**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*
**Governor**

*Thomas W. Easterly*
**Commissioner**

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

TO: Interested Parties / Applicant

DATE: September 30, 2008

RE: Twin Bridges Recycling / 063-26467-00029

FROM: Matthew Stuckey, Branch 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 13-17-3-4 and 326 IAC 2, this permit modification 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 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. 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.



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

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

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

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

Enclosures
FNTV-PMOD.doc 3/27/08

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Mr. Matthew W. Rechtin
Twin Bridges Recycling & Disposal Facility
P.O. Box 17
124 Twin Bridges Road
Danville, Indiana 46122

September 30, 2008

Re: 063-26467-00029
First Significant Permit Modification to
Part 70 Permit Renewal No.: T063-18240-00029

Dear Mr. Rechtin:

Twin Bridges Recycling & Disposal Facility was issued Part 70 Operating Permit No. T063-18240-00029 on June 19, 2007, for a stationary municipal solid waste landfill operation. A letter requesting changes to this permit was received on April 25, 2008. Pursuant to 326 IAC 2-7-12, a Significant Permit Modification to this permit is herby approved as described in the attached Technical Support Document.

The proposed expansion will consist of adding the following emission units:

> Four (4) Caterpillar 3516 landfill gas-fueled engine/generators, each rated at 800 kilowatts, identified as EG09, EG10, EG11 and EG12, to be constructed during 2008, each with a maximum capacity of 1148.00 bhp, 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES09 through ES12, respectively.
>
> These four engine generators are subject to 40 CFR 63 Subpart ZZZZ.

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating permit as modified will be provided at issuance.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Syed Jaffery via email sjaffery@idem.IN.gov or call him directly at (317) 233-1782. He may also be contacted at toll free phone number (800) 451-6027extension 3-1782.

Sincerely/Original Signed By:

Donald F. Robin, P.E., Section Chief
Permits Branch
Office of Air Quality

Attachments:
Revised Permit
Technical Support Document (TSD)

cc:

File - Hendricks County
Hendricks County Health Department
US EPA, Region V
Air Compliance Inspector
Compliance Data Section
Administrative and Development
Permit Reviewer - Syed Jaffery
Source Consultant:
Qaiser L. Baig
Earth Tech AECOM
36133 Schoolcraft Road
Livonia, MI 48150

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# PART 70 SIGNIFICANT PERMIT MODIFICATION
# OFFICE OF AIR QUALITY

## Twin Bridges Recycling and Disposal Facility
## 124 Twin Bridges Road
## Danville, Indiana 46122

(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.: T063-18240-00029 | |
|---|---|
| Issued by: Original signed by:<br><br>Nisha Sizemore, Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: June 19, 2007<br><br>Expiration Date: June 19, 2012 |

First Administrative Amendment 063-25392-00029, issued on November 28, 2007
First Significant Source Modification No.: 063-26467-00029

| First Significant Permit Modification No.: 063-26467-00029 | |
|---|---|
| Issued by/Original Signed By:<br><br>Donald F. Robin, P.E., Section Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: September 30, 2008<br><br>Expiration Date: June 19, 2012 |

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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.

| | |
|---|---|
| Source Address: | 124 Twin Bridges Road, Danville, IN 46122 |
| Mailing Address: | P.O. Box 17, 124 Twin Bridges Road, Danville, IN 46122 |
| General Source Phone Number: | (317) 745-2878 |
| SIC Code: | 4953 |
| County Location: | Hendricks |
| Source Location Status: | Nonattainment for PM2.5<br>Attainment or Unclassified for all other criteria pollutants |
| Source Status: | Part 70 Permit Program<br>Major Source, under PSD Rules;<br>Minor Source under Nonattainment NSR<br>Minor Source, Section 112 of the Clean Air Act<br>Not 1 of 28 Source Categories |

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

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

(a) One (1) municipal solid waste landfill, as defined in 40 CFR 60.751, identified as LF1, constructed in 1970, modified in 1996, with a maximum design capacity of 34,086,000 cubic meters (34,303,050 Megagrams), with landfill gas emissions collected by a collection system installed in 1990.

