01	1.787E+02	2.678E+05	1.800E+01
2075	6.364E+02	5.096E+05	3.424E+01	1.700E+02	2.548E+05	1.712E+01
2076	6.053E+02	4.847E+05	3.257E+01	1.617E+02	2.424E+05	1.628E+01
2077	5.758E+02	4.611E+05	3.098E+01	1.538E+02	2.305E+05	1.549E+01
2078	5.477E+02	4.386E+05	2.947E+01	1.463E+02	2.193E+05	1.473E+01
2079	5.210E+02	4.172E+05	2.803E+01	1.392E+02	2.086E+05	1.402E+01
2080	4.956E+02	3.969E+05	2.666E+01	1.324E+02	1.984E+05	1.333E+01
2081	4.714E+02	3.775E+05	2.536E+01	1.259E+02	1.887E+05	1.268E+01
2082	4.484E+02	3.591E+05	2.413E+01	1.198E+02	1.795E+05	1.206E+01
2083	4.266E+02	3.416E+05	2.295E+01	1.139E+02	1.708E+05	1.148E+01
2084	4.058E+02	3.249E+05	2.183E+01	1.084E+02	1.625E+05	1.092E+01
2085	3.860E+02	3.091E+05	2.077E+01	1.031E+02	1.545E+05	1.038E+01
2086	3.672E+02	2.940E+05	1.975E+01	9.807E+01	1.470E+05	9.877E+00
2087	3.492E+02	2.797E+05	1.879E+01	9.329E+01	1.398E+05	9.395E+00
2088	3.322E+02	2.660E+05	1.787E+01	8.874E+01	1.330E+05	8.937E+00
2089	3.160E+02	2.530E+05	1.700E+01	8.441E+01	1.265E+05	8.501E+00
2090	3.006E+02	2.407E+05	1.617E+01	8.029E+01	1.204E+05	8.086E+00
2091	2.859E+02	2.290E+05	1.538E+01	7.638E+01	1.145E+05	7.692E+00
2092	2.720E+02	2.178E+05	1.463E+01	7.265E+01	1.089E+05	7.317E+00
2093	2.587E+02	2.072E+05	1.392E+01	6.911E+01	1.036E+05	6.960E+00
2094	2.461E+02	1.971E+05	1.324E+01	6.574E+01	9.854E+04	6.621E+00
2095	2.341E+02	1.875E+05	1.260E+01	6.253E+01	9.373E+04	6.298E+00

