



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: December 27, 2006
RE: National Serv-All Landfill
003-18142-00257
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

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

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, Room 1049, 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 impracticable 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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PART 70 OPERATING PERMIT RENEWAL OFFICE OF AIR QUALITY

**Republic Services of Indiana, LP/ National Serv-All Landfill
6231 McBeth Road
Fort Wayne Indiana 46809**

(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.: T003-18142-00257	
Issued by: <i>Nisha Sizemore</i> Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: December 27, 2006 Expiration Date: December 27, 2011

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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(15)] [326 IAC 2-7-1(22)]

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

Responsible Official:	Area President or Regional Environmental Manager
Source Address:	6231 McBeth Road, Fort Wayne, IN 46809
Mailing Address:	6231 McBeth Road, Fort Wayne, IN 46809
General Source Phone Number:	260-478-0300
SIC Code:	4953
County Location:	Allen
Source Location Status:	Nonattainment for 8 hour Ozone Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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

- (a) One (1) stationary municipal sold waste landfill with a design capacity of 30,996,952 mega grams, constructed in 1966.
- (b) One (1) 148.5 MMBtu/hr open flare with a maximum capacity of 5,000 scfm of landfill gas usage, identified as EU-3, constructed in 2004.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

Three (3) crystal clean parts washers with a solvent consumption of 240 gallons per year, constructed after 1990; [326 IAC 8-3-2] [326 IAC 8-3-5]

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, T003-18142-00257, 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]

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. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). 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) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, 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(34).

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 July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
[326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) 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.
- (b) 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 or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) 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, 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 Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

- (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 Branch, Office of Air Quality
100 North Senate Avenue
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 the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (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)(9) 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.
 - (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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 T003-18142-00257 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 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 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 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.17 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(40). The renewal application does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
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 in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

B.18 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

Any such application shall be certified by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (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.19 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 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.20 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), (c), or (e), 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
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), (c), or (e). 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), (c)(1), and (e)(2).

- (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(36)) 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 the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (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.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 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.23 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.24 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.25 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 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) 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. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

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

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

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 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 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
Asbestos Section, Office of Air Quality
100 North Senate Avenue
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 by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

C.8 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
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 certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.9 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.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 Branch, Office of Air Quality
100 North Senate Avenue
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 the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.12 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.
- (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.13 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 prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on October 6, 1999.
- (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.14 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.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned 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 within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (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;
 - (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 maintain the following records:
- (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.16 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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.17 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]

- (a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 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
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (b) The emission statement 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.18 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. 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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.19 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. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
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) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (e) 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.20 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 the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) stationary municipal solid waste landfill with a design capacity of 30,996,952 Mega grams, constructed in 1966.
- (b) One (1) 148.5 MMBtu/hr open flare with a maximum capacity of 5,000 scfm of landfill gas usage, identified as EU-3, constructed in 2004.

(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 PSD Minor Limit [326 IAC 2-2]

- (a) The input of landfill gas (LFG) into the flare shall be less than 2,365 million standard cubic feet per 12 consecutive month period, with compliance determined at the end of each month.

The landfill gas (LFG) usage limit is required to limit the potential to emit of CO to less than 241 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.1.2 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

- (a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart WWW.
- (b) The provisions of 40 CFR Part 61, Subpart A - General Provisions, which are incorporated as 326 IAC 14-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 61, Subpart M.
- (c) The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart AAAA.

D.1.3 Municipal Solid Waste Landfill NSPS [326 IAC 12] [40CFR 60.752, Subpart WWW]

The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and shall either comply with 40CFR 60.752 (b)(2) or calculate the non methane organic compound (NMOC) emission rate for the landfill using the procedures specified in 40CFR 60.754(a)(3).

D.1.4 Operational Standards for Collection and Control Systems [40CFR 60.753]

In order to comply with 40 CFR 60.752 (b)(2)(ii) the Permittee shall:

- (a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the municipal solid waste landfill in which solid waste has been in place for five years if active or 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) Fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the semi-annual reports as provided in 40 CFR 60.757(f)(1).

- (2) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan.
 - (3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Office of Air Quality (OAQ).
- (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 (except for the landfill gas well, LFGASB16, which can have an oxygen level less than 16.9 percent). The Permittee 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 method is established as allowed by 40CFR 60.752 (b)(2)(i).
 - (2) Unless an alternative test method is established as allowed by 40 CFR 60.752 (b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A except that; the span shall be set so that the regulatory limit is between 20 and 50 percent of the span; a data recorder is not required; only two calibration gases are required, a zero and span, and ambient air may be used as the span; a calibration error check is not required; 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 Permittee 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 Permittee 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 40CFR 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 one hour.
- (f) Operate the control system at all times when the collected gas is routed to the system.
- (g) If monitoring demonstrates that the operational requirements in 40 CFR 60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in 40 CFR 60.755(a)(3) through (5) or 40 CFR 60.755(c). If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements in 40 CFR 60.753.

D.1.5 National Emission Standards for Hazardous Air Pollutants for Active Asbestos Waste Disposal Sites (40 CFR 61.154, Subpart M)

Pursuant to National Emission Standards for Hazardous Air Pollutants 326 IAC14-2-1, (40 CFR 61.154, Subpart M), any active waste disposal site that receives asbestos-containing waste material must either:

- (a) Allow no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or comply with (b) or (c) below.
- (b) At the end of each operating day or at least once every 24-hour period, asbestos-containing waste material that has been deposited during the previous 24-hour period must:
 - (1) Be covered with at least 15 centimeters (6 inches) of compacted non asbestos containing material, or
 - (2) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. Any used, spent, or other waste oil is not considered a dust suppression agent.
- (c) Use an alternate emissions control method that has received prior written approval by the Administrator according to the procedures described in 61.149(c)(2).
- (d) Also, unless a natural barrier deters access by the general public, warning signs and fencing must be installed or the requirements of paragraph (b)(1) above must be met. The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public. The warning signs must:
 - (1) Be posted in such a manner and location that a person can easily read the legend; and
 - (2) Conform to the requirements of 51cm x 36 cm upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and
 - (3) Display the information contained in the legend provided in 40 CFR 61.154 (b) (1) (iii).

D.1.6 Municipal Solid Waste Landfill NESHAP [326 IAC 20] [40 CFR 63, Subpart AAAA]

Pursuant to 40 CFR 63.1955, the Permittee shall:

- (a) Comply with the requirements of 40 CFR 60, Subpart WWW.
- (b) If the source is required by 40 CFR 60.752(b)(2) to install a collection and control system, the source shall comply with the general and continuing compliance requirements in 40 CFR 63.1960 through 40 CFR 63.1985.
- (c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, record keeping or reporting provisions, the Permittee 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 startup, shutdown, and malfunction (SSM) requirements in Subpart A of this part as specified in Table 1 of 40 CFR 63 Subpart AAAA and all affected sources must submit compliance reports every 6 months as specified in 40 CFR 63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations (as defined in 40 CFR 63.1965) for continuous emission monitors or numerical continuous parameter monitors must be determined using

a 3 hour monitoring block average (as defined in 40 CFR 63.1975).

D.1.7 Calculation of Non-Methane Organic Compound (NMOC) Rate [40 CFR 60.754] [326 IAC 8-8.1] [326 IAC 12]

Pursuant to 40 CFR 60.754, the Permittee shall, when calculating emissions for PSD purposes, estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 40 CFR 51.166 or 40 CFR 52.21 using AP-42 or other approved measurement procedures. If a collection system, which complies with the provisions of 40 CFR 60.752(b)(2) is already installed, the Permittee shall estimate the NMOC emission rate using the procedures provided in 40 CFR 60.754(b).

Compliance Determination Requirements

D.1.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 60.754(b)]

(a) After installation of a collection and control system in compliance with 40 CFR 60.755, the Permittee shall calculate the non methane organic compound (NMOC) emission rate for purposes of determining when the system can be removed using the following equation:

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

where,

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

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

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

- (1) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40 CFR 60.
- (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 40 CFR 60. If using Method 18 of Appendix A of 40 CFR 60, 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 Permittee shall divide the NMOC concentration from Method 25C of Appendix A of 40 CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.
- (3) The Permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Office of Air Quality (OAQ).

(b) Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.9 Compliance Determination [40 CFR 63.1960]

Pursuant to 40 CFR 63.1960, compliance with 40 CFR 63, Subpart AAAA is determined by the following:

- (a) The same way it is determined for 40 CFR 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence.

- (b) 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 (as defined in 40 CFR 63.1965) occurs, the Permittee has failed to meet the control device operating conditions described in 40 CFR 60, Subpart WWW and has deviated from the requirements of this subpart.
- (c) The Permittee must develop and implement a written Startup, Shutdown and Malfunction (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, implement, or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

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

D.1.10 Monitoring [40 CFR 60.756]

Except as provided in 40 CFR 60.752(b)(2)(i)(B):

- (a) The Permittee seeking to comply with 40 CFR 60.752(b)(2)(ii)(A) for an active gas collection 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 40 CFR 60.755(a)(3);
 - (2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40 FR 60.755(a)(5); and
 - (3) Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5).
- (b) The Permittee seeking to comply with 40CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturers specifications the following equipment:
 - (1) 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 Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or 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 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) The Permittee seeking to install a collection system that does not meet the specifications in 40 CFR 60.759 or seeking to monitor alternative parameters to those required by 40 CFR 60.753 through 40 CFR 60.756 shall provide information satisfactory to the Office of Air Quality (OAQ) as provided in 40 CFR 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 Office of Air Quality (OAQ) may specify additional appropriate monitoring procedures.

- (d) The Permittee seeking to demonstrate compliance with 40 CFR 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 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.

D.1.11 Compliance Provisions [40CFR 60.755]

- (a) Except as provided in 40CFR 60.752(b)(2)(i)(B), the specified methods below shall be used to determine whether the gas collection system is in compliance with 40 CFR 60.752(b)(2)(i).
- (1) For the purpose 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 Pollution Emission Factors (AP42) or other site-specific values demonstrated to be appropriate and approved by the Office of Air Quality (OAQ). If k has been determined as specified in 40 CFR 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.

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

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

where,

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

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

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹

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

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

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

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

where,

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

k = methane generation rate constant, year⁻¹

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

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

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

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 40 CFR 60.755(a)(1)(i) and (ii). 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 40 CFR 60.755(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 collector for compliance with 40 CFR 60.752 (b)(2)(ii)(A)(2), the Permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Office of Air Quality (OAQ), 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 40 CFR 60.752(b)(2)(ii)(A)(3), the Permittee 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 five (5) calendar days, except for the three conditions allowed under 40 CFR 60.753(b). If negative pressure cannot be achieved without excess air infiltration within fifteen (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) The Permittee is not required to expand the system as required in 40 CFR 60.755(a)(3) during the first 180 days after gas collection system start-up.
 - (5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40 CFR 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within five (5) calendar days. If correction of the exceedance cannot be achieved within fifteen (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) If the Permittee seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40 CFR 60.759, then the Permittee shall provide information satisfactory to the Office of Air Quality (OAQ) as specified in 40 CFR 60.752 (b)(2)(i)(C) demonstrating that off-site migration is being controlled.
- (b) For purposes of compliance with 40 CFR 60.753(a), the Permittee shall place each well or design component of a controlled landfill as specified in the approved design plan as provided in 40 CFR 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 five (5) years or more if active or two (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 40 CFR 60.753 (d):
- (1) After installation of the collection system, the Permittee 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 40 CFR 60.755(d).
 - (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 perimeter wells.
 - (3) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of 40 CFR 60, except that the probe inlet shall be placed within five(5) to ten(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 40 CFR 60.755(c)(4)(i) through (v) should be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 60.753(d).

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

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 ten (10) calendar days of detecting the exceedance.

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 ten (10) days of the second exceedance. If re-monitoring shows a third exceedance for the same location, the action specified in paragraph 40CFR 60.755(c)(4)(v) of this section shall be taken, and no further monitoring of that location is required until the action specified in 40 CFR 60.755(c)(4)(v) has been taken.

Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day remonitoring specified in 40 CFR 60.755(c)(4)(ii) or (iii) shall be re-monitored one (1) month from the initial exceedance. If the one (1)-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one (1)-month remonitoring shows an exceedance, the actions specified in 40CFR 60.755(c)(4)(iii) or (v) shall be taken.

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 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 Office of Air Quality (OAQ) for approval.

- (5) The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.
- (d) The Permittee seeking to comply with the provisions of 40 CFR 60.755(c) 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 40 CFR 60, except the methane shall replace all references to volatile organic compound (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 40 CFR 60, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of 40 CFR 60 shall be used.
 - (4) The calibration procedures provided in section 4.2 of Method 21 of appendix A of 40 CFR 60 shall be followed immediately before commencing a surface monitoring survey.
- (e) The provisions of 40 CFR 60.755 shall apply at all times, except during periods of startup, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction, shall not exceed five (5) days for collection systems and shall not exceed one (1) hour for treatment or control devices.