(b) One (1) open flare, identified as FL2, constructed in 2006, with a maximum capacity of 2,100 standard cubic feet per minute (scfm) and exhausting to stack FL2S. This flare does not have a bypass.

(c) Four (4) Caterpillar 3516 landfill gas-fueled engine/generators, each rated at 800 kilowatts, identified as EG01, EG02, EG03 and EG04, with EG01 and EG02 constructed in 1994 and EG03 and EG04 constructed in 1996, each with a maximum capacity of 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES1 through ES4, respectively.

(d) Four (4) Caterpillar 3516 landfill gas fueled engine/generators, each rated at 800 kilowatts, identified as EG05, EG06, EG07 and EG08, constructed in 2002, each with a maximum capacity of 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES5 through ES8, respectively.

(e) Four (4) Caterpillar 3516 landfill gas-fueled engine/generators, each rated at 800 kilowatts, identified as EG09, EG10, EG11 and EG12, to be constructed during 2008, each with a maximum capacity of 1148.00 bhp 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES09 through ES12, respectively.

These four engine generators are subject to 40 CFR 63 Subpart ZZZZ.

## 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):

(a) Degreasing and parts washing operations that do not exceed 145 gallons per 12 months, and are not subject to 326 IAC 20-6. [326 IAC 8-3-2 and 326 IAC 8-3-5]

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

(c) Activities with emissions equal to or less than the following thresholds: 5 lb/hr or 25 lb/day PM10, consisting of one (1) portable concrete and rock crushing operation, identified as PORT-CRUSHER, with a maximum capacity of less than 150 tons per hour. [326 IAC 6-3-2]

(d) Asbestos abatement projects regulated by 326 IAC 14-10.

## 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, T063-18240-00029, 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

The submittal by the Permittee does require 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require 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, and Evansville EPA 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 T063-18240-00029 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 combined 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within ten (10) calendar days from the date of the discovery of the deviation except as allowed for in 40 CFR 60, Subpart WWW. The Permittee shall use 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified 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
MC 61-53 IGCN 1003
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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b), (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] [326 IAC 2-2-2]

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

(b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2-2.

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
MC 61-53 IGCN 1003
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.

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

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

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

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification 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.7 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require 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.8 Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

The notification which shall be submitted by the Permittee does require 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.10 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.11 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.12 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 22, 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.13 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.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) Except as otherwise provided for in 40 CFR 60, Subpart WWW, 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.15 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 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.16 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) Pursuant to 326 IAC 2-6-3(b)(3), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:.

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

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

The statement must be submitted to:

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

The emission statement does require 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.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

(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) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

(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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

(d) 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.

(f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

**Stratospheric Ozone Protection**

C.19 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) municipal solid waste landfill, as defined in 40 CFR 60.751, identified as LF1, constructed in 1970, modified in 1996, with a maximum design capacity of 34,086,000 cubic meters (34,303,050 Megagrams), with landfill gas emissions collected by a collection system installed in 1990.

(b) One (1) open flare, identified as FL2 constructed in 2006, with a maximum capacity of 2,100 standard cubic feet per minute (scfm) and exhausting to stack FL2S. This flare does not have a bypass.

(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.1.0 PSD Minor Limit [326 IAC 2-2]

The amount of landfill gas (LFG) vented to one (1) open flare, identified as FL2, constructed in 2006, shall be limited to less than 946 MM scf of landfill gas (LFG) per twelve (12) consecutive month period with compliance determined at the end of each month. This is equivalent to an emission limit of 79.64 tons of CO per twelve (12) consecutive month period, based on emissions of 0.17 lbs of CO per thousand scf of LFG.

Compliance with the above limits, combined with the potential CO emissions from existing emission units, will limit the source wide CO emissions to less than 250 tons per year, and render 326 IAC 2-2 not applicable to the existing emissions units constructed before 2008.