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
1955	0	0	0	0	0	0
1956	1.210E+03	6.609E+05	4.441E+01	3.971E+00	1.108E+03	7.443E-02
1957	2.361E+03	1.290E+06	8.665E+01	7.747E+00	2.161E+03	1.452E-01
1958	3.455E+03	1.888E+06	1.268E+02	1.134E+01	3.164E+03	2.126E-01
1959	4.497E+03	2.457E+06	1.651E+02	1.476E+01	4.117E+03	2.766E-01
1960	5.487E+03	2.998E+06	2.014E+02	1.801E+01	5.024E+03	3.376E-01
1961	6.429E+03	3.512E+06	2.360E+02	2.110E+01	5.887E+03	3.955E-01
1962	7.326E+03	4.002E+06	2.689E+02	2.404E+01	6.707E+03	4.507E-01
1963	8.178E+03	4.468E+06	3.002E+02	2.684E+01	7.488E+03	5.031E-01
1964	8.989E+03	4.911E+06	3.300E+02	2.950E+01	8.230E+03	5.530E-01
1965	9.761E+03	5.332E+06	3.583E+02	3.203E+01	8.937E+03	6.005E-01
1966	1.049E+04	5.733E+06	3.852E+02	3.444E+01	9.609E+03	6.456E-01
1967	1.119E+04	6.114E+06	4.108E+02	3.673E+01	1.025E+04	6.885E-01
1968	1.186E+04	6.477E+06	4.352E+02	3.891E+01	1.086E+04	7.294E-01
1969	1.249E+04	6.822E+06	4.584E+02	4.098E+01	1.143E+04	7.682E-01
1970	1.309E+04	7.150E+06	4.804E+02	4.296E+01	1.198E+04	8.052E-01
1971	1.366E+04	7.463E+06	5.014E+02	4.483E+01	1.251E+04	8.404E-01
1972	1.420E+04	7.760E+06	5.214E+02	4.662E+01	1.300E+04	8.738E-01
1973	1.472E+04	8.042E+06	5.403E+02	4.831E+01	1.348E+04	9.056E-01
1974	1.521E+04	8.311E+06	5.584E+02	4.993E+01	1.393E+04	9.359E-01
1975	1.568E+04	8.566E+06	5.756E+02	5.146E+01	1.436E+04	9.647E-01
1976	1.613E+04	8.809E+06	5.919E+02	5.292E+01	1.476E+04	9.920E-01
1977	1.655E+04	9.041E+06	6.074E+02	5.431E+01	1.515E+04	1.018E+00
1978	1.695E+04	9.261E+06	6.222E+02	5.563E+01	1.552E+04	1.043E+00
1979	1.733E+04	9.470E+06	6.363E+02	5.689E+01	1.587E+04	1.066E+00
1980	1.770E+04	9.669E+06	6.497E+02	5.809E+01	1.621E+04	1.089E+00
1981	1.805E+04	9.858E+06	6.624E+02	5.923E+01	1.652E+04	1.110E+00
1982	1.838E+04	1.004E+07	6.745E+02	6.031E+01	1.682E+04	1.130E+00
1983	1.869E+04	1.021E+07	6.860E+02	6.134E+01	1.711E+04	1.150E+00
1984	1.899E+04	1.037E+07	6.970E+02	6.232E+01	1.738E+04	1.168E+00
1985	1.927E+04	1.053E+07	7.074E+02	6.325E+01	1.764E+04	1.186E+00
1986	1.954E+04	1.068E+07	7.173E+02	6.413E+01	1.789E+04	1.202E+00
1987	1.980E+04	1.082E+07	7.267E+02	6.498E+01	1.813E+04	1.218E+00
1988	2.004E+04	1.095E+07	7.357E+02	6.578E+01	1.835E+04	1.233E+00
1989	2.027E+04	1.108E+07	7.442E+02	6.654E+01	1.856E+04	1.247E+00
1990	2.050E+04	1.120E+07	7.523E+02	6.727E+01	1.877E+04	1.261E+00