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

D.1.12 Reporting Requirements [40CFR 60.757]

Pursuant to 40CFR 60.757, except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee shall:

- (a) Submit an amended design capacity report to the Office of Air Quality (OAQ) providing notification of any increase in the design capacity of the landfill.
- (b) Submit a closure report to the Office of Air Quality (OAQ) within thirty days of waste acceptance cessation. The Office of Air Quality (OAQ) may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40CFR 258.60. If a closure report has been submitted to the Office of Air Quality (OAQ), no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).
- (c) Submit an equipment removal report to the Office of Air Quality (OAQ) thirty (30) days prior to removal or cessation of operation of the control equipment. The equipment removal report shall contain all of the following items: a copy of the closure report submitted in accordance with 40 CFR 60.757(d), a copy of the initial performance test report demonstrating that the fifteen (15) year minimum control period has expired, and dated copies of three (3) successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year. The Office of Air Quality (OAQ) may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) have been met.

- (d) Submit semi-annual reports of the following recorded information. 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 40CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c).
- (1) Value and length of time for exceedance of applicable parameters monitored under 40CFR 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 40 CFR 60.756.
 - (3) Description and duration of all periods when the control device was not operating for a period exceeding one (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 five (5) days.
 - (5) Location of each exceedance of the 500 parts per million methane concentration as provided in 40CFR 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.
 - (6) Date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 60.755(a)(3), (b), and (c)(4).
- (e) The Permittee complying with 40 CFR 40.752(b)(2)(iii) shall include the following information with the initial performance test report required under 40 CFR 60.8:
- (1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the 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.
 - (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.
 - (6) The provisions for the control of off-site migration.
- (f) A summary of the above information shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit.

- (g) The reporting period for the semi-annual report required in Condition D.1.12 (d) shall be from January 1 to June 30 and July 1 to December 31. Reports must be submitted every six (6) months to IDEM, OAQ. The reports shall be due within 30 days of the end of the reporting period.

D.1.13 Record Keeping Requirements [326 IAC 12] [40CFR 60.758]

Pursuant to 40CFR 60.758

- (a) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee subject to 40CFR 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 40 CFR 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 four (4) hours. Either paper copy or electronic formats are acceptable.
- (b) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment listed in (a) through (d) below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of control device vendor specifications shall be maintained until removal.
 - (1) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40CFR 60.752(b)(2)(ii):
 - (A) The maximum expected gas generation flow rate as calculated in 40 CFR 60.755(a)(1). The Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Office of Air Quality (OAQ).
 - (B) The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1).
 - (2) The Permittee demonstrating compliance with 40 CFR 60.752(b)(2)(iii)(A) through use of an open flare shall keep records of:
 - (A) The flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18.
 - (B) 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 40 CFR 60.752(b)(2)(i)(B), the Permittee 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 40 CFR 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 Permittee subject to 40 CFR 60.758 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60.756.
 - (2) The Permittee seeking to comply with the provisions of 40 CFR 60.758 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 40 CFR 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 40 CFR 60.752(b)(2)(i)(B), the Permittee 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) The Permittee subject to the provisions of 40 CFR 60.758 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified in 40 CFR 60.755 (b).
 - (2) The Permittee subject to the provisions of 40 CFR 60.758 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 40 CFR 60.759 (a)(3)(i) as well as any non-productive areas excluded from collection as provided in 40 CFR 60.759 (a)(3)(ii).
- (e) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee 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 40 CFR 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.

D.1.14 Record keeping for NESHAP for Asbestos Active Waste Disposal Sites [40 CFR 61.154]

- (a) For all asbestos containing waste material received, the owner or operator of the active waste disposal site shall:
- (1) Maintain waste shipment records, using a form similar to that shown in figure 4 of 40 CFR 61, Subpart M, and include the following information
 - (A) The name, address, and telephone number of the waste generator;
 - (B) The name, address, and telephone number of the transporter(s);
 - (C) The quantity of the asbestos containing waste material in cubic meters (cubic yards).

- (D) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.
 - (E) The date of the receipt.
- (2) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.
 - (3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.
 - (4) Retain a copy of all records and reports required by this paragraph for at least 2 years.
- (b) Maintain until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.
 - (c) Upon closure, comply with all the provisions of 40 CFR 61.151.
 - (d) Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.
 - (e) Furnish upon request, and make available during normal business hours for inspection by the Administrator, all records required under this section.
 - (f) Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:
 - (1) Scheduled starting and completion dates.
 - (2) Reason for disturbing the waste.

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

D.1.15 Record Keeping and Reporting Requirements for NESHAP for Municipal Solid Waste Landfills [40 CFR 63.1980] [326 IAC 20]

Pursuant to 40 CFR 63.1980, the Permittee shall:

- (a) Keep records and reports as specified in 40 CFR 60, Subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR 60, Subpart Cc, whichever applies to this landfill, with one exception: The Permittee must submit the annual report described in 40 CFR 60.757(f) every 6 months to IDEM, OAQ.
- (b) Keep records and reports as specified in the general provisions of 40 CFR 60 and 40 CFR 63 as shown in Table 1 of 40 CFR 63, Subpart AAAA. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports. The SSM Plan report shall be submitted semi-annually IDEM, OAQ.
- (c) The reporting period for the semi-annual reports required in Conditions D.1.15 (a) and (b) shall be from January 1 to June 30 and July 1 to December 31. Reports must be submitted every six (6) months and the reports shall be due within 30 days of the end of the reporting period.

D.1.16 Record Keeping Requirements

- (a) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) Three (3) crystal clean parts washers with a solvent consumption of 240 gallons per year, constructed after 1990.

(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.2.1 Cold cleaner operation (VOC) [326 IAC 8-3-2]

The Crystal Clean Parts washer is subject to this rule because the facilities are constructed after 1980. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaning facility shall:

- (a) equip the cleaner with a cover;
- (b) equip the cleaner with a facility for draining cleaned parts;
- (c) close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) provide a permanent, conspicuous label summarizing the operation requirements;
- (f) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.2.2 Cold cleaner degreaser operation and control [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^oC) (one hundred twenty degrees Fahrenheit (120^oF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Republic Services of Indiana, LP/National Serv-All Landfill
Source Address: 6231 McBeth Road, Fort Wayne, In 46809
Mailing Address: 6231 McBeth Road, Fort Wayne, In 46809
Part 70 Permit No.: T003-18142-00257

**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 DATA SECTION

Part 70 Quarterly Report

Source Name: Republic Services of Indiana, LP/National Serv-All Landfill
Source Address: 6231 McBeth Road, Fort Wayne, In 46809
Mailing Address: 6231 McBeth Road, Fort Wayne, In 46809
Part 70 Permit No.: T003-18142-00257
Facility: Open Flare
Parameter: Landfill gas usage
Limit: The input of landfill gas (LFG) into the flare shall be less than 2,365 million standard cubic feet per 12 consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this month.
- Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**COMPLIANCE BRANCH
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Republic Services of Indiana, LP/National Serv-All Landfill
Source Address: 6231 McBeth Road, Fort Wayne, In 46809
Mailing Address: 6231 McBeth Road, Fort Wayne, In 46809
Part 70 Permit No.: T003-18142-00257

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">C 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); andC 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:

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Republic Services of Indiana, LP/National Serv-All Landfill
 Source Address: 6231 McBeth Road, Fort Wayne, In 46809
 Mailing Address: 6231 McBeth Road, Fort Wayne, In 46809
 Part 70 Permit No.: T003-18142-00257

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, 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".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> 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:

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Quality**

**Addendum to the
Technical Support Document (TSD) for a Part 70 Permit Renewal**

Source Background and Description

Source Name:	Republic Services of Indiana, LP/National Serv-All Landfill
Source Location:	6231 Mc Beth Road Fort Wayne Indiana 46809
County:	Allen
SIC Code:	4953
Operation Permit No.:	T003-18142-00257
Permit Reviewer:	Surya Ramaswamy / EVP

On August 21, 2006, the Office of Air Quality (OAQ) had a notice published in the Fort Wayne Journal Gazette in Fort Wayne, Indiana, stating that National Serv-All Landfill had applied for a Part 70 permit renewal for the operation of a stationary municipal solid waste landfill. The notice also stated that OAQ proposed to issue a Part 70 Permit for this operation and provided information on how the public could review the proposed Part 70 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 Part 70 Permit should be issued as proposed.

On September 22, 2006, Khaled Mahmood, Senior Project Manager at Cornerstone Environmental Group, LLC submitted comments on the proposed Title V permit. The summary of the comments and corresponding responses is as follows (bolded language has been added and the language with a line through it has been deleted):

Comment 1

The Permittee has submitted an application to IDEM to change the name of the source from "National Serv-All Landfill" to "Republic Services of Indiana, LP/ National Serv-All Landfill".

Response 1

The following changes have been made to Title page, header, and forms as requested.

**Republic Services of Indiana, LP/ National Serv-All Landfill
6231 McBeth Road
Fort Wayne Indiana 46809**

Comment 2 & 3

National Serv-All (NSA) likes to add in "Area President or" under the Responsible Official and change the General Source Phone Number as "260-478-0300".

Response 2 & 3

The following changes have been made to Section A.1 as requested.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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

Responsible Official:	Area President or Regional Environmental Manager
Source Address:	6231 McBeth Road, Fort Wayne, IN 46809
Mailing Address:	6231 McBeth Road, Fort Wayne, IN 46809
General Source Phone Number:	765-983-9278 260-478-0300

Comment 4

NSA requests to change the description of the flare as follow:

One (1) 148.5 MMBtu/hr **open** flare with a maximum capacity of 5,000 scfm of landfill gas usage, identified as EU-3, constructed in 2004.

Response 4

The following change has been made to the description of flare in Sections A.1 and D.1 as requested.

One (1) 148.5 MMBtu/hr **open** flare with a maximum capacity of 5,000 scfm of landfill gas usage, identified as EU-3, constructed in 2004.

Comment 5

NSA wants the reporting frequency in Conditions D.1.4 (b) (1), D.1.12 (d), D.1.12 (g) and D.1.15 to be consistent with the rest of the permit as "semi-annual".

Response 5

The reporting frequency in Conditions D.1.4 (b) (1), D.1.12 (d), D.1.12 (g) and D.1.15 are made consistent with the rest of the permit as "semi-annual" and the following changes have been made to Conditions D.1.4 (b) (1), D.1.12 (d), D.1.12 (g) and D.1.1 as requested.

D.1.4 Operational Standards for Collection and Control Systems [40CFR 60.753]

In order to comply with 40 CFR 60.752 (b) (2) (ii) the Permittee shall:

- (a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the municipal solid waste landfill in which solid waste has been in place for five years if active or 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) Fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the **semi**-annual reports as provided in 40 CFR 60.757(f)(1).

.....

D.1.12 Reporting Requirements [40CFR 60.757]

Pursuant to 40CFR 60.757, except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee shall:

...

- (d) Submit **semi**-annual reports of the following recorded information. 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 40CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c).

...

- (g) The reporting period for the **semi**-annual report required in Condition D.1.12 (d) shall be from ~~January 1 to December 31~~ **January 1 to June 30 and July 1 to December 31**. Reports must be submitted every ~~twelve (12)~~ **six (6)** months to IDEM, OAQ. The reports shall be due within 30 days of the end of the reporting period.

D.1.15 Record Keeping and Reporting Requirements for NESHAP for Municipal Solid Waste Landfills [40 CFR 63.1980] [326 IAC 20]

....

- (c) The reporting period for the semi-annual reports required in Conditions D.1.15 (a) and (b) shall be from ~~March 1 to August 31 and from September 1 to February 28 (February 29 in a leap year)~~ **January 1 to June 30 and July 1 to December 31**. Reports must be submitted every six (6) months and the reports shall be due within 30 days of the end of the reporting period.

Comment 6

NSA has an Open flare. NSPS does not require temperature monitoring of the open flare. Please remove Condition D.1.16.

Response 6

Condition D.1.16 has been removed as requested. All subsequent conditions have been re-numbered.

D.1.16 Flare Temperature

~~Pursuant to CP 003-6024 issued October 29, 1996, the Permittee shall record the operating temperature of the flame at least once per day. Unless operated under conditions for which the preventive maintenance plan specifies otherwise, the flame temperature shall be maintained at a minimum of 1400 degrees F or a minimum temperature exit velocity established during the latest stack test. The Response to Excursions or Exceedances for this unit shall contain trouble shooting contingency and response steps for when the temperature below the above mentioned minimum for any one reading.~~

D.1.176 Record Keeping Requirements

- ~~(a) To document compliance with Condition D.1.16, the Permittee shall maintain records of temperature of the flare.~~

- (b)(a)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**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:	National Serv-All Landfill
Source Location:	6231 Mc Beth Road Fort Wayne Indiana 46809
County:	Allen
SIC Code:	4953
Operation Permit No.:	T003-7675-00257
Operation Permit Issuance Date:	July 12, 1999
Permit Renewal No.:	T003-18142-00257
Permit Reviewer:	Surya Ramaswamy / EVP

The Office of Air Quality (OAQ) has reviewed a Part 70 Operating Permit Renewal application from National Serv-All Landfill relating to the operation of a stationary municipal solid waste landfill (MSLWLF), and to increase the design capacity of the Landfill to 30,996,952 Megagrams.