D.1.1 General Provisions Relating to NSPS and NESHAP [326 IAC 12-1-1] [326 IAC 8-8.1] [40 CFR Part 60, Subpart A] [326 IAC 20-1-1] [40 CFR 63, Subpart A] [326 IAC 14-1-1][40 CFR Part 61, Subpart A]

(a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart WWW.

(b) 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 facilities described in this section except when otherwise specified in 40 CFR Part 63, Subpart AAAA.

(c) The provisions of 40 CFR Part 61, Subpart A - General Provisions, which are incorporated as 326 IAC 14-1-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 61, Subpart M.

D.1.2 Operational Standards for Collection and Control Systems [40 CFR 60.753] [326 IAC 8-8.1] [326 IAC 12]

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 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 IDEM, OAQ.

(c) Pursuant to 40 CFR 60.753(c), the Permittee shall operate each interior wellhead in the collection system within the following ranges:

(1) A landfill gas temperature equal to or less than 135°F (57.2°C) for wells #58, 71, 86, 89, 97, 100, and 103.

(2) A landfill gas temperature less than 140°F (60°C) for well #79.

(3) A landfill gas temperature less than 150°F (65.6°C) for well #99.

(4) A landfill gas temperature less than 160°F (71.1°C) for well #98.

(5) A landfill gas temperature less than 145°F (62.7°C) for well 145.

(6) A landfill gas temperature less than 131°F (55°C) for all other wells.

(7) A nitrogen level less than 20 percent or an oxygen level less than 5 percent.

The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. The Permittee has shown 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 40 CFR 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 or 3C 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 40 CFR 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.1.3 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) The Permittee required by 40 CFR 60.752(b)(2) to install a collection and control system shall comply with the general and continuing compliance requirements in 40 CFR 63.1960 through 40 CFR 63.1985.

(c) The Permittee shall 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 six (6) months as specified in 40 CFR 63.1980(a) and (b), including information on all deviations that occurred during the six (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 three (3) hour monitoring block average (as defined in 40 CFR 63.1975).

D.1.4 NESHAP for Active Asbestos Waste Disposal Sites [40 CFR 61.154, Subpart M] [326 IAC 14]

Pursuant to the National Emissions Standards for Hazardous Air Pollutants 326 IAC 14-2-1, (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 40 CFR 61.154 (b) or 40 CFR 61.154 (c).

(b) At the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:

(1) Be covered with at least 15 centimeters (6 inches) of compacted nonasbestos 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 40 CFR 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 51 cm 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.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

**Compliance Determination Requirements**

D.1.6 Compliance Provisions [40 CFR 60.755] [326 IAC 8-8.1] [326 IAC 12]

(a) Except as provided in 40 CFR 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)(ii).

(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 (AP-42) 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 CFR60, 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 with 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 40 CFR 60.755(c)(4)(v) 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 re-monitoring 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 40 CFR 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 days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the 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 complying 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 that “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 start-up, 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.

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).

D.1.8 Monitoring [40 CFR 60.756] [326 IAC 8-8.1] [326 IAC 12]

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

(a) The Permittee complying with 40 CFR 60.752(b)(2)(ii)(A) for an active gas collection system shall install a sampling port and a thermometer, other temperature measuring device or an access port for temperature measurements at each wellhead and:

(1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40 CFR 60.755(a)(3);

(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40 CFR 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 complying with 40 CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications: 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.