1991	2.071E+04	1.131E+07	7.600E+02	6.796E+01	1.896E+04	1.274E+00
1992	2.091E+04	1.142E+07	7.674E+02	6.861E+01	1.914E+04	1.286E+00
1993	2.110E+04	1.152E+07	7.744E+02	6.924E+01	1.932E+04	1.298E+00
1994	2.128E+04	1.162E+07	7.810E+02	6.983E+01	1.948E+04	1.309E+00
1995	2.145E+04	1.172E+07	7.873E+02	7.039E+01	1.964E+04	1.320E+00
1996	2.161E+04	1.181E+07	7.933E+02	7.093E+01	1.979E+04	1.330E+00
1997	2.177E+04	1.189E+07	7.990E+02	7.144E+01	1.993E+04	1.339E+00
1998	2.192E+04	1.197E+07	8.045E+02	7.193E+01	2.007E+04	1.348E+00
1999	2.085E+04	1.139E+07	7.652E+02	6.842E+01	1.909E+04	1.283E+00
2000	1.983E+04	1.083E+07	7.279E+02	6.508E+01	1.816E+04	1.220E+00
2001	1.886E+04	1.031E+07	6.924E+02	6.191E+01	1.727E+04	1.160E+00
2002	1.794E+04	9.803E+06	6.586E+02	5.889E+01	1.643E+04	1.104E+00
2003	1.707E+04	9.325E+06	6.265E+02	5.602E+01	1.563E+04	1.050E+00
2004	1.624E+04	8.870E+06	5.960E+02	5.329E+01	1.487E+04	9.988E-01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2005	1.544E+04	8.437E+06	5.669E+02	5.069E+01	1.414E+04	9.501E-01
2006	1.469E+04	8.026E+06	5.393E+02	4.822E+01	1.345E+04	9.038E-01
2007	1.397E+04	7.634E+06	5.130E+02	4.586E+01	1.280E+04	8.597E-01
2008	1.329E+04	7.262E+06	4.879E+02	4.363E+01	1.217E+04	8.178E-01
2009	1.264E+04	6.908E+06	4.641E+02	4.150E+01	1.158E+04	7.779E-01
2010	1.203E+04	6.571E+06	4.415E+02	3.948E+01	1.101E+04	7.400E-01
2011	1.144E+04	6.251E+06	4.200E+02	3.755E+01	1.048E+04	7.039E-01
2012	1.088E+04	5.946E+06	3.995E+02	3.572E+01	9.965E+03	6.695E-01
2013	1.035E+04	5.656E+06	3.800E+02	3.398E+01	9.479E+03	6.369E-01
2014	9.848E+03	5.380E+06	3.615E+02	3.232E+01	9.017E+03	6.058E-01
2015	9.368E+03	5.118E+06	3.438E+02	3.074E+01	8.577E+03	5.763E-01
2016	8.911E+03	4.868E+06	3.271E+02	2.924E+01	8.159E+03	5.482E-01
2017	8.476E+03	4.631E+06	3.111E+02	2.782E+01	7.761E+03	5.214E-01
2018	8.063E+03	4.405E+06	2.959E+02	2.646E+01	7.382E+03	4.960E-01
2019	7.670E+03	4.190E+06	2.815E+02	2.517E+01	7.022E+03	4.718E-01
2020	7.295E+03	3.986E+06	2.678E+02	2.394E+01	6.680E+03	4.488E-01
2021	6.940E+03	3.791E+06	2.547E+02	2.278E+01	6.354E+03	4.269E-01
2022	6.601E+03	3.606E+06	2.423E+02	2.166E+01	6.044E+03	4.061E-01
2023	6.279E+03	3.430E+06	2.305E+02	2.061E+01	5.749E+03	3.863E-01
2024	5.973E+03	3.263E+06	2.192E+02	1.960E+01	5.469E+03	3.675E-01