History and Background

The National Serv-All Landfill opened in 1966. Its design capacity at that time was 10,000,000 Megagrams. The landfill increased its maximum design capacity to 30,996,952 Megagrams in 2005. Landfill gas from this landfill is fed to a 4,500 scfm open flare. The landfill accepts waste containing asbestos. The landfill's anticipated closure date is 2030.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) stationary municipal solid waste landfill with a design capacity of 10,000,000 Mega grams, constructed in 1966.
- (b) One (1) 148.5 MMBtu/hr flare with a maximum capacity of 5,000 scfm of landfill gas usage, identified as EU-3, constructed in 2004.

Note:

The source is requesting to increase the design capacity of one (1) stationary municipal solid waste landfill from 10,000,000 Mega grams to 30,996,952 Mega grams. This increase in design capacity will not trigger any new requirements.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) 10,000-gallon leachate tank and 1,000 gallon propane tank; [326 IAC 8-9]
- (b) Propane or waste oil combustion sources from landfill maintenance garage with heat input equal to or less than six million (6,000,000) Btu per hour;
- (c) Five (5) Raznor propane-fired space heaters (80-150,000 Btu per hour);

- (d) Ten (10) Raznor propane –fired radiant gas heaters (150,000 Btu per hour);
- (e) Three (3) crystal clean parts washers with a solvent consumption of 240 gallons per year, constructed after 1990;[326 IAC 8-3-2] [326 IAC 8-3-5]
- (f) Two (2) electric welders from hauling garage maintenance area;
- (g) Bryant office propane-fired furnace (150,000 Btu per hour);
- (h) 1,000 gallon propane storage tank from hauling garage maintenance area; [326 IAC 8-9]; and
- (i) 500-gallon propane storage tank from flare station. [326 IAC 8-9]

Existing Approvals

The source has been operating under the following previous approvals:

- (a) Part 70 Permit No. T003-7675-00257, issued on July 12, 1999;
- (b) First Administrative Amendment No. 003-12577-00257, issued on October 2, 2000;
- (c) Second Administrative Amendment No. 003-12820-00257, issued on December 8, 2000;
- (d) First Significant Source Modification No. 003-19047-00257, issued on October 7, 2004; and
- (e) First Significant Permit Modification No. 003-19181-00257, issued on December 12, 2004.

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 permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit 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 administratively complete Part 70 permit renewal application for the purposes of this review was received on October 14, 2003. Additional information was received February 20, 2004, February 23, 2004, March 01, 2004, March 11, 2004 and January 23, 2006.

There was no notice of completeness letter mailed to the Permittee.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Fourteen (14) pages).

Potential to Emit of the Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

The source was issued a Part 70 Operating Permit on July 12, 1999. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of the original Part 70 operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/emission unit	Potential to Emit (Tons/year)							
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs (Single)	HAPS (Total)
Landfill ¹	0.00	0.00	0.00	31.62	0.00	0.00	5.49	16.07
One Open Flare ²	8.89	8.89	9.9	1.25	240.66	44.23	3.11	8.76
Fugitive Dust	39.55	39.55	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE	48.44	48.44	9.9	32.86	240.66	44.23	8.6	24.83

Note:

1. Emissions from Landfill reflect the emissions after the expansion in landfill capacity from 10,000,000 to 30,996,952 Megagrams.
 2. Emissions from the open flare are based on landfill gas usage limit of 4,500 scfm.
- (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.
 - (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater 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. Therefore, the source is subject to the provisions of 326 IAC 2-7.
 - (c) Pursuant to 40 CFR 60.752, Subpart WWW, this source is subject to §§ 70.5(a)(1)(i) and 71.5(a)(1)(i) because its design capacity is greater than 2.5 million Megagrams and 2.5 million cubic meters.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2003 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	25
PM-10	25
SO ₂	1
VOC	10
CO	21
NO _x	4
HAP (specify)	---

“---“ No emissions data reported.

County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Non Attainment
CO	Attainment
Lead	Attainment

- (a) 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 the ozone standards. Allen County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the source section.
- (b) Allen County has been classified as unclassifiable or attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as surrogate for PM_{2.5} emissions. See the State Rule Applicability for the source section.
- (c) Allen 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. See the State Rule Applicability for the source section.
- (d) Fugitive Emissions
 Since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD and Emission Offset applicability. This source is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 (PSD).

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet 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.

Federal Rule Applicability

- (a) The municipal solid waste landfill is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.750, Subpart WWW) because the municipal solid waste landfill commenced construction, reconstruction or modification or began accepting waste on or after May 30, 1991.
 - (1) Pursuant to 40CFR 60.752, a municipal solid waste landfill with a design capacity greater than 2.5 million megagrams (Mg) shall comply with 40CFR 60.752 (b)(2).
 - (2) In order to comply with 40 CFR 60.752 (b)(2)(ii) the Permittee shall:
 - (A) Operate the collection system such that gas is collected from each area, cell, or group of cells in the municipal solid waste landfill in which solid waste has been in place for five years if active or 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:
 - (i) Fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR 60.757(f)(1).
 - (ii) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan.
 - (iii) 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 Office of Air Quality (OAQ).
 - (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 (except for the landfill gas well, LFGASB16, which can have an oxygen level less than 16.9 percent). The Permittee 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.
 - (i) The nitrogen level shall be determined using Method 3C, unless an alternative method is established as allowed by 40CFR 60.752 (b)(2)(i).

- (ii) Unless an alternative test method is established as allowed by 40 CFR 60.752 (b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A except that; the span shall be set so that the regulatory limit is between 20 and 50 percent of the span; a data recorder is not required; only two calibration gases are required, a zero and span, and ambient air may be used as the span; a calibration error check is not required; 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 Permittee 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 Permittee 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 40CFR 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 one hour.
 - (F) Operate the control system at all times when the collected gas is routed to the system.
 - (G) If monitoring demonstrates that the operational requirements in 40 CFR 60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in 40 CFR 60.755(a)(3) through (5) or 40 CFR 60.755(c). If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements in 40 CFR 60.753.
- (b) National Emission Standards for Hazardous Air Pollutants (NESHAP)
- (1) Pursuant to 326 IAC 14-2-1, this source is subject to the National Emission Standards for Hazardous Air Pollutants (40 CFR 61.154, (Subpart M)). This rule requires that each owner or operator of an active waste disposal site that receives asbestos-containing waste material from a source covered under 40 CFR 61.149, 61.150, or 61.155 shall meet the requirements of this section:
 - (A) Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of paragraph (C) or (D) of this section must be met.

- (B) Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph (c)(i) of this section must be met.
 - (i) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must conform to the specifications set forth in 40 CFR 61.154(b)(1)(I-iii).
 - (ii) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.
 - (iii) Upon request and supply of appropriate information, the Administrator will determine whether a fence or a natural barrier adequately deters access by the general public.
- (C) Rather than meet the no visible emission requirement of paragraph (a) of this section, at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:
 - (i) Be covered with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, or
 - (ii) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.
- (D) Rather than meet the no visible emission requirement of paragraph (a) of this section, use an alternative emissions control method that has received prior written approval by the Administrator according to the procedures described in 40 CFR 61.149(c)(2).
- (E) For all asbestos-containing waste material received, the owner or operator of the active waste disposal site shall:
 - (i) Maintain waste shipment records and include the following information:
 - (aa) The name, address, and telephone number of the waste generator.
 - (bb) The name, address, and telephone number of the transporter(s).

- (cc) The quantity of the asbestos-containing waste material in cubic meters (cubic yards).
- (dd) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.
- (ee) The date of the receipt.
- (ii) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.
- (iii) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and, if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.
- (F) Maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.
- (G) Upon closure, comply with all the provisions of 40 CFR 61.151.
- (H) Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.
- (I) Furnish upon request, and make available during normal business hours for inspection by the Administrator, all records required under this section.

- (J) Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:
- (i) Scheduled starting and completion dates.
 - (ii) Reason for disturbing the waste.
 - (iii) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.
 - (iv) Location of any temporary storage site and the final disposal site. (Secs. 112 and 301(a) of the Clean Air Act as amended (42 U.S.C. 7412, 7601(a)).

The source currently complies with the federal requirements by covering any asbestos-containing waste material that has been deposited with at least 15 centimeters (6 inches) of compacted non-asbestos containing material within a 24-hour period.

- (2) This source is subject to the requirements of National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Municipal Solid Waste Landfills (40 CFR 63.1930 - 63.1952, Subpart AAAA). 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 source has accepted waste since November 8, 1987 and is a major source of HAP as defined by 40 CFR 63.2. This landfill site does not include a bioreactor, as defined in 40 CFR 63.1990.

Since this NESHAP was promulgated on January 16, 2003 and was not included in the source's most recent permit modification (Reopening 125-13448-00033, issued 01-15-2002), the conditions for the requirement of 40 CFR 63, Subpart AAAA will be added into this permit renewal. The additional conditions are listed as the following:

- (A) Pursuant to 40 CFR 63.1955, the Permittee shall:
- (i) Comply with the requirements of 40 CFR 60, Subpart WWW.
 - (ii) If the source is required by 40 CFR 60.752(b)(2) to install a collection and control system, the source shall comply with the general and continuing compliance requirements in 40 CFR 63.1960 through 40 CFR 63.1985.

- (iii) 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, the Permittee 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 startup, shutdown, and malfunction (SSM) requirements in Subpart A of 40 CFR 63 as specified in Table 1 of 40 CFR 63, Subpart AAAA and all affected sources must submit compliance reports every 6 months as specified in 40 CFR 63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations (as defined in 40 CFR 63.1965) for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average (as defined in 40 CFR 63.1975).

- (B) Pursuant to 40 CFR 63.1960, compliance with 40 CFR 63, Subpart AAAA is determined by the following:
 - (i) The same way it is determined for 40 CFR 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence.
 - (ii) 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 (as defined in 40 CFR 63.1965) occurs, the Permittee has failed to meet the control device operating conditions described in 40 CFR 60, Subpart WWW and has deviated from the requirements of 40 CFR 63.
 - (iii) The Permittee must develop and implement 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, implement, or maintain a copy of the SSM plan is a deviation from the requirements of 40 CFR 63, Subpart AAAA.

- (C) Pursuant to 40 CFR 63.1980, the Permittee has the following record keeping and reporting requirements:
 - (i) The Permittee shall keep records and reports as specified in 40 CFR 60, Subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR 60, Subpart Cc, whichever applies to this landfill, with one exception: The Permittee must submit the annual report described in 40 CFR 60.757(f) every 6 months.
 - (ii) The Permittee shall keep records and reports as specified in the general provisions of 40 CFR part 60 and 40 CFR 63 as shown in Table 1 of 40 CFR 63, Subpart AAAA. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

The SSM plan for National Serv-All Landfill was developed and maintained on site by January 16, 2004.

- (c) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart AAAA.
- (d) 40 CFR 64, Compliance Assurance Monitoring

The requirements of 40 CFR Part 64, Compliance Assurance Monitoring, apply to a pollutant-specific emissions unit (PSEU), as defined in 40 CFR 64.1, at a major source that is required to obtain a Part 70 or 71 permit if the PSEU meets the following criteria:

- (1) the unit is subject to an emission limitation or standard for an applicable regulated air pollutant,
- (2) the unit uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard, and
- (3) the unit has a potential to emit (PTE) before controls equal to or greater than 100 percent of the amount (tons per year) of the pollutant required for a source to classified as a Part 70 major source.

This source was issued initial Part 70 permit no. T003-7675-00257, on July 12, 1999. The open flare, identified as EU 3, as PSEU has uncontrolled PTE of CO at greater than 100 percent of the applicable major Part 70 threshold, but does not use a control device to control CO emissions. Therefore, the PSEU as open flare does not meet the criteria for Compliance Assurance Monitoring applicability.

The landfill as PSEU has uncontrolled PTE at less than 100 percent of the applicable major Part 70 threshold. Therefore, the PSEU as landfill does not meet the criteria for Compliance Assurance Monitoring applicability.

- (e) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels Constructed, Reconstructed or Modified after July 23, 1984, (326 IAC 12, 40 CFR 60, Subpart Kb), are not included in this permit for the above ground diesel storage tanks. These storage tanks each have a capacity less than 75 cubic meters.
- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants: Parts washer Operation, (326 IAC 20, 40 CFR 63, Subpart T), is not included in this permit for the degreaser operation. The solvent used in the degreasing operation does not contain any of the following halogenated solvents in concentrations greater than five percent by weight: methylene chloride, 1,1,1-trichloroethane, trichloroethylene, perchloroethylene, carbon tetrachloride, or chloroform.