(c) The Permittee demonstrating 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.1.9 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 60.754(b)] [326 IAC 8-8.1] [326 IAC 12]

(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:

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

where,

$M_{NMOC}$ = mass emission rate of NMOC, megagrams per year
$Q_{LFG}$ = flow rate of landfill gas, cubic meters per minute
$C_{NMOC}$ = NMOC concentration, parts per million by volume as hexane

(1) The flow rate of landfill gas, $Q_{LFG}$, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 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 60.754(d):

For the performance test required in 40 CFR 60.752(b)(2)(iii)(B), Method 25, 25C, or Method 18 of Appendix A of this part must be used to determine compliance with the 98 weight-percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Administrator as provided by 40 CFR 60.752(b)(2)(i)(B). Method 3 or 3A shall be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent. In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25. If using Method 18 of appendix A of this part, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42). The following equation shall be used to calculate efficiency:

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

where,

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

D.1.10 Compliance Determination [40 CFR 63.1960] [40 CFR 63.1965] [326 IAC 20-67]

(a) Pursuant to 40 CFR 63.1960, compliance with 40 CFR 63, Subpart AAAA is determined 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. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of Subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, the Permittee has failed to meet the control device operating conditions described in 40 CFR 63, Subpart AAAA and has deviated from the requirements of 40 CFR 63, Subpart AAAA. Finally, the Permittee must develop 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 or maintain a copy of the SSM plan is a deviation from the requirements of 40 CFR 63, Subpart AAAA.

(b) Pursuant to 326 IAC 20-67, the Permittee shall comply with the previous version of 40 CFR 63, Subpart AAAA, published in 68 FR 2238, January 16, 2003. Compliance with the requirements specified in Condition D.1.10(a) shall satisfy the requirements of 326 IAC 20-67, with the exception of the following requirements. In order to satisfy 326 IAC 20-67, 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 40 CFR 63, Subpart AAAA.

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

D.1.11 Record Keeping Requirements [326 IAC 12] [326 IAC 8-8.1] [40 CFR 60.758]

Pursuant to 40 CFR 60.758, the Permittee shall:

(a) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee shall keep for at least five years up-to-date, readily accessible, continuous 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 shall keep up-to-date, readily accessible records for the life of the control equipment listed in paragraphs (1) through (2) 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) The Permittee demonstrating compliance with 40 CFR 60.752(b)(2)(ii) shall keep records of:

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).

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, 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 shall keep for five years up-to-date, readily accessible, continuous on-site 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, complying 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 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 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 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 shall keep for at least five (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.

D.1.12 Reporting Requirements [40 CFR 60.757] [326 IAC 8-8.1]

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

(a) 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 40 CFR 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).

(b) 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.

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

(1) 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.

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

(3) Location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.

(4) 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).

[Pursuant to 40 CFR 63.1980, the Permittee shall submit the report in paragraph (c) semi-annually. See Condition D.1.13(a).]

(d) A summary of the above information shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit.

D.1.13 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, with one exception: The Permittee must submit the annual report described in 40 CFR 60.757(f) and Condition D.1.12(c) every six (6) months.

(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 to IDEM, OAQ.

(c) The Permittee shall submit the reports required in paragraphs (a) and (b) by January 30 and July 30 of each year.

D.1.14 Record keeping and Reporting Requirements for NESHAP for Active Asbestos Waste Disposal Sites [40 CFR 61.154] [326 IAC 14]

Pursuant to 40 CFR 61, Subpart M, the Permittee shall:

(a) For all asbestos containing waste material received, the Permittee of the active waste disposal site shall:

(1) Maintain waste shipment records 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 two (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 ten (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 Requirements for open flare

To document compliance with Condition D.1.0, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) and (2) shall be sufficient to demonstrate compliance using a thirty (30) day rolling weighted average and shall be complete and sufficient to establish compliance with the LFG throughput limit established in Condition D.1.0.