2025	5.682E+03	3.104E+06	2.086E+02	1.865E+01	5.202E+03	3.495E-01
2026	5.405E+03	2.953E+06	1.984E+02	1.774E+01	4.948E+03	3.325E-01
2027	5.141E+03	2.809E+06	1.887E+02	1.687E+01	4.707E+03	3.163E-01
2028	4.890E+03	2.672E+06	1.795E+02	1.605E+01	4.478E+03	3.008E-01
2029	4.652E+03	2.541E+06	1.707E+02	1.527E+01	4.259E+03	2.862E-01
2030	4.425E+03	2.417E+06	1.624E+02	1.452E+01	4.051E+03	2.722E-01
2031	4.209E+03	2.299E+06	1.545E+02	1.381E+01	3.854E+03	2.589E-01
2032	4.004E+03	2.187E+06	1.470E+02	1.314E+01	3.666E+03	2.463E-01
2033	3.809E+03	2.081E+06	1.398E+02	1.250E+01	3.487E+03	2.343E-01
2034	3.623E+03	1.979E+06	1.330E+02	1.189E+01	3.317E+03	2.229E-01
2035	3.446E+03	1.883E+06	1.265E+02	1.131E+01	3.155E+03	2.120E-01
2036	3.278E+03	1.791E+06	1.203E+02	1.076E+01	3.001E+03	2.017E-01
2037	3.118E+03	1.703E+06	1.145E+02	1.023E+01	2.855E+03	1.918E-01
2038	2.966E+03	1.620E+06	1.089E+02	9.735E+00	2.716E+03	1.825E-01
2039	2.821E+03	1.541E+06	1.036E+02	9.260E+00	2.583E+03	1.736E-01
2040	2.684E+03	1.466E+06	9.851E+01	8.808E+00	2.457E+03	1.651E-01
2041	2.553E+03	1.395E+06	9.371E+01	8.379E+00	2.337E+03	1.571E-01
2042	2.428E+03	1.327E+06	8.914E+01	7.970E+00	2.223E+03	1.494E-01
2043	2.310E+03	1.262E+06	8.479E+01	7.581E+00	2.115E+03	1.421E-01
2044	2.197E+03	1.200E+06	8.066E+01	7.212E+00	2.012E+03	1.352E-01
2045	2.090E+03	1.142E+06	7.672E+01	6.860E+00	1.914E+03	1.286E-01
2046	1.988E+03	1.086E+06	7.298E+01	6.525E+00	1.820E+03	1.223E-01
2047	1.891E+03	1.033E+06	6.942E+01	6.207E+00	1.732E+03	1.163E-01
2048	1.799E+03	9.828E+05	6.604E+01	5.904E+00	1.647E+03	1.107E-01
2049	1.711E+03	9.349E+05	6.281E+01	5.616E+00	1.567E+03	1.053E-01
2050	1.628E+03	8.893E+05	5.975E+01	5.342E+00	1.490E+03	1.001E-01
2051	1.548E+03	8.459E+05	5.684E+01	5.082E+00	1.418E+03	9.526E-02
2052	1.473E+03	8.047E+05	5.407E+01	4.834E+00	1.349E+03	9.061E-02
2053	1.401E+03	7.654E+05	5.143E+01	4.598E+00	1.283E+03	8.619E-02
2054	1.333E+03	7.281E+05	4.892E+01	4.374E+00	1.220E+03	8.199E-02
2055	1.268E+03	6.926E+05	4.653E+01	4.161E+00	1.161E+03	7.799E-02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2056	1.206E+03	6.588E+05	4.426E+01	3.958E+00	1.104E+03	7.419E-02
2057	1.147E+03	6.267E+05	4.211E+01	3.765E+00	1.050E+03	7.057E-02
2058	1.091E+03	5.961E+05	4.005E+01	3.581E+00	9.991E+02	6.713E-02
2059	1.038E+03	5.670E+05	3.810E+01	3.407E+00	9.504E+02	6.385E-02