State Rule Applicability – Entire Source

326 IAC 2-2 (PSD Minor Limit)

This source was constructed in 1966, before the rule applicability date of August 7, 1977, and is not considered a major source because it does not belong to one of the 28 listed source categories. The uncontrolled potential to emit of CO, SO₂, PM, PM10, VOC, and NO_x was less than 250 tons per year, at the time of initial construction. The source has always been a minor source for PSD applicability.

The installation of 5,000 scfm (148.5 MMBtu/hr) open flare (EU-3) under SSM No.003-19047-00257, issued on October 7, 2004, had the potential to emit CO of greater than 250 tons per year. However, the source opted for a landfill gas usage limit of 2,365 million cubic feet per year (equivalent to 4,500 scfm) for the open flare (EU-3). This usage limit in conjunction with CO emission factor of 0.37 lb per MMBtu provided by LFG Specialties Inc. (manufacturer) limited the potential to emit of CO to less than 241 tons per 12 consecutive month period from the open flare (EU-3).

Expansion in landfill capacity being requested in this renewal results in increase of 18.45 tons per year of VOC emissions, which is less than the major PSD threshold for VOC. Therefore all modifications at the source including the expansion in landfill capacity have been minor at this existing minor PSD source, and the sourcewide potential emissions of all attainment criteria pollutants still remain less than the PSD threshold of 250 tons per year.

326 IAC 2-3 (Emission Offset)

Allen County has been designated as nonattainment for the 8-hour ozone standard on June 15, 2004. VOC and NO_x emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. All modifications to this source after the rule applicability date of August 7, 1977, had potential emissions less than the PSD major modification thresholds and the source is not one of the 28 source categories. Therefore, this source is not subject to the requirements of 326 IAC 2-2 and remains a minor source under this rule.

326 IAC 2-6 (Emission Reporting)

This source 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. In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 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).

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of forty percent (40%) 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.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

This source is not subject to this rule. This rule applies to major sources of hazardous air pollutants (HAP) that were constructed or reconstructed after July 27, 1997. The source was constructed before 1997. The modifications occurring in October and December of 2004 (SSM 003-19181 and SPM 003-19047) and the increase of capacity without prior approval, in and of itself are not a major source of hazardous air pollutants. Therefore, 326 IAC 2-4.1 does not apply.

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. A violation of this section would occur if air crossing the downwind boundaries of the site were to contain fugitive dust concentrations greater than sixty-seven percent (67%) in excess of ambient upwind concentrations.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

Pursuant to 326 IAC 6-5-1(b), the source shall be required to control fugitive particulate matter emissions. The source is located in Allen County, has received all the necessary preconstruction approvals before December 13, 1985. Therefore, 326 IAC 6-5 will not apply to the source.

State Rule Applicability – Degreaser (Three (3) Crystal Clean Parts)

326 IAC 8-3-2 (Cold Cleaner Operations)

The Crystal Clean Parts washer is subject to this rule because the facilities are constructed after 1980. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaning facility shall:

- (a) equip the cleaner with a cover;
- (b) equip the cleaner with a facility for draining cleaned parts;
- (c) close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) provide a permanent, conspicuous label summarizing the operation requirements;
- (f) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operations and Control)

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^oC) (one hundred twenty degrees Fahrenheit (120^oF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

State Rule Applicability – Welding Operation

326 IAC 6-3-2 (e) (Particulate Emissions Limitations for manufacturing Process)

The welding operations (item (g) described under insignificant activities) at each station, consume less than six hundred twenty-five (625) pounds of rod per day. Therefore, pursuant to 326 IAC 6-3-1(b), the welding operations are exempt from the requirements of 326 IAC 6-3-2 (Particulate Emissions Limitations for Manufacturing Processes).

State Rule Applicability – Municipal Solid Waste Landfills

326 IAC 8-8.1 (Municipal Solid Waste Landfills Not Located in Clark, Floyd, Lake, and Porter Counties)

This source is located in Pike County, has capacity available for future use and was constructed prior to May 30, 1991. It meets the definition of “existing municipal solid waste landfill” as defined in 326 IAC 8-8.1-2(b). Therefore, this landfill is subject to 326 IAC 8-8.1. 326 IAC 8-8.1 incorporates, by reference, all of the provisions of 40 CFR 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills. Therefore, the landfill fulfills the requirements of 326 IAC 8-8.1 by following the requirements of 40 CFR 60, Subpart WWW.

State Rule Applicability – Storage Vessels

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

The above ground storage tanks are not subject to 326 IAC 8-9 because they are not located in Clark, Floyd, Lake, or Porter County.

State Rule Applicability – 4,500 SCFM Open Flare

326 IAC 9-1-2 (Carbon Monoxide Emission Requirements)

This source is not among the listed source categories in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1-2 are not applicable to this open flare.

326 IAC 10-1-3 (Nitrogen Oxide Emission Requirements)

This source is not located in Clark or Floyd County. Therefore, the requirements of 326 IAC 10-1-3 are not applicable to this open flare.

Testing Requirements

326 IAC 2-7-6(1), (6) 40 CFR 60.754 (b) (Testing Requirements)

- (a) After installation of a collection and control system in compliance with 40 CFR 60.755, the Permittee shall calculate the non methane organic compound (NMOC) emission rate for purposes of determining when the system can be removed using the following equation:

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

where,

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

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

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

- (1) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40 CFR 60.
 - (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 40 CFR 60. If using Method 18 of Appendix A of 40 CFR 60, 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 Permittee shall divide the NMOC concentration from Method 25C of Appendix A of 40 CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.
 - (3) The Permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Office of Air Quality (OAQ).
- (b) Pursuant to 40 CFR 60.752 (b)(2)(iii)(A), route all the collected landfill gas (LFG) to open flare that is designed and operated in accordance to 40 CFR 60.18 procedures.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less 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 requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions 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.

The compliance monitoring requirements applicable to this source are as follows:

1. The municipal solid waste landfill has applicable compliance monitoring conditions as specified below:
 - (a) The Permittee seeking to comply with 40 CFR 60.752(b)(2)(ii)(A) for an active gas collection 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 40 CFR 60.755(a)(3);
 - (2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40 FR 60.755(a)(5); and
 - (3) Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5).
 - (b) The Permittee seeking to comply with 40CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturers specifications the following equipment:
 - (1) 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 Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or 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 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) The Permittee seeking to install a collection system that does not meet the specifications in 40 CFR 60.759 or seeking to monitor alternative parameters to those required by 40 CFR 60.753 through 40 CFR 60.756 shall provide information satisfactory to the Office of Air Quality (OAQ) as provided in 40 CFR 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 Office of Air Quality (OAQ) may specify additional appropriate monitoring procedures.
 - (d) The Permittee seeking to demonstrate compliance with 40 CFR 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 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.
2. The flare has applicable compliance monitoring conditions as specified below:
- (a) Each owner or operator seeking to comply with 40 CFR 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:
 - (A) 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
 - (B) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

These monitoring conditions are necessary because the open flare at the municipal solid waste landfill must operate properly to ensure compliance with 40 CFR 60, Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills) and 40 CFR 63, Subpart AAAA (National Emissions Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills).

These monitoring conditions are necessary because the flare must operate properly to ensure compliance with 40 CFR 60, Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills) and 326 IAC 2-7 (Part 70).

Conclusion

The operation of this stationary municipal solid waste landfill (MSLWLF) shall be subject to the conditions of this Part 70 permit 033-18142-00257.

Appendix A: Emission Calculations

Total emissions from Open Flare
 Company Name: National Serv-All, Inc./ McBeth Road lanfill
 Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
 Part 70 Permit: T003-18142-00257
 Reviewer: KSR/EVP
 Date: 1/5/06

Total emissions from Entire source (Flare+Landfill+Fugitives)

Emission Unit ID No.	Description	Potential Emissions (Uncontrolled)																		
		LFG Flow	NO _x		CO		SO ₂		PM ₁₀		TSP		NMOC		VOC		HAP (Total)		HAP (Single)	
		(scfm)	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	Landfill	2209.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.51	81.07	7.22	31.62	3.67	16.07	1.25	5.49	
2	One Open Flare	5000.00	11.22	49.14	61.05	267.40	2.51	11.00	2.50	10.97	2.50	40.51	177.45	15.80	69.21	9.55	41.85	2.86	12.53	
3,4,5	Fugitive Dust	---	0.00	0.00	0.00	0.00	0.00	0.00	45.15	197.76	217.83	954.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total		11.22	49.14	61.05	267.40	2.51	11.00	47.65	208.73	220.33	965.07	59.02	258.52	23.02	100.82	13.22	57.92	4.11	18.02

Emission Unit ID No.	Description	Potential Emissions (Controlled)																		
		LFG Flow	NO _x		CO		SO ₂		PM ₁₀		TSP		NMOC		VOC		HAP (Total)		HAP (Single)	
		(scfm)	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	Landfill	2209.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.51	81.07	7.22	31.62	3.67	16.07	1.25	5.49	
2	One Open Flare	4500.00	10.10	44.23	54.95	240.66	2.26	9.90	2.03	8.89	2.03	8.73	3.19	0.28	1.25	2.00	8.76	0.71	3.11	
3,4,5	Fugitive Dust	---	0.00	0.00	0.00	0.00	0.00	0.00	9.03	39.55	43.57	190.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total		10.10	44.23	54.95	240.66	2.26	9.90	11.06	48.44	45.60	199.71	19.24	84.26	7.50	32.86	5.67	24.83	1.96	8.60

Landfill Characteristics

Landfill Open Year	1968
Landfill Closure Year (with 80-year limit)	2030
Actual Closure Year (without limit)	2030
Have Model Calculate Closure Year?	Yes
Waste Design Capacity	30,996,952 megagrams

Model Parameters

Methane Generation Rate, k	0.04	year ⁻¹
Potential Methane Generation Capacity, L ₀	100	m ³ /Mg
NMOC Concentration	595	ppmv as hexane
Methane Content	50	% by volume