(1) Actual landfill gas usage in open flare each month;

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

D.1.16 Reporting Requirements for open flare

A quarterly summary of the information to document compliance with Condition D.1.0 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

## SECTION D.2 FACILITY OPERATION CONDITIONS

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

**Insignificant Activities**

(a) Degreasing and parts washing operations that do not exceed 145 gallons per 12 months, and are not subject to 326 IAC 20-6. [326 IAC 8-3-2 and 326 IAC 8-3-5]

(c) Activities with emissions equal to or less than the following thresholds: 5 lb/hr or 25 lb/day PM10, consisting of one (1) portable concrete and rock crushing operation, identified as PORT-CRUSHER, with a maximum capacity of less than 150 tons per hour. [326 IAC 6-3-2]

(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 (Degreaser) Operations [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the Permittee of a 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) Operations [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the Permittee of a cold cleaner degreaser facility 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$^{o}$C) (one hundred degrees Fahrenheit (100$^{o}$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$^{o}$C) (one hundred degrees Fahrenheit (100$^{o}$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$^{o}$C) (one hundred degrees Fahrenheit (100$^{o}$F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9$^{o}$C) (one hundred twenty degrees Fahrenheit (120$^{o}$F)):

(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 Permittee or operator of a cold cleaning facility 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.

D.2.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the rock crushing operation shall not exceed 55.4 pounds per hour when operating at a process weight rate of 149 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

**SECTION E FACILITY OPERATION CONDITIONS**

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

(a) Four (4) Caterpillar 3516 landfill gas-fueled engine/generators, each rated at 800 kilowatts, identified as EG01, EG02, EG03 and EG04, with EG01 and EG02 constructed in 1994 and EG03 and EG04 constructed in 1996, each with a maximum capacity of 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES1 through ES4, respectively.

(b) Four (4) Caterpillar 3516 landfill gas fueled engine/generators, each rated at 800 kilowatts, identified as EG05, EG06, EG07 and EG08, constructed in 2002, each with a maximum capacity of 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES5 through ES8, respectively.

(c) Four (4) Caterpillar 3516 landfill gas-fueled engine/generators, each rated at 800 kilowatts, identified as EG09, EG10, EG11 and EG12, to be constructed during 2008, each with a maximum capacity of 1148.00 bhp 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES09 through ES12, respectively.

These four engine generators are subject to 40 CFR 63 Subpart ZZZZ.

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

**New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]**

E.1 NSPS Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [40 CFR Part 60, Subpart WWWW]

Pursuant to 40 CFR 60.752(b)(2)(iii), the Permittee is required to route all collected landfill gas to a control system that complies with the requirements in either paragraph (b)(iii)(A), (B), or (C) of 40 CFR 60.752. The Permittee's treatment system meets the definition of a treatment system as defined by U.S. EPA in a notice of proposed rulemaking published in the Federal Register [67 FR 36480] on May 23, 2002. In a letter to the Permittee, dated February 10, 2004, regarding engine/generators EG01 through EG08, the EPA states that once the landfill gas is treated, the facilities that buy or use the gas have no further obligations under the NSPS (40 CFR 60, Subpart WWW). The treatment system fulfills the Permittee's requirements under 40 CFR 60, Subpart WWW.

Engine/generators EG09 through EG12 also employ a similar treatment system. 40 CFR 60, Subpart WWW and, by extension, 40 CFR 63, Subpart AAAA, do not regulate devices that use landfill gas after it is treated pursuant to 40 CFR 60.752(b)(2)(iii)(C). Therefore, the requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA do not apply for the twelve (12) Caterpillar 3516 landfill gas-fueled engine/generators (EG01 through EG12) because these engine/generators use treated landfill gas as fuel.

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]**

E.1 NESHAP: Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

(a) Permittee as an owner/operator of Stationary Spark Ignition Internal Combustion Engines shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment B of this permit):

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6665

(b) Pursuant to 40 CFR 63.6590 (c) Permittee must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ, for spark ignition engines.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY

## PART 70 OPERATING PERMIT
## CERTIFICATION

Source Name: Twin Bridges Recycling and Disposal Facility
Source Address: 124 Twin Bridges Road, Danville, Indiana 46122
Mailing Address: P.O. Box 17, 124 Twin Bridges Road, Danville, Indiana 46122
Part 70 Permit No.: T063-18240-00029

**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 BRANCH**
**100 North Senate Avenue**
**MC 61-53 IGCN 1003**
**Indianapolis, Indiana 46204-2251**
**Phone: 317-233-0178**
**Fax: 317-233-6865**