2060	9.873E+02	5.394E+05	3.624E+01	3.240E+00	9.040E+02	6.074E-02
2061	9.392E+02	5.131E+05	3.447E+01	3.082E+00	8.599E+02	5.778E-02
2062	8.934E+02	4.881E+05	3.279E+01	2.932E+00	8.180E+02	5.496E-02
2063	8.498E+02	4.642E+05	3.119E+01	2.789E+00	7.781E+02	5.228E-02
2064	8.084E+02	4.416E+05	2.967E+01	2.653E+00	7.401E+02	4.973E-02
2065	7.689E+02	4.201E+05	2.822E+01	2.524E+00	7.040E+02	4.730E-02
2066	7.314E+02	3.996E+05	2.685E+01	2.401E+00	6.697E+02	4.500E-02
2067	6.958E+02	3.801E+05	2.554E+01	2.283E+00	6.370E+02	4.280E-02
2068	6.618E+02	3.616E+05	2.429E+01	2.172E+00	6.060E+02	4.072E-02
2069	6.296E+02	3.439E+05	2.311E+01	2.066E+00	5.764E+02	3.873E-02
2070	5.988E+02	3.272E+05	2.198E+01	1.965E+00	5.483E+02	3.684E-02
2071	5.696E+02	3.112E+05	2.091E+01	1.870E+00	5.216E+02	3.504E-02
2072	5.419E+02	2.960E+05	1.989E+01	1.778E+00	4.961E+02	3.333E-02
2073	5.154E+02	2.816E+05	1.892E+01	1.692E+00	4.719E+02	3.171E-02
2074	4.903E+02	2.678E+05	1.800E+01	1.609E+00	4.489E+02	3.016E-02
2075	4.664E+02	2.548E+05	1.712E+01	1.531E+00	4.270E+02	2.869E-02
2076	4.436E+02	2.424E+05	1.628E+01	1.456E+00	4.062E+02	2.729E-02
2077	4.220E+02	2.305E+05	1.549E+01	1.385E+00	3.864E+02	2.596E-02
2078	4.014E+02	2.193E+05	1.473E+01	1.317E+00	3.675E+02	2.469E-02
2079	3.818E+02	2.086E+05	1.402E+01	1.253E+00	3.496E+02	2.349E-02
2080	3.632E+02	1.984E+05	1.333E+01	1.192E+00	3.326E+02	2.234E-02
2081	3.455E+02	1.887E+05	1.268E+01	1.134E+00	3.163E+02	2.126E-02
2082	3.287E+02	1.795E+05	1.206E+01	1.079E+00	3.009E+02	2.022E-02
2083	3.126E+02	1.708E+05	1.148E+01	1.026E+00	2.862E+02	1.923E-02
2084	2.974E+02	1.625E+05	1.092E+01	9.760E-01	2.723E+02	1.829E-02
2085	2.829E+02	1.545E+05	1.038E+01	9.284E-01	2.590E+02	1.740E-02
2086	2.691E+02	1.470E+05	9.877E+00	8.831E-01	2.464E+02	1.655E-02
2087	2.560E+02	1.398E+05	9.395E+00	8.400E-01	2.344E+02	1.575E-02
2088	2.435E+02	1.330E+05	8.937E+00	7.991E-01	2.229E+02	1.498E-02
2089	2.316E+02	1.265E+05	8.501E+00	7.601E-01	2.121E+02	1.425E-02
2090	2.203E+02	1.204E+05	8.086E+00	7.230E-01	2.017E+02	1.355E-02
2091	2.096E+02	1.145E+05	7.692E+00	6.878E-01	1.919E+02	1.289E-02
2092	1.993E+02	1.089E+05	7.317E+00	6.542E-01	1.825E+02	1.226E-02
2093	1.896E+02	1.036E+05	6.960E+00	6.223E-01	1.736E+02	1.167E-02
2094	1.804E+02	9.854E+04	6.621E+00	5.920E-01	1.651E+02	1.110E-02
2095	1.716E+02	9.373E+04	6.298E+00	5.631E-01	1.571E+02	1.055E-02