Year	Waste Acceptance Rates (Mg/year)	Waste-in-Place (Mg)	Total Landfill Gas (Mg/year)		Methane (Mg/year)		Carbon dioxide (Mg/year)		NMOC (Mg/year)	
			(Mg/year)	(m ³ /year)	(Mg/year)	(m ³ /year)	(Mg/year)	(m ³ /year)	(Mg/year)	(m ³ /year)
1966	19,720	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1967	20,320	19,720	193.51	154,955.95	51.69	77,477.99	141.82	77,477.98	0.33	92.20
1968	20,930	40,040	385.33	308,550.68	102.92	154,275.34	282.40	154,275.34	0.66	183.59
1969	21,550	60,970	575.60	460,916.13	153.75	230,458.06	421.85	230,458.06	0.96	274.25
1970	22,180	82,520	764.50	612,179.09	204.21	306,089.54	560.30	306,089.54	1.31	364.25
1971	22,900	104,700	952.18	762,461.35	254.34	381,230.68	697.84	381,230.68	1.63	453.66
1972	23,500	127,600	1,139.56	912,508.60	304.39	456,254.30	835.17	456,254.30	1.95	542.94
1973	24,300	151,100	1,325.49	1,061,387.08	354.05	530,693.54	971.43	530,693.54	2.26	631.53
1974	25,000	175,400	1,511.97	1,210,714.21	403.86	605,357.10	1,108.11	605,357.10	2.58	720.37
1975	25,700	200,400	1,698.01	1,359,686.60	453.56	679,843.30	1,244.45	679,843.30	2.90	809.01
1976	26,500	226,100	1,883.62	1,508,318.16	503.14	754,159.08	1,380.49	754,159.08	3.22	897.45
1977	27,300	252,600	2,069.81	1,657,408.04	552.87	828,704.02	1,516.94	828,704.02	3.53	986.16
1978	28,200	279,900	2,256.55	1,806,938.27	602.75	903,469.13	1,653.80	903,469.13	3.85	1,075.13
1979	32,800	308,100	2,444.79	1,957,677.36	653.03	978,838.68	1,791.76	978,838.68	4.18	1,164.82
1980	35,000	340,700	2,668.84	2,137,080.23	712.87	1,068,540.12	1,955.96	1,068,540.12	4.56	1,271.56
1981	45,400	379,700	2,946.90	2,359,738.59	787.15	1,179,869.29	2,159.75	1,179,869.29	5.03	1,404.04
1982	68,000	425,100	3,276.86	2,623,956.34	875.28	1,311,978.17	2,401.57	1,311,978.17	5.60	1,561.25
1983	113,400	493,100	3,815.66	3,055,400.41	1,019.20	1,527,700.20	2,796.45	1,527,700.20	6.52	1,817.96
1984	181,500	606,500	4,778.84	3,826,671.74	1,276.48	1,913,335.87	3,502.36	1,913,335.87	8.16	2,276.87
1985	249,000	788,000	6,372.52	5,102,817.74	1,702.17	2,551,408.87	4,670.35	2,551,408.87	10.88	3,036.18
1986	318,000	1,037,000	8,566.09	6,859,327.30	2,288.09	3,429,663.65	6,278.00	3,429,663.65	14.63	4,081.30
1987	317,000	1,355,000	11,350.75	9,089,151.81	3,031.91	4,544,575.90	8,318.84	4,544,575.90	19.38	5,408.05
1988	318,000	1,672,000	14,016.40	11,223,685.84	3,743.93	5,611,842.92	10,272.47	5,611,842.92	23.94	6,678.09
1989	318,000	1,990,000	16,587.35	13,282,381.40	4,430.66	6,641,190.70	12,156.69	6,641,190.70	28.33	7,903.02
1990	317,000	2,308,000	19,057.49	15,260,354.36	5,090.46	7,630,177.18	13,967.03	7,630,177.18	32.55	9,079.91
1991	331,000	2,625,000	21,420.96	17,152,912.07	5,721.77	8,576,456.04	15,699.19	8,576,456.04	36.58	10,205.98
1992	343,000	2,956,000	23,829.14	19,081,270.84	6,365.02	9,540,635.42	17,464.12	9,540,635.42	40.70	11,353.36
1993	306,000	3,299,000	26,260.65	21,028,311.26	7,014.50	10,514,155.63	19,246.15	10,514,155.63	44.85	12,511.85
1994	281,000	3,605,000	28,233.74	22,608,268.26	7,541.53	11,304,134.14	20,692.20	11,304,134.14	48.22	13,451.82
1995	324,000	3,886,000	29,884.14	23,929,829.12	7,982.37	11,964,914.56	21,901.76	11,964,914.56	51.04	14,238.25
1996	118,000	4,210,000	31,891.78	25,537,456.52	8,518.64	12,768,728.26	23,373.14	12,768,728.26	54.47	15,194.79
1997	91,000	4,328,000	31,799.22	25,463,339.74	8,493.91	12,731,669.87	23,305.31	12,731,669.87	54.31	15,150.69
1998	91,000	4,419,000	31,445.34	25,179,988.33	8,399.39	12,589,984.16	23,045.95	12,589,984.16	53.70	14,982.08
1999	705,000	4,510,000	31,105.33	24,907,708.07	8,308.57	12,453,854.03	22,796.76	12,453,854.03	53.12	14,820.09
2000	721,000	5,215,000	36,803.85	29,470,816.70	9,830.70	14,735,408.35	26,973.15	14,735,408.35	62.85	17,535.14
2001	738,000	5,936,000	42,435.93	33,980,728.18	11,335.09	16,990,364.09	31,100.84	16,990,364.09	72.47	20,218.53
2002	798,000	6,674,000	48,014.00	38,447,386.23	12,825.06	19,223,893.11	35,188.95	19,223,893.11	82.00	22,876.19
2003	632,636	7,472,000	53,962.13	43,210,372.52	14,413.87	21,605,186.26	39,548.27	21,605,186.26	92.16	25,710.17
2004	587,213	8,104,636	58,054.31	46,487,201.07	15,506.93	23,243,600.54	42,547.38	23,243,600.54	99.15	27,659.88
2005	656,029	8,791,849	62,521.61	50,064,402.21	16,700.19	25,032,201.11	45,821.41	25,032,201.11	106.78	29,788.32
2006	887,345	9,447,878	66,507.72	53,256,295.12	17,764.93	26,628,147.56	48,742.79	26,628,147.56	113.58	31,887.50
2007	1,035,223	72,607.44	58,140,671.54	19,394.23	29,070,335.77	53,213.21	29,070,335.77	124.00	34,593.70	
2008	887,345	11,222,568	78,467.99	62,833,528.82	20,959.64	31,416,764.41	57,508.35	31,416,764.41	134.01	37,385.95
2009	887,345	12,109,913	84,098.75	67,342,376.54	22,463.68	33,671,188.27	61,635.07	33,671,188.27	143.62	40,068.71
2010	887,345	12,997,258	89,508.72	71,674,429.80	23,908.74	35,837,214.90	65,599.98	35,837,214.90	152.86	42,646.29
2011	887,345	13,884,603	94,706.56	75,836,620.83	25,297.14	37,918,310.42	69,409.42	37,918,310.42	161.74	45,122.79
2012	887,345	14,771,948	99,700.59	79,835,610.01	26,631.10	39,917,805.01	73,069.49	39,917,805.01	170.27	47,502.19
2013	887,345	15,659,293	104,498.81	83,677,796.59	27,912.75	41,838,898.29	76,586.05	41,838,898.29	178.46	49,788.29
2014	887,345	16,546,638	109,108.88	87,369,328.87	29,144.15	43,684,664.44	79,964.73	43,684,664.44	186.34	51,984.75
2015	887,345	17,433,983	113,538.19	90,916,114.11	30,327.27	45,458,057.05	83,210.92	45,458,057.05	193.90	54,095.09
2016	887,345	18,321,328	117,793.82	94,323,827.93	31,463.99	47,161,913.85	86,329.83	47,161,913.85	201.17	56,122.68
2017	887,345	19,208,673	121,882.59	97,597,923.33	32,556.15	48,798,961.66	89,326.44	48,798,961.66	208.15	58,070.76
2018	887,345	20,096,018	125,811.03	100,743,639.64	33,605.48	50,371,819.82	92,205.56	50,371,819.82	214.86	59,942.47
2019	887,345	20,983,363	129,585.44	103,766,010.64	34,613.66	51,883,005.32	94,971.78	51,883,005.32	221.31	61,740.78
2020	887,345	21,870,708	133,211.85	106,669,872.79	35,582.32	53,334,936.39	97,629.54	53,334,936.39	227.50	63,468.57
2021	887,345	22,758,053	136,696.07	109,459,872.87	36,512.99	54,729,936.44	100,183.08	54,729,936.44	233.45	65,128.62
2022	887,345	23,645,398	140,043.67	112,140,475.48	37,407.17	56,070,237.74	102,636.50	56,070,237.74	239.17	66,723.58
2023	887,345	24,532,743	143,260.01	114,715,970.17	38,266.29	57,357,985.08	104,993.72	57,357,985.08	244.66	68,256.00
2024	887,345	25,420,088	146,350.23	117,190,478.26	39,091.72	58,595,239.13	107,258.51	58,595,239.13	249.94	69,728.33
2025	887,345	26,307,433	149,319.29	119,567,959.50	39,884.79	59,783,979.75	109,434.50	59,783,979.75	255.01	71,142.94
2026	887,345	27,194,778	152,171.92	121,852,218.37	40,646.76	60,926,109.18	111,525.17	60,926,109.18	259.88	72,502.07
2027	887,345	28,082,123	154,912.71	124,046,910.16	41,378.85	62,023,455.08	113,533.86	62,023,455.08	264.56	73,807.91
2028	887,345	28,969,468	157,546.02	126,155,546.86	42,082.23	63,077,773.43	115,463.79	63,077,773.43	269.06	75,062.55
2029	887,345	29,856,813	160,076.08	128,181,502.74	42,758.04	64,090,751.37	117,318.04	64,090,751.37	273.38	76,267.99
2030	252,794	30,744,158	162,506.94	130,128,818.74	43,407.35	65,064,009.87	119,099.59	65,064,009.87	277.53	77,426.17
2031	0	30,996,952	158,815.62	127,012,032.53	42,387.94	63,506,016.26	116,247.69	63,506,016.26	270.89	75,572.16
2032	0	30,996,952	152,396.21	122,031,819.50	40,706.67	61,015,909.75	111,689.55	61,015,909.75	260.26	72,608.93
2033	0	30,996,952	146,420.67	117,246,863.41	39,110.53	58,623,441.71	107,310.14	58,623,441.71	250.06	69,761.90
2034	0	30,996,952	140,679.44	112,649,567.38	37,576.99	56,324,783.68	103,102.45	56,324,783.68	240.25	67,026.49
2035	0	30,996,952	135,163.32	108,232,514.64	36,103.57	54,116,257.32	99,059.74	54,116,257.32	230.83	64,399.35
2036	0	30,996,952	129,863.49	103,988,657.04	34,687.93	51,994,328.52	95,175.56	51,994,328.52	221.78	61,873.25
2037	0	30,996,952	124,771.47	99,911,203.48	33,327.80	49,855,601.74	91,443.67	49,855,601.74	213.09	59,447.17
2038	0	30,996,952	119,879.11	95,993,629.15	32,021.00	47,996,814.58	87,858.11	47,996,814.58	204.73	57,116.21
2039	0	30,996,952	115,178.58	92,229,665.12	30,765.44	46,114,832.56	84,413.15	46,114,832.56	196.70	54,876.65
2040	0	30,996,952	110,662.36	88,613,288.22	29,559.11	44,306,				

Landfill Characteristics

Landfill Open Year 1966
 Landfill Closure Year (with 80-year limit) 2030
 Actual Closure Year (without limit) 2030
 Have Model Calculate Closure Year? Yes
 Waste Design Capacity 30,996,952 megagrams

Model Parameters

Methane Generation Rate, k 0.04 year⁻¹
 Potential Methane Generation Capacity, L₀ 100 m³/Mg
 NMOC Concentration 595 ppmv as hexane
 Methane Content 50 % by volume

Year	Waste Acceptance Rates (Mg/year)	Waste-In-Place Mg	Methane Modeled Landfill Gas Flow		
			(Mg/year)	(m ³ /year)	(av ft ³ /min)
1966	19,720	0	0.00	0.00	0.00
1967	20,320	19,720	51.69	77,477.96	10.41
1968	20,930	40,040	102.92	154,275.34	20.73
1969	21,550	60,970	153.75	230,458.06	30.97
1970	22,180	82,520	204.21	306,089.54	41.13
1971	22,900	104,700	254.34	381,230.68	51.23
1972	23,500	127,600	304.39	456,254.30	61.31
1973	24,300	151,100	354.05	530,693.54	71.31
1974	25,000	175,400	403.86	605,357.10	81.35
1975	25,700	200,400	453.56	679,843.30	91.36
1976	26,500	226,100	503.14	754,159.08	101.34
1977	27,300	252,600	552.87	828,704.02	111.36
1978	28,200	279,900	602.75	903,469.13	121.41
1979	32,600	308,100	653.03	978,838.68	131.54
1980	39,000	340,700	712.87	1,068,540.12	143.59
1981	45,400	379,700	787.15	1,179,869.29	158.55
1982	68,000	425,100	875.28	1,311,978.17	176.30
1983	113,400	493,100	1,019.20	1,527,700.20	205.29
1984	181,500	606,500	1,276.48	1,913,335.87	257.11
1985	249,000	788,000	1,702.17	2,551,408.87	342.86
1986	318,000	1,037,000	2,288.09	3,429,663.65	460.88
1987	317,000	1,355,000	3,031.91	4,544,575.90	610.70
1988	318,000	1,672,000	3,743.93	5,611,842.92	754.12
1989	318,000	1,990,000	4,430.66	6,641,190.70	892.44
1990	317,000	2,308,000	5,090.46	7,630,177.18	1,025.34
1991	331,000	2,625,000	5,721.77	8,576,456.04	1,152.50
1992	343,000	2,956,000	6,365.02	9,540,635.42	1,282.07
1993	306,000	3,299,000	7,014.50	10,514,155.63	1,412.89
1994	281,000	3,605,000	7,541.53	11,304,134.14	1,519.05
1995	324,000	3,886,000	7,982.37	11,964,914.56	1,607.84
1996	118,000	4,210,000	8,518.64	12,768,728.26	1,715.86
1997	91,000	4,328,000	8,493.91	12,731,669.87	1,710.88
1998	91,000	4,419,000	8,399.39	12,589,984.16	1,691.84
1999	705,000	4,510,000	8,308.57	12,453,854.03	1,673.55
2000	721,000	5,215,000	9,830.70	14,735,408.35	1,980.14
2001	738,000	5,936,000	11,335.09	16,990,364.09	2,283.16
2002	798,000	6,674,000	12,825.06	19,223,693.11	2,583.28
2003	632,636	7,472,000	14,413.87	21,605,186.26	2,903.30
2004	687,213	8,104,636	15,506.93	23,243,600.54	3,123.47
2005	656,029	8,791,849	16,700.19	25,032,201.11	3,363.82
2006	887,345	9,447,878	17,764.93	26,628,147.56	3,578.28
2007	887,345	10,335,223	19,394.23	29,070,335.77	3,906.46
2008	887,345	11,222,568	20,959.64	31,416,764.41	4,221.78
2009	887,345	12,109,913	22,463.68	33,671,188.27	4,524.73
2010	887,345	12,997,258	23,908.74	35,837,214.90	4,815.80
2011	887,345	13,884,603	25,297.14	37,918,310.42	5,095.45
2012	887,345	14,771,948	26,631.10	39,917,805.01	5,364.14
2013	887,345	15,659,293	27,912.75	41,838,898.29	5,622.30
2014	887,345	16,546,639	29,144.15	43,684,664.44	5,870.33
2015	887,345	17,433,983	30,327.27	45,458,057.05	6,108.64
2016	887,345	18,321,328	31,463.99	47,161,913.95	6,337.61
2017	887,345	19,208,673	32,556.15	48,798,961.66	6,557.59
2018	887,345	20,096,018	33,605.48	50,371,819.82	6,768.95
2019	887,345	20,983,363	34,613.66	51,883,005.32	6,972.03
2020	887,345	21,870,708	35,582.32	53,334,936.39	7,167.14
2021	887,345	22,758,053	36,512.99	54,729,936.44	7,354.60
2022	887,345	23,645,398	37,407.17	56,070,237.74	7,534.70
2023	887,345	24,532,743	38,266.29	57,357,985.08	7,707.75
2024	887,345	25,420,088	39,091.72	58,595,239.13	7,874.01
2025	887,345	26,307,433	39,894.79	59,783,979.75	8,033.76
2026	887,345	27,194,778	40,646.76	60,926,109.18	8,187.24
2027	887,345	28,082,123	41,378.85	62,023,455.08	8,334.70
2028	887,345	28,969,468	42,082.23	63,077,773.43	8,476.38
2029	887,345	29,856,813	42,758.04	64,090,751.37	8,612.50
2030	252,794	30,744,158	43,407.35	65,064,009.87	8,743.29
2031	0	30,996,952	42,367.94	63,506,016.26	8,533.92
2032	0	30,996,952	40,706.67	61,015,909.75	8,199.30
2033	0	30,996,952	39,110.53	58,623,441.71	7,877.80
2034	0	30,996,952	37,576.99	56,324,783.68	7,568.91
2035	0	30,996,952	36,103.57	54,116,257.32	7,272.13
2036	0	30,996,952	34,687.93	51,994,328.52	6,986.99
2037	0	30,996,952	33,327.80	49,955,601.74	6,713.02
2038	0	30,996,952	32,021.00	47,996,814.58	6,449.80
2039	0	30,996,952	30,765.44	46,114,832.56	6,196.90
2040	0	30,996,952	29,559.11	44,306,644.11	5,953.92
2041	0	30,996,952	28,400.08	42,569,355.74	5,720.46
2042	0	30,996,952	27,286.49	40,900,187.43	5,496.16
2043	0	30,996,952	26,216.58	39,296,468.14	5,280.65
2044	0	30,996,952	25,188.61	37,755,631.59	5,073.59
2045	0	30,996,952	24,200.95	36,275,212.10	4,874.65