## PART 70 OPERATING PERMIT
## EMERGENCY OCCURRENCE REPORT

Source Name: Twin Bridges Recycling and Disposal Facility
Source Address: 124 Twin Bridges Road, Danville, Indiana 46122
Mailing Address: P.O. Box 17, 124 Twin Bridges Road, Danville, Indiana 46122
Part 70 Permit No.: T063-18240-00029

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

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

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

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

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

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

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

Form Completed by:

Title / Position:

Date:

Phone:

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: Twin Bridges Recycling and Disposal Facility
Source Address: 124 Twin Bridges Road, Danville, Indiana 46122
Mailing Address: P.O. Box 17, 124 Twin Bridges Road, Danville, Indiana 46122
Part 70 Permit No.: T063-18240-00029

**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. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period". | |
| ☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD. | |
| ☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD | |
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |
| **Permit Requirement** (specify permit condition #) | |
| **Date of Deviation:** | **Duration of Deviation:** |
| **Number of Deviations:** | |
| **Probable Cause of Deviation:** | |
| **Response Steps Taken:** | |

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

Form Completed By:

Title/Position:

Date:

Phone:

Attach a signed certification to complete this report.

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE DATA SECTION
# Part 70 Quarterly Report

Source Name: Twin Bridges Recycling and Disposal Facility
Source Address: 124 Twin Bridges Road, Danville, IN 46122
Mailing Address: P.O. Box 17, 124 Twin Bridges Road, Danville, IN 46122
Part 70 Permit No.: T063-18240-00029
Facility: 2,100 scfm Open Flare (FL2)
Parameter: Landfill gas (LFG) usage
Limit: LFG vented to the open flare shall be limited to less than 946 MM scf per 12 month period rolled on a monthly basis

YEAR:

| Month | Landfill gas (LFG) (MM scf) | Landfill gas (LFG) (MM scf) | Column 1 + Column 2 |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

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

Attach a signed certification to complete this report.

# Attachment A –National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

## Source Description and Location

| | |
|---|---|
| Source Name: | Twin Bridges Recycling and Disposal Facility |
| Source Location: | 124 Twin Bridges Road, Danville, Indiana 46122 |
| County: | Hendricks |
| SIC Code: | 4953, 4911 |
| Operation Permit Renewal No.: | T063-18240-00029 |
| Operation Permit Renewal Issuance Date: | June 19, 2007 |
| Significant Source Modification No.: | 063-26461-00029 |
| Significant Permit Modification No.: | 063-26467-00029 |
| Permit Reviewer: | Syed Jaffery |

## NESHAP [40 CFR Part 63, Subpart ZZZZ]

### Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

### What This Subpart Covers

### § 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

### § 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a

reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

## § 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraph (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(h).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; or

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(h) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source, an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source, an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE, an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE, an existing compression ignition (CI) stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]

### § 63.6595 When do I have to comply with this subpart?

(a) *Affected Sources.* (1) If you have an existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]

## Emission and Operating Limitations

### § 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

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

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

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

[73 FR 3605, Jan. 18, 2008]

### § 63.6601 What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January

1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008]

## General Compliance Requirements

### § 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times, except during periods of startup, shutdown, and malfunction.

(b) If you must comply with emission limitations and operating limitations, you must operate and maintain your stationary RICE, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown, and malfunction.

## Testing and Initial Compliance Requirements

### § 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

### § 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008]

### § 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

### § 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements in §63.7(e)(1) and under the specific conditions that this subpart specifies in Table 4. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

(c) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 1)}$$

Where:

$C_i$= concentration of CO or formaldehyde at the control device inlet,

$C_o$= concentration of CO or formaldehyde at the control device outlet, and

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide ($CO_2$). If pollutant concentrations are to be corrected to 15 percent oxygen and $CO_2$concentration is measured in lieu of oxygen concentration measurement, a $CO_2$correction factor is needed. Calculate the $CO_2$correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific $F_o$value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209\, F_d}{F_c} \qquad \text{(Eq. 2)}$$

Where:

$F_o$= Fuel factor based on the ratio of oxygen volume to the ultimate $CO_2$volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

$F_d$= Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, $dsm^3$ /J (dscf/$10^6$ Btu).