INVENTORY

Landfill Name or Identifier: Gary Sanitary Landfill

Enter year of emissions inventory: 2014

Gas / Pollutant	Emission Rate				
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(ft^3/year)*	*(short tons/year)*
Total landfill gas	1.344E+04	1.076E+07	7.229E+02	3.800E+08	1.478E+04
Methane	3.589E+03	5.380E+06	3.615E+02	1.900E+08	3.948E+03
Carbon dioxide	9.848E+03	5.380E+06	3.615E+02	1.900E+08	1.083E+04
NMOC	3.232E+01	9.017E+03	6.058E-01	3.184E+05	3.555E+01
1,1,1-Trichloroethane (methyl chloroform) - HAP	2.866E-02	5.165E+00	3.470E-04	1.824E+02	3.152E-02
1,1,2,2-Tetrachloroethane - HAP/VOC	8.263E-02	1.184E+01	7.952E-04	4.180E+02	9.089E-02
1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	1.063E-01	2.582E+01	1.735E-03	9.120E+02	1.169E-01
1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	8.677E-03	2.152E+00	1.446E-04	7.600E+01	9.544E-03
1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	1.816E-02	4.412E+00	2.964E-04	1.558E+02	1.997E-02
1,2-Dichloropropane (propylene dichloride) - HAP/VOC	9.102E-03	1.937E+00	1.301E-04	6.840E+01	1.001E-02
2-Propanol (isopropyl alcohol) - VOC	1.345E+00	5.380E+02	3.615E-02	1.900E+04	1.480E+00
Acetone	1.819E-01	7.532E+01	5.061E-03	2.660E+03	2.001E-01
Acrylonitrile - HAP/VOC	1.496E-01	6.779E+01	4.555E-03	2.394E+03	1.646E-01
Benzene - No or Unknown Co-disposal - HAP/VOC	6.642E-02	2.044E+01	1.374E-03	7.220E+02	7.306E-02
Benzene - Co-disposal - HAP/VOC	3.845E-01	1.184E+02	7.952E-03	4.180E+03	4.230E-01
Bromodichloromethane - VOC	2.273E-01	3.336E+01	2.241E-03	1.178E+03	2.500E-01
Butane - VOC	1.301E-01	5.380E+01	3.615E-03	1.900E+03	1.431E-01
Carbon disulfide - HAP/VOC	1.976E-02	6.241E+00	4.193E-04	2.204E+02	2.174E-02
Carbon monoxide	1.755E+00	1.506E+03	1.012E-01	5.320E+04	1.930E+00
Carbon tetrachloride - HAP/VOC	2.754E-04	4.304E-02	2.892E-06	1.520E+00	3.029E-04
Carbonyl sulfide - HAP/VOC	1.317E-02	5.272E+00	3.542E-04	1.862E+02	1.449E-02
Chlorobenzene - HAP/VOC	1.259E-02	2.690E+00	1.807E-04	9.500E+01	1.385E-02
Chlorodifluoromethane	5.031E-02	1.399E+01	9.398E-04	4.940E+02	5.534E-02
Chloroethane (ethyl chloride) - HAP/VOC	3.754E-02	1.399E+01	9.398E-04	4.940E+02	4.129E-02
Chloroform - HAP/VOC	1.603E-03	3.228E-01	2.169E-05	1.140E+01	1.763E-03
Chloromethane - VOC	2.711E-02	1.291E+01	8.675E-04	4.560E+02	2.983E-02
Dichlorobenzene - (HAP for para isomer/VOC)	1.382E-02	2.260E+00	1.518E-04	7.980E+01	1.520E-02
Dichlorodifluoromethane	8.658E-01	1.722E+02	1.157E-02	6.080E+03	9.523E-01
Dichlorofluoromethane - VOC	1.198E-01	2.798E+01	1.880E-03	9.880E+02	1.317E-01
Dichloromethane (methylene chloride) - HAP	5.322E-01	1.506E+02	1.012E-02	5.320E+03	5.854E-01
Dimethyl sulfide (methyl sulfide) - VOC	2.169E-01	8.393E+01	5.639E-03	2.964E+03	2.386E-01
Ethane	1.198E+01	9.576E+03	6.434E-01	3.382E+05	1.317E+01
Ethanol - VOC	5.568E-01	2.905E+02	1.952E-02	1.026E+04	6.125E-01
Ethyl mercaptan (ethanethiol) - VOC	6.395E-02	2.475E+01	1.663E-03	8.740E+02	7.035E-02
Ethylbenzene - HAP/VOC	2.185E-01	4.949E+01	3.326E-03	1.748E+03	2.404E-01
Ethylene dibromide - HAP/VOC	8.408E-05	1.076E-02	7.229E-07	3.800E-01	9.249E-05
Fluorotrichloromethane - VOC	4.673E-02	8.177E+00	5.494E-04	2.888E+02	5.140E-02
Hexane - HAP/VOC	2.545E-01	7.101E+01	4.771E-03	2.508E+03	2.800E-01
Hydrogen sulfide	5.491E-01	3.874E+02	2.603E-02	1.368E+04	6.040E-01
Mercury (total) - HAP	2.604E-05	3.120E-03	2.097E-07	1.102E-01	2.864E-05
Methyl ethyl ketone - HAP/VOC	2.291E-01	7.639E+01	5.133E-03	2.698E+03	2.520E-01
Methyl isobutyl ketone - HAP/VOC	8.517E-02	2.044E+01	1.374E-03	7.220E+02	9.368E-02
Methyl mercaptan - VOC	5.383E-02	2.690E+01	1.807E-03	9.500E+02	5.921E-02
Pentane - VOC	1.066E-01	3.551E+01	2.386E-03	1.254E+03	1.172E-01
Perchloroethylene (tetrachloroethylene) - HAP	2.746E-01	3.981E+01	2.675E-03	1.406E+03	3.020E-01
Propane - VOC	2.170E-01	1.184E+02	7.952E-03	4.180E+03	2.388E-01
t-1,2-Dichloroethene - VOC	1.215E-01	3.013E+01	2.024E-03	1.064E+03	1.336E-01
Toluene - No or Unknown Co-disposal - HAP/VOC	1.608E+00	4.196E+02	2.819E-02	1.482E+04	1.769E+00
Toluene - Co-disposal - HAP/VOC	7.009E+00	1.829E+03	1.229E-01	6.460E+04	7.710E+00
Trichloroethylene (trichloroethene) - HAP/VOC	1.647E-01	3.013E+01	2.024E-03	1.064E+03	1.811E-01
Vinyl chloride - HAP/VOC	2.042E-01	7.855E+01	5.278E-03	2.774E+03	2.246E-01
Xylenes - HAP/VOC	5.701E-01	1.291E+02	8.675E-03	4.560E+03	6.271E-01