Maximum modeled LFG Flow

8,743.29

Appendix A: Emission Calculations
Fugitive HAP Emissions from Landfill
Company Name: National Serv-All, Inc.
Address City IN Zip: 8231 McBeth Road Fort Wayne Indiana 46809
Part 70 Permit: T003-18142-00257
Reviewer: KSR/EVP
Date: 1/5/2006

Potential LFG fugitive flow 2.186 scfm

LFG Compound	HAP	VOC	CAS	MW (lb/lb-mol)	Conc (ppmv)*	Control Eff. %	Landfill Emissions	
							lb/hr	TPY
1,1,1 - Trichloroethane (methyl chloroform)	x	x	71-55-6	133.42	0.48	0.00	0.022119889	0.096865112
1,1,2,2 - Tetrachloroethane	x	x	79-34-5	167.85	1.10	0.00	0.063772698	0.279324416
1,1 - Dichloroethane (ethylidene dichloride)	x	x	75-34-3	98.95	2.40	0.00	0.082025293	0.359270793
1,1 - Dichloroethane (vinylidene chloride)	x	x	75-35-4	96.94	0.20	0.00	0.006730074	0.029477724
1,2 - Dichloroethane (ethylene dichloride)	x	x	107-05-2	98.95	0.41	0.00	0.013911529	0.060932496
1,2 - Dichloropropane (propylene dichloride)	x	x	78-87-6	112.99	0.18	0.00	0.007024167	0.030765852
2-Propanol (Isopropyl alcohol)			67-63-0	60.11	50.00	0.00	1.038095944	4.546860233
Acetone			67-64-1	58.08	7.00	0.00	0.140425316	0.615062883
Acrylonitrile	x	x	107-13-1	53.06	6.30	0.00	0.115459203	0.505711311
Benzene	x	x	71-43-2	78.11	1.9	0.00	0.051260283	0.22452004
Bromodichloromethane			75-27-4	163.83	3.10	0.00	0.175418699	0.768339303
Butane			106-97-8	58.12	5.00	0.00	0.100372877	0.4396332
Carbon Disulfide	x		75-15-0	76.13	0.58	0.00	0.015330108	0.067145862
Carbon Tetrachloride	x	x	56-23-6	153.84	0.094	0.00	0.000212545	0.000903945
Carbonyl Sulfide	x		463-58-1	60.07	0.49	0.00	0.01018657	0.044529576
Chlorobenzene	x	x	108-90-7	112.56	0.25	0.00	0.009875033	0.043252645
Chlorodifluoromethane			124-48-1	86.47	1.30	0.00	0.038826619	0.170060591
Chloroethane (ethyl chloride)	x	x	75-00-3	84.52	1.30	0.00	0.028970666	0.126891515
Chloroform	x	x	67-66-3	119.39	0.03	0.00	0.001237115	0.005418562
Chloromethane (methyl chloride)	x	x	74-87-3	50.48	1.20	0.00	0.020927019	0.091660345
1,4 Dichlorobenzene	x	x	106-46-7	147.00	0.21	0.00	0.01091478	0.047368738
Dichlorodifluoromethane			75-71-8	120.91	16.00	0.00	0.668194606	2.926692376
Dichlorofluoromethane			75-43-4	102.92	2.60	0.00	0.092425942	0.404825527
Dichloromethane (methylene chloride)	x	x	75-09-2	84.94	14.00	0.00	0.410734378	1.799018574
Dimethyl Sulfide (methyl sulfide)			75-18-3	62.13	7.80	0.00	0.18738507	0.733146606
Ethane			74-84-0	30.07	890	0.00	9.243864971	40.48725257
Ethanol			64-17-5	46.08	27.00	0.00	0.429731308	1.882223133
Ethyl Mercaptan (ethanethiol)			75-08-1	62.13	2.30	0.00	0.049357136	0.216184256
Ethylbenzene	x	x	100-41-4	106.16	4.60	0.00	0.168670644	0.738777421
Ethylene dibromide (dibromoethane)	x	x	108-93-4	187.88	0.001	0.00	0.48935E-05	0.000284234
Fluorotrichloromethane			75-69-4	137.38	0.76	0.00	0.036062669	0.15795449
Hexane	x	x	110-54-3	86.18	6.60	0.00	0.196458664	0.86048895
Hydrogen Sulfide			7783-06-4	34.08	36.00	0.00	0.423762819	1.896081145
Mercury (total)	x		7439-97-6	200.61	0.000292	0.00	2.02328E-05	8.86197E-05
Methyl Ethyl Ketone (2-butanone)	x	x	78-93-3	72.11	7.10	0.00	0.176837597	0.774548877
Methyl Isobutyl Ketone (hexone)	x	x	108-10-1	100.16	1.60	0.00	0.065730764	0.287600745
Methyl Mercaptan			74-83-1	48.11	2.50	0.00	0.041542835	0.181657616
Pentane			109-66-0	72.15	3.30	0.00	0.082237715	0.360201194
Tetrachloroethylene (perchloroethylene)	x	x	127-18-4	166.83	3.70	0.00	0.211926657	0.928238756
Propane			74-88-6	44.09	11.00	0.00	0.16751494	0.733715438
1,1,2 - Dichloroethene (1,2 dichloroethylene)			156-60-5	96.94	2.80	0.00	0.093752274	0.410634958
Toluene	x	x	108-88-3	92.13	39.00	0.00	1.241041887	5.435783468
Trichloroethylene (trichloroethene)	x	x	79-01-6	131.38	2.60	0.00	0.127059768	0.565621774
Vinyl Chloride	x	x	75-01-4	62.50	7.30	0.00	0.13758818	0.600236227
Xylenes	x	x	1330-20-7	106.16	12.00	0.00	0.440010376	1.927245446

Total HAP* 3.66 15.90
 Maximum Single HAP, toluene 1.24 5.44

* Source: AP-42 (11/99), tables 2.4-1 and 2.4-2

^ source: AP-42 (8/97), table 2.4-3

^ AP-42 gives ranges for control efficiencies. Control efficiencies for halogenated species range from 91 to 99 percent. Control efficiencies for non-halogenated species range from 38 to 99 percent.

* HCl emissions calculated per AP42 Section 2.4.4.2, dated 11/99

PM Data

Company Name: National Serv-All, Inc.
 Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
 Part 70 Permit: T003-18142-00257
 Reviewer: KSR/EVP
 Date: 1/5/2006

Enter mean wind speed, \bar{U} mph
 Enter material moisture content, M (whole number) %
 Enter silt content, G (whole number)^a %
 Enter amount of dirt handled per day for dirt pushing operations ton/day
 Enter number of hours per day for dirt-pushing operations hr/day
 Enter mean silt content of unpaved surface material (whole number), \bar{c}_s %
 Enter road surface silt loading of paved surface material (whole number), \bar{s}_L g/m²
 Enter mean/avg vehicle weight loaded (unpaved & paved), W tons
 Enter # days per year with at least 0.01 in. precipitation,^b days
 Enter number of days per year vehicles travel on site days
 Enter total length of unpaved roads, u_{pr} mile
 Enter total length of paved roads, p_r mile

The following is a breakdown of trucks; enter the number of trucks per day

Transfer Trailer
 High Capacity
 Front Loader
 Rear Loader
 Roll-Off
 Dump Trucks
 Other (P/U)

^a AP-42, Section 13.2.4, 1/95

^b derived from AP42, Figure 13.2.2-1, 9/98

^c AP42, Section 13.2.2, 9/98

Appendix A: Emission Calculations
Fugitive Emissions from Unpaved Roads
 Company Name: National Serv-All, Inc.
 Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
 Part 70 Permit: T003-18142-00257
 Reviewer: KSR/EVP
 Date: 1/5/2006

	Uncontrolled			80% Controlled (water)		
Total Calculated PM ₁₀ Emissions from Unpaved Roads	344473.58	lb/yr	172.24	ton/yr	39.32	lb/hr
Total Calculated TSP Emissions from Unpaved Roads	1657541.99	lb/yr	828.77	ton/yr	189.22	lb/hr
					34.45	TPY
					7.88	lb/hr
					165.75	TPY
					37.84	lb/hr

$TSP (lb/VMT)^a = E \cdot VMT$
 $PM_{10} (lb/VMT)^a = E \cdot VMT$
 $E = (k \cdot (s/12)^{0.8} (W/3)^{0.5}) / ((M_{dry}/0.2)^{0.4} \cdot ((365-p)/365))$
 $E = (k \cdot (s/12)^{0.8} (W/3)^{0.6}) / ((M_{dry}/0.2)^{0.3} \cdot ((365-p)/365))$

where,
 E = emission factor from loaded trucks (lb/VMT)
 VMT = vehicle mile travelled 133224.00 mi
 k = particle size multiplier for PM₁₀ (unpaved)^a 2.60
 k = particle size multiplier for TSP (unpaved)^a 10.00
 s = mean silt content of unpaved surface materia (unpaved)^a 6.40 %
 W = mean/avg vehicle weight loaded (unpaved & paved) 28.18 tons
 M_{dry} = surface moisture content (dry, uncontrolled conditions) 0.20 %
 p = # days per year with at least 0.01 in. precip^b 120.00 days
 annual operation 312.00 days
 UPR = total length of unpaved roads 1.00 mi

Vehicle Type	E (lb/VMT)		Truck Count (per day)	Emissions (lb/yr)	
	PM ₁₀	TSP		PM ₁₀	TSP
Transfer Trailer	2.59	12.44	20.00	16134.59	77636.63
High Capacity	2.59	12.44	0.00	0.00	0.00
Front Loader	2.59	12.44	61.00	49210.51	236791.71
Rear Loader	2.59	12.44	27.00	21781.70	104809.45
Roll-Off	2.59	12.44	95.00	76639.32	368773.98
Dump Trucks	2.59	12.44	224.00	180707.45	869530.22
Other (P/U)	2.59	12.44	0.00	0.00	0.00

PM10 Emissions - 80% control
 Control Device - Watering of unpaved roads, gravel/stone road, reduced speed limit

Tons per year * 0.8 control = Controlled emissions 137.79 tpy
 Tons per year - controlled emissions = Fugitive emissions reported 34.45 tpy

^a AP42, Section 13.2.2, 9/98
^b derived from AP42, Figure 13.2.2-1, 9/98

Appendix A: Emission Calculations
Fugitive Emissions from Paved Roads

Company Name: National Serv-Air, Inc.
Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
Part 70 Permit: T003-18142-00257
Reviewer: KSR/EVP
Date: 1/5/2006