$F_c$= Ratio of the volume of $CO_2$produced to the gross calorific value of the fuel from Method 19, $dsm^3$ /J (dscf/$10^6$ Btu).

(ii) Calculate the $CO_2$correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

Where:

$X_{co2}$= $CO_2$correction factor, percent.

5.9 = 20.9 percent $O_2$−15 percent $O_2$, the defined $O_2$correction value, percent.

(iii) Calculate the $NO_X$and $SO_2$gas concentrations adjusted to 15 percent $O_2$using $CO_2$as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 4)}$$

Where:

$\%CO_2$= Measured $CO_2$concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally ( *e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally ( *e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

## § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or $CO_2$at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent $CO_2$concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in §63.8.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008]

### § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

## Continuous Compliance Requirements

### § 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

### § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b and Tables 2a and 2b of this subpart that apply to you according to methods specified in Table 6 of this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b and Tables 2a and 2b of this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) Consistent with §§63.6(e) and 63.7(e)(1), deviations from the emission or operating limitations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations.

Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR §94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate any stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing CI stationary RICE, an existing emergency stationary RICE, an existing limited use emergency stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008]

## Notifications, Reports, and Records

### § 63.6645 What notifications must I submit and when?

(a) If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions or a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions, you must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[73 FR 3606, Jan. 18, 2008]

### § 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section.

(1) The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) The first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

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

(3) Any problems or errors suspected with the meters.

### § 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(3), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous ( *i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

### § 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off-site for the remaining 3 years.

## Other Requirements and Information

### § 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate any stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions: An existing 2SLB RICE, an existing 4SLB stationary RICE, an existing CI stationary RICE, an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[73 FR 3606, Jan. 18, 2008]

### § 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

## § 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

*Area source* means any stationary source of HAP that is not a major source as defined in part 63.

*Associated equipment* as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

*CAA* means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101–549, 104 Stat. 2399).

*Compression ignition* means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

*Custody transfer* means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

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

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

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

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

*Diesel engine* means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2.

*Digester gas* means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and $CO_2$.

*Dual-fuel engine* means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

*Emergency stationary RICE* means any stationary RICE whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in

the case of fire or flood, etc. Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed on or after June 12, 2006, must comply with requirements specified in 40 CFR 60.4243(d).

*Four-stroke engine* means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

*Gaseous fuel* means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

*Gasoline* means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

*Glycol dehydration unit* means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

*Hazardous air pollutants (HAP)* means any air pollutants listed in or pursuant to section 112(b) of the CAA.

*ISO standard day conditions* means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

*Landfill gas* means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and $CO_2$.

*Lean burn engine* means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

*Limited use stationary RICE* means any stationary RICE that operates less than 100 hours per year.

*Liquefied petroleum gas* means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

*Liquid fuel* means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

*Major Source,* as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

*Natural gas* means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

*Non-selective catalytic reduction (NSCR)* means an add-on catalytic nitrogen oxides ($NO_X$) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, $NO_X$, CO, and volatile organic compounds (VOC) into $CO_2$, nitrogen, and water.

*Oil and gas production facility* as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded ( *i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

*Oxidation catalyst* means an add-on catalytic control device that controls CO and VOC by oxidation.

*Peaking unit or engine* means any standby engine intended for use during periods of high demand that are not emergencies.

*Percent load* means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

*Potential to emit* means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

*Production field facility* means those oil and gas production facilities located prior to the point of custody transfer.

*Production well* means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

*Propane* means a colorless gas derived from petroleum and natural gas, with the molecular structure $C_3H_8$.