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Brenda Scott-Henry
Gary Sanitary Landfill
839 Broadway, Suite N206
Gary, IN 46402

DATE: September 25, 2014

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Title V Operating Permit Renewal
089-34007-00143

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

September 25, 2014

TO: Lake County Public Library-Griffith-Calumet Twp Branch

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Gary Sanitary Landfill
Permit Number: 089-34007-00143

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	VHAUN 9/25/2014 Gary Sanitary Landfill 089-34007-00143 FINAL		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Brenda Scott-Henry Gary Sanitary Landfill 839 Broadway, Suite N206 Gary IN 46402 (Source CAATS) CONFIRMED DELIVERY									
2		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 *(Local Official)*									
3		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 *(Health Department)*									
4		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 *(Affected Party)*									
5		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 *(Affected Party)*									
6		Mark Coleman 107 Diana Road Portage IN 46368 *(Affected Party)*									
7		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 *(Affected Party)*									
8		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 *(Affected Party)*									
9		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 *(Local Official)*									
10		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 *(Affected Party)*									
11		Barbara G. Perez 506 Lilac Street East Chicago IN 46312 *(Affected Party)*									
12		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 *(Affected Party)*									
13		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 (Affected Party)									
14		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 *(Affected Party)*									
15		Gary City Council 401 Broadway # 209 Gary IN 46402 *(Local Official)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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Mail Code 61-53

IDEM Staff	VHAUN 9/25/2014 Gary Sanitary Landfill 089-34007-00143 FINAL		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Peter Julovich City of Gary Dept. of Envrionmental Affairs 839 Broadway SuiteN206 Gary IN 46402 (Local Official)									
2		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 *(Affected Party)*									
3		Ryan Dave 939 Cornwallis Munster IN 46321 *(Affected Party)*									
4		Matt Mikus 1710 Vale Park Rd Apt 302 Valparaiso IN 46383 *(Affected Party)*									
5		Niquelle Allen City of Gary 401 Broadway, Suite 101 Gary IN 46402 *(Attorney)*									
6		Ms. Kathy Rhyne PO Box 853 Griffith IN 46319-0853 *(Affected Party)*									
7		Lake County Public Library-Griffith-Calumet Twp Br 1215 E. 45th Ave. Griffith IN 46319 *(Library)*									
8											
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