Total Calculated PM ₁₀ Emissions from Paved Roads	47,400 lb/yr	23.70 ton/yr	5.41 lb/hr	80% Controlled (water)	
Total Calculated TSP Emissions from Paved Roads	242,924 lb/yr	121.46 ton/yr	27.73 lb/hr	4.74 TPY	1.08 lb/hr
				24.29 TPY	5.55 lb/hr

PM₁₀ and TSP (lb/VMT) *

$$E = k * (sL/2)^{0.85} * (W/3)^{1.5}$$

where,

E = emission factor from loaded trucks (lb/VMT)
VMT = vehicle mile travelled
k = particle size multiplier for PM₁₀ (paved)^a
k = particle size multiplier for TSP (paved)^a
sL = road surface silt loading (g/m²)
W = mean/avg vehicle weight loaded (unpaved & paved)
annual operation
PR = total length of paved roads

43963.92 mi
0.016
0.082
7.4 g/m²
28.2 tons
312 days
0.33 mi

Vehicle Type	E (lb/VMT)		Truck Count ^b (per day)	Emissions (lb/yr)	
	PM ₁₀	TSP		PM ₁₀	TSP
Transfer Trailer	1.08	5.53	20	2,220	11,378
High Capacity	1.08	5.53	0	0	0
Front Loader	1.08	5.53	61	6,771	34,703
Rear Loader	1.08	5.53	27	2,997	15,381
Roll-Off	1.08	5.53	95	10,546	54,046
Dump Trucks	1.08	5.53	224	24,866	127,436
Other (P/U)	1.08	5.53	0	0	0

PM10 Emissions - 80% control

Control Device - Sweeping of paved roads, reduced speed limit

Tons per year * 0.8 control = Controlled emissions

18.96 tpy

Tons per year - controlled emissions = Fugitive emissions reported

4.74 tpy

^a AP42, Section 13.2.2, 9/98

^b derived from AP42, Figure 13.2.2-1, 9/98

**Appendix A: Emission Calculations
Fugitive Emissions from Dirt, Filth**

Company Name: National Serv-All, Inc.
Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
Part 70 Permit: T003-18142-00257
Reviewer: KSR/EVP
Date: 1/5/2006

	Uncontrolled				80% Controlled (water)					
Total Calculated PM ₁₀ Emissions from Storage Pile(s)	57.12	lb/yr	0.03	ton/yr	0.01	lb/hr	0.01	TPY	0.00	lb/hr
Total Calculated TSP Emissions from Storage Pile(s)	120.77	lb/yr	0.06	ton/yr	0.01	lb/hr	0.01	TPY	0.00	lb/hr
Total Calculated PM ₁₀ Emissions from Dirt Pushing	3608.57	lb/yr	1.80	ton/yr	0.41	lb/hr	0.36	TPY	0.08	lb/hr
Total Calculated TSP Emissions from Dirt Pushing	7629.55	lb/yr	3.81	ton/yr	0.87	lb/hr	0.76	TPY	0.17	lb/hr

NOTE: The ratio of TSP to PM₁₀ emissions from Dirt Pushing are assumed the same as for Storage Piles

$$\text{Storage Pile (lb/ton)}^a \quad E = k(0.0032)^{1.3} \left(\frac{U}{5} \right)^{1.3} \left(\frac{M}{2} \right)^{1.4}$$

where,

E = emission factor from loaded trucks (lb/ton)

k = particle size multiplier for TSP^a

0.74

k = particle size multiplier for PM₁₀^a

0.35

U = mean mean wind speed^a

8.15 mph

M = material moisture content^a

12.00 %

calculated TSP emission factor

0.00 lb/ton

calculated PM₁₀ emission factor

0.00 lb/ton

amount of dirt handled per day

1064.10 tons

days of operation

312.00 day/yr

amount of dirt handled per year

331999.20 ton/yr

total calculated TSP emissions from storage pile(s)

120.77 lb/yr

0.06 ton/yr

total calculated PM₁₀ emissions from storage pile(s)

57.12 lb/yr

0.03 ton/yr

Dirt Pushing^b

$$E = (0.45 \left(\frac{G}{100} \right)^{1.5} \left(\frac{H}{100} \right)^{1.4}) \cdot I \cdot J$$

where,

G = silt content^a

9.00 %

H = moisture content^a

12.00 %

I = conversion from kg to lb

2.20 lb/kg

J = hours of pushing operation

14 hr/day

days of operation

312 day/yr

hours of operation

4,368 hr/yr

total calculated PM₁₀ emissions from dirt pushing

3609 lb/yr

^a AP-42, Section 13.2.4, 1/95

^b CEQA Air Quality Handbook, Table A9-9-F

Appendix A: Emission Calculations

Fugitive Emissions (Landfill + Fugitive particle sources)

Company Name: National Serv-All, Inc.
 Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
 Part 70 Permit: T003-18142-00257
 Reviewer: KSR/EVP
 Date: 1/5/2006

TABLE: EMISSIONS SUMMARY - MUNICIPAL SOLID WASTE LANDFILL

Emission Unit	Description	LFG Flow (scfm)	Calculated Potential Emissions																	
			NO _x		CO		SO ₂		PM ₁₀		TSP		NMOC		VOC		HAP (total)		HAP (single)	
			(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)
1	MSW Landfill ^a	2186											18.51	81.07	7.22	31.62	3.63	15.90	1.24	5.44
	Total	--		0.00		0.00		0.00		0.00		0.00		81.07		31.62		15.90		5.44

^a Fugitive landfill gas flow; assuming 75% collection efficiency

^b VOC, and HAP emissions are derived using mass balance and/or AP42 compound concentrations in LFG

TABLE: EMISSIONS SUMMARY - FUGITIVE PARTICULATE SOURCES

Emission Unit	Description	LFG Flow (scfm)	Calculated Potential Emissions (Uncontrolled)																	
			NO _x		CO		SO ₂		PM ₁₀		TSP		NMOC		VOC		HAP (total)		HAP (single)	
			(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)
3,4,5	Fugitive Dust	--						45.15	197.77	217.83	954.11									
	Total	--		0.00		0.00		0.00		197.77		954.11		0.00		0.00		0.00		0.00

Emission Unit	Description	LFG Flow (scfm)	Calculated Potential Emissions (Controlled)																	
			NO _x		CO		SO ₂		PM ₁₀		TSP		NMOC		VOC		HAP (total)		HAP (single)	
			(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)	(lb/hr)	(TPY)
3,4,5	Fugitive Dust	--						9.03	39.55	43.57	190.82									
	Total	--		0.00		0.00		0.00		39.55		190.82		0.00		0.00		0.00		0.00

Appendix A: Emission Calculations

Equipment Data

Company Name: National Serv-All, Inc./ McBeth Road landfill
Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
Part 70 Permit: T003-18142-00257
Reviewer: KSR/EVP
Date: 1/5/2006

Standard Conditions, Constants, and Typical Values

Category	Value	Equivalent
Standard Temperature ^a	60 °F	520 °R
Universal Gas Constant	0.7302 atm-ft ³ /lb-mol°R	
Pressure ^a	1 atm	
Methane Heating Value ^b	1,000 Btu/ft ³	
LFG Methane Component ^c	55%	
LFG Typical Heating Value	550 Btu/ft ³	
LFG Temperature ^c	100 °F	560 °R
LFG Moisture ^c	8%	

^aIndustrial STP (60 °F, 30.00 in. Hg, 1 atm)

^bTypical

^cAssumed

^dSource: Professional Engineering Registration Program , pg. 23-9

Table. Fuel & Equipment - Open Flare

Open Flare Information	Value	Equivalent
LFG inlet flow, standard ^b	4,500 scfm	
LFG Inlet Flow, dry standard	4,140 dscfm	
Heat Input	148.5 MMBtu/hr	
Design Flare Operating Temperature ^c	1,400 °F	1,860 °R
Flare Tip Flow, standard	4,500 scfm	
Flare Tip Flow, actual	16,096 acfm	
Flare Tip Diameter ^b	1.0 ft	
Flare Tip Exhaust Velocity	20,505 ft/min	341.7 ft/s
Flare Tip Height, above local grade ^b	35 ft	

^aSource: Based on annual LFG throughput limit of 972 MM scf

^bSource: Flare manufacturer

Appendix A: Emission Calculations

Criteria pollutants Emissions

Company Name: National Serv-All, Inc / McBeth Road landfill
 Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
 Part 70 Permit: T003-18142-00257
 Reviewer: KSR/VEP
 Date: 1/5/2006

Criteria Pollutant Emissions - Open Flare

Annual Operating Hours	8,760 Hours
LFG inlet flow, standard	4,500 scfm
Heat Input	148.5 MMBtu/hr

SO₂ Emission Rate

SO ₂ concentration in exhaust gas	49.60 ppmv	
SO ₂ emission rate	2.26 lb/hr	9.90 ton/yr
SO ₂ molecular weight	64.07	

LFG Compound	CAS	MW (lb/lb-mol)	Conc (ppmv) ^a	Control Eff b,c	No. of S Atoms	Individual Compound Contribution to SO ₂	
						S Conc (ppmv)	SO ₂ Emiss (lb/hr)
Carbon Disulfide	75-15-0	76.13	0.58	99.7%	2	1.16	0.05
Carbonyl Sulfide	463-58-1	60.07	0.49	99.7%	1	0.49	0.02
Dimethyl Sulfide (methyl sulfide)	75-18-3	62.13	7.82	99.7%	1	7.80	0.36
Ethyl Mercaptan (ethanethiol)	75-08-1	62.13	2.28	99.7%	1	2.27	0.10
Hydrogen Sulfide	7783-06-4	34.08	35.50	99.7%	1	35.39	1.61
Methyl Mercaptan	74-93-1	48.11	2.49	99.7%	1	2.48	0.11
Total Contribution to SO ₂ :						49.60	2.26

PM₁₀ Emission Rate

PM emission factor ^d	17 lb/MM dscf CH ₄	
PM emission rate	2.03 lb/hr	8.89 ton/yr

NO₂ Emission Rate

NO ₂ emission factor ^e	0.068 lb/MMBtu	
NO ₂ emission rate	10.1 lb/hr	44.2 ton/yr

CO Emission Rate

CO emission factor ^e	0.37 lb/MMBtu	
CO emission rate	54.9 lb/hr	240.7 ton/yr

NMOC Emission Rate

NMOC conc inlet gas ^f	595 ppmv	
MW hexane	86.18 lb/lb-mol	
destruction efficiency	98%	
mass NMOC inlet gas	36.5 lb/hr	159.7 (Uncontrolled)
NMOC emission rate	0.73 lb/hr	3.19 ton/yr (Controlled)

VOC Emission Rate

NMOC conc inlet gas ^f	595 ppmv	
VOC fraction of NMOC ^f	39%	
VOC concentration in inlet gas	232 ppmv	
MW hexane	86.18 lb/lb-mol	
mass VOC inlet gas	14.2 lb/hr	
destruction efficiency	98%	
VOC Emission Rate	14	62.3 (Uncontrolled)
VOC emission rate	0.28 lb/hr	1.25 ton/yr (Controlled)

Note: References to AP-42 are taken from, US Environmental Protection Agency, *Compilation of Air Pollutant Emission Factors, Volume I. Stationary Point and Area Sources, 5th Ed.* (unless otherwise noted)

^aSource: US EPA. AP-42, Tables 2.4-1 and 2.4-3, November 1998.

^bSource: US EPA. AP-42, Table 2.4-3, November 1998.

^cAP-42 gives ranges for control efficiencies. Control efficiencies for halogenated species range from 91 to 99.7 percent. The upper end of the range is used here resulting in maximum calculated emissions of SO₂

^dSource: US EPA. AP-42, Table 2.4-5, November 1998.

^eSource: Typical value provided by LFG Specialties Inc.

^fSource: US EPA. AP-42, Table 2.4-2, November 1998.

Appendix A: Emission Calculations

HAP Emissions from Open Flare

Company Name: National Serv-Air, Inc./ McBeth Road landfill
 Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
 Part 70 Permit: T003-18142-00257
 Reviewer: KSR/EVP
 Date: 1/5/2006
 4,500 scfm

LFG inlet flow

LFG Compound	HAP	VOC	CAS	MW (lb/lb-mol)	Compound Conc & Mass in Inlet Gas			Control Eff b, c	Flare Exhaust	
					(ppmv) ^a	(lb/hr)	(ton/yr)		lb/hr	ton/yr
1,1,1 - Trichloroethane (methyl chloroform)	x	--	71-55-6	133.41	0.48	0.0455353	0.1994446	91.0%	0.0040982	0.017950016
1,1,2,2 - Tetrachloroethane	x	x	79-34-5	167.85	1.11	0.1324838	0.5802792	91.0%	0.0119235	0.052225131
1,1,2 - Trichloroethane (1,1,2-TCA)	x	x	79-00-5	133.41	0.10	0.0094865	0.041551	91.0%	0.0008538	0.003739587
1,1 - Dichloroethane (ethylidene dichloride)	x	x	75-34-3	98.96	2.35	0.165366	0.7243029	91.0%	0.0148829	0.065187265
1,1 - Dichloroethane (vinylidene chloride)	x	x	75-35-4	96.94	0.20	0.0138554	0.0606865	91.0%	0.001247	0.005461781
1,2 - Dichloroethane (ethylene dichloride)	x	x	107-06-2	98.96	0.41	0.02864	0.1254431	91.0%	0.0025776	0.01128988
1,2 - Dichloropropane (propylene dichloride)	x	x	78-87-5	112.99	0.18	0.0144621	0.063344	91.0%	0.0013016	0.005700956
2-Propanol (isopropyl alcohol)	--	y	67-63-0	60.11	50.1	2.1414259	9.3794453	38.0%	1.327684	5.815256103
Acetone (2-propanone)	--	--	67-64-1	58.08	7.01	0.2895098	1.2680528	38.0%	0.1794961	0.786192719
Acrylonitrile (Propenenitrile)	x	x	107-13-1	53.06	6.33	0.2388304	1.046077	38.0%	0.1480748	0.648567747
Benzene	x	x	71-43-2	78.12	1.91	0.1060997	0.4647167	38.0%	0.0657818	0.28812437
Bromodichloromethane	--	y	75-27-4	163.83	3.13	0.3646333	1.597094	91.0%	0.032817	0.143736458
Butane	--	y	106-97-8	58.12	5.03	0.2078797	0.9106133	38.0%	0.1288854	0.564518245
Carbon Disulfide	x	x	75-15-0	76.14	0.58	0.0315646	0.1382529	38.0%	0.01957	0.085716774
Carbon Tetrachloride	x	x	56-23-5	153.84	0.004	0.0004376	0.0019166	91.0%	3.93E-05	0.00017249
Carbonyl Sulfide	x	x	463-58-1	60.07	0.49	0.0209301	0.091674	38.0%	0.0129767	0.056837911
Chlorobenzene (monochlorobenzene)	x	x	108-90-7	112.56	0.25	0.02033	0.0890452	91.0%	0.0172569	0.008014068
Chlorodifluoromethane (CFC-22, freon-22)	--	--	75-45-6	86.47	1.30	0.0799332	0.3501076	91.0%	0.007194	0.031509682
Chloroethane (ethyl chloride)	x	x	75-00-3	64.52	1.25	0.0573486	0.251187	91.0%	0.0051614	0.022606826
Chloroform (trichloromethane)	x	x	67-66-3	119.38	0.03	0.0025467	0.0111544	91.0%	0.0002292	0.001003894
Chloromethane (methyl chloride)	x	x	74-87-3	50.49	1.21	0.043442	0.1902758	91.0%	0.0039098	0.017124818
1,4 Dichlorobenzene (p-dichlorobenzene)	x	x	106-46-7	147	0.21	0.0222646	0.0975191	91.0%	0.0020038	0.008776718
Dichlorodifluoromethane (CFC-12, freon-12)	--	--	75-71-8	120.91	15.7	1.3498343	5.9122743	91.0%	0.1214851	0.532104688
Dichlorofluoromethane (freon-21)	--	--	75-43-4	102.92	2.62	0.1917431	0.8398346	91.0%	0.0172569	0.075585115
Dichloromethane (methylene chloride)	x	--	75-09-2	84.93	14.3	0.8638062	3.7825952	91.0%	0.0777246	0.340433566
Dimethyl Sulfide (methyl sulfide)	--	y	75-18-3	62.13	7.82	0.345483	1.5132156	38.0%	0.2141995	0.93819367
Ethane	--	--	74-84-0	30.07	889	19.00876	83.258368	38.0%	11.785431	51.62018789
Ethanol (ethyl alcohol)	--	y	64-17-5	46.08	27.2	0.8912509	3.9036788	38.0%	0.5525755	2.42028086
Ethylbenzene ⁹	x	x	100-41-4	106.17	4.61	0.3480337	1.5243877	38.0%	0.2157809	0.945120394
Ethyl Mercaptan (ethanethiol)	--	y	75-08-1	62.13	1.25	0.0552243	0.2418823	38.0%	0.0342399	0.149967019
Ethylene dibromide (1,2 dibromoethane)	x	x	106-93-4	187.88	0.001	0.0001336	0.0005952	91.0%	1.202E-05	5.26642E-05
Fluorotrichloromethane (CFC-11, freon-11)	--	--	75-69-4	137.37	0.76	0.0742376	0.3251608	91.0%	0.0066814	0.029264473
Hexane	x	x	110-54-3	86.18	6.57	0.4026155	1.7634557	38.0%	0.2496216	1.093342553
Hydrogen Sulfide	--	--	7783-06-4	34.08	35.5	0.8602933	3.7680846	38.0%	0.5333818	2.336212434
Mercury (total)	x	--	7439-97-6	200.61	0.000292	4.165E-05	0.0001824	0.0%	4.165E-05	0.000182443
Methyl Ethyl Ketone (2-butanone)	x	x	78-93-3	72.11	7.09	0.3635468	1.592335	38.0%	0.225399	0.987247682
Methyl Isobutyl Ketone (hexone)	x	x	108-10-1	100.16	1.87	0.1331848	0.5833492	38.0%	0.0825745	0.361676519
Methyl Mercaptan	--	y	74-93-1	48.11	2.49	0.0851831	0.3731019	38.0%	0.0528135	0.231323149
Pentane	--	y	109-66-0	72.15	3.29	0.1687916	0.7393072	38.0%	0.1046508	0.458370464
Tetrachloroethylene (perchloroethylene, -ethene)	x	x	127-18-4	165.83	3.73	0.4398357	1.9264806	91.0%	0.0395852	0.173383252
Propane	--	y	74-98-6	44.1	11.1	0.3480809	1.5245942	38.0%	0.2158101	0.94524842
Toluene (methylbenzene)	x	x	108-88-3	92.14	39.3	2.574894	11.278036	38.0%	1.5964343	6.992382065
Trichloroethylene (trichloroethene)	x	x	79-01-6	131.38	2.82	0.2634492	1.1539077	91.0%	0.0237104	0.103851692
1,2 - Dichloroethene (1,2 dichloroethylene)	--	--	156-60-5	96.94	2.84	0.1957672	0.8574604	91.0%	0.017169	0.077171433
Vinyl Chloride (chloroethylene, VCM)	x	x	75-01-4	62.50	7.34	0.326208	1.4287912	91.0%	0.0293587	0.128591212
Xylenes (m, o, p)	x	x	1330-20-7	106.17	12.1	0.9134942	4.0011045	38.0%	0.5663664	2.480684766
Hydrogen Chloride	x	--	7647-01-0	36.50	42.0	1.090086	4.7745765	0.0%	1.090086	4.774576512
Total HAP ^a						8.60	37.67		4.46	19.53
Maximum Single HAP						2.57	11.28		1.60	6.99
VOC (Non-HAP)									2.66	11.7

Note: References to AP-42 are taken from, US Environmental Protection Agency, *Compilation of Air Pollutant Emission Factors, Volume I. Stationary Point and Area Sources, 5th Ed.* (unless otherwise noted)

Key to HAP and VOC list: "x" denotes a HAP only or a HAP and VOC; "y" denotes a VOC only

^aSource: AP-42, Tables 2.4-1 and 2.4-2, November 1998.

^bSource: AP-42, Tables 2.4-3, November 1998.

^cAP-42 gives ranges for control efficiencies. Control efficiencies for halogenated species range from 91 to 99.7 percent and control efficiencies for non-halogenated species range from 38 to 91 percent. For permitting purposes, the lower end of each range is used here.

⁹Product of combustion

⁹Default outlet concentration; Source: US EPA. AP-42, Section 2.4.4, November 1998.

Sample Calculations

Company Name: National Serv-All, Inc./ McBeth Road landfill
 Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
 Part 70 Permit: T003-18142-00257
 Reviewer: KSR/EVP
 Date: 1/5/2006

Sample Calculations

Standard Conditions and Constants

$$^{\circ}\text{R} = ^{\circ}\text{F} + 460$$

$$\text{standard temperature} = 60^{\circ}\text{F}$$

$$\text{standard pressure} = 1 \text{ atm}$$

$$\text{Universal gas constant (R)} = 0.7302 \text{ atm}\cdot\text{ft}^3/\text{lb}\cdot\text{mol}^{\circ}\text{R}$$

Flow

$$\text{dscfm} = \text{scfm} \cdot (1 - \% \text{moisture})$$

$$\text{acfm} = \text{scfm} \cdot (\text{actual temp}^{\circ}\text{R}) / (\text{standard temp}^{\circ}\text{R}) \cdot ((\text{standard press}[\text{atm}]) / (\text{actual press} [\text{atm}]))$$

CO and NO_x Emissions

$$(\text{lb/MMbtu}) \cdot (\text{MMbtu/hr}) = \text{lb/hr}$$

SO₂ Emissions

typically, 86% to 99.7% of sulfur compounds convert to SO₂ during combustion

$$\{(\text{scfm}) \cdot (60 \text{ min/hr}) \cdot (\text{total sulfur concentration} [\text{ppmv}]) \cdot (1 - \text{control efficiency}) \cdot (\text{MW SO}_2)\} / \{(R) \cdot (T)\} = \text{lb/hr}$$

PM₁₀ Emissions

$$(\text{dscfm}) \cdot (\text{CH}_4 \text{ component}) \cdot (1\text{E-}6 \text{ MMscf/scf}) \cdot (\text{lb PM/MMscf CH}_4) \cdot (60 \text{ min/hr}) = \text{lb/hr}$$

VOC Emissions

$$\{(\text{scfm} \cdot 60 \text{ min/hr} \cdot \text{concentration}_{\text{compound}} [\text{ppmv}] \cdot \text{MW}_{\text{compound}})\} / \{(R) \cdot (T)\} \cdot (1 - \text{control efficiency}) = \text{lb/hr}$$

OR

VOCs are 39 percent of NMOC, as prescribed in AP-42

$$\text{VOC concentration} [\text{ppmv}] = \text{NMOC concentration} [\text{as hexane}] \cdot 39\%$$

flare and/or engines typically combust 98% of VOCs

$$\{(\text{scfm} \cdot 60 \text{ min/hr} \cdot \text{concentration}_{\text{hexane}} [\text{ppmv}] \cdot \text{MW}_{\text{hexane}})\} / \{(R) \cdot (T)\} \cdot (0.39) = \text{lb/hr}$$

LFG Compound Emissions

$$\{(\text{scfm} \cdot 60 \text{ min/hr} \cdot \text{concentration}_{\text{compound}} [\text{ppmv}] \cdot \text{MW}_{\text{compound}})\} / \{(R) \cdot (T)\} \cdot (1 - \text{control efficiency})$$

HCl Emissions

typically, 86% to 99.7% of chlorine compounds convert to HCl during combustion

$$(\text{concentration}_{\text{compound}} [\text{ppmv}]) \cdot (\text{control efficiency}) \cdot (\text{no. of chlorine atoms}) = \text{HCl concentration} [\text{ppm}] \text{ in outlet gas from each compound}$$

$$\{\text{HCl concentration}_{\text{each compound}} [\text{ppm}] \cdot \text{scfm} \cdot \text{MW}_{\text{HCl}}\} / \{(R) \cdot (T)\} \cdot (60 \text{ min/hr}) = \text{lb/hr}$$

OR

$$\{(\text{scfm}) \cdot (60 \text{ min/hr}) \cdot (\text{HCl outlet concentration per AP-42} [\text{ppmv}]) \cdot (1 - \text{control efficiency}) \cdot (\text{MW})\} / \{(R) \cdot (T)\} = \text{lb/hr}$$

Appendix A: Emission Calculations

Total emissions from Open Flare

Company Name: National Serv-All, Inc./ McBeth Road landfill
 Address City IN Zip: 6231 McBeth Road Fort Wayne Indiana 46809
 Part 70 Permit: T003-18142-00257
 Reviewer: KSR/EVP
 Date: 1/5/06

Potential Emissions Summary - Utility (Open) Flare

Emission Unit ID No.	Description	Potential Emissions (Uncontrolled)																		
		LFG Flow (scfm)	NO _x		CO		SO ₂		PM ₁₀		TSP		NMOC		VOC		HAP (Total)		HAP (Single)	
2	One Open Flare	5000.00	11.22	49.14	61.05	267.40	2.51	11.00	2.50	10.97	2.50	10.97	40.51	177.45	15.80	69.21	9.55	41.85	2.86	12.53

Emission Unit ID No.	Description	Potential Emissions (Controlled)																		
		LFG Flow (scfm)	NO _x		CO		SO ₂		PM ₁₀		TSP		NMOC		VOC		HAP (Total)		HAP (Single)	
2	One Open Flare	4500*	10.10	44.23	54.95	240.66	2.26	9.90	2.03	8.89	2.03	8.89	0.73	3.19	0.28	1.25	2.00	8.76	0.71	3.11