*Responsible official* means responsible official as defined in 40 CFR 70.2.

*Rich burn engine* means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for $NO_X$(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

*Site-rated HP* means the maximum manufacturer's design capacity at engine site conditions.

*Spark ignition* means relating to either: A gasoline-fueled engine; or any other type of engine a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

*Stationary reciprocating internal combustion engine (RICE)* means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

*Stationary RICE test cell/stand* means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

*Stoichiometric* means the theoretical air-to-fuel ratio required for complete combustion.

*Storage vessel with the potential for flash emissions* means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

*Subpart* means 40 CFR part 63, subpart ZZZZ.

*Surface site* means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

*Two-stroke engine* means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008]

### Table1ato Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

[As stated in §63.6600, you must comply with the following emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions at 100 percent load plus or minus 10 percent]

| For each... | You must meet the following emission limitations... |
|---|---|
| 1. 4SRB | a. reduce formaldehyde emissions by 76 percent or more. If you commenced |

| | |
|---|---|
| stationary RICE | construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007; |
| | or |
| | b. limit the concentration of formaldehyde in the stationary RICE exhaust 350 ppbvd or less at 15 percent $O_2$. |

[73 FR 3607, Jan. 18, 2008]

**Table1bto Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

[As stated in §§63.6600, 63.6630 and 63.6640, you must comply with the following operating emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions]

| For each... | You must meet the following operating limitation... |
|---|---|
| 1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR;<br>or | a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and |
| 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and using NSCR. | b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. |
| 2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR;<br>or | Comply with any operating limitations approved by the Administrator. |
| 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and not using NSCR. | |

[73 FR 3607, Jan. 18, 2008]

**Table2ato Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions**

[As stated in §§63.6600 and 63.6601, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent]

| For each... | You must meet the following emission limitation... |
|---|---|
| 1. 2SLB stationary RICE | a. reduce CO emissions by 58 percent or more; |
| | or |
| | b. limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent $O_2$. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent $O_2$until June 15, 2007. |
| 2. 4SLB stationary RICE | a. reduce CO emissions by 93 percent or more; |
| | or |
| | b. limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent $O_2$. |
| 3. CI stationary RICE | a. reduce CO emissions by 70 percent or more; |
| | or |
| | b. limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent $O_2$. |

[73 FR 3608, Jan. 18, 2008]

**Table2bto Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and 4SLB Burn Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions**

[As stated in §§63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary]

| For each... | You must meet the following operating limitation... |
|---|---|
| 1. 2SLB and 4SLB stationary RICE and CI | a. maintain your catalyst so that the pressure |

| | |
|---|---|
| stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst | drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and<br>b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. |
| 2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst | Comply with any operating limitations approved by the Administrator. |

[73 FR 3608, Jan. 18, 2008]

**Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests**

[As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements]

| For each . . . | Complying with the requirement to . . . | You must . . . |
|---|---|---|
| 1. 2SLB and 4SLB stationary RICE and CI stationary RICE | Reduce CO emissions and not using a CEMS | Conduct subsequent performance tests semiannually.[1] |
| 2. 4SRB stationary RICE with a brake horsepower ≥5,000 | Reduce formaldehyde emissions | Conduct subsequent performance tests semiannually.[1] |
| 3. Stationary RICE (all stationary RICE subcategories and all brake horsepower ratings) | Limit the concentration of formaldehyde in the stationary RICE exhaust | Conduct subsequent performance tests semiannually.[1] |

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

**Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests**

[As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE]

| For each . . . | Complying with the requirement to . . . | You must . . . | Using . . . | According to the following requirements . . . |
|---|---|---|---|---|
| 1. 2SLB, 4SLB, and CI stationary RICE | a. Reduce CO emissions | i. Measure the $O_2$at the inlet and outlet of the control device; and | (1) Portable CO and $O_2$analyzer | (a) Using ASTM D6522–00 (2005)[a](incorporated by reference, see §63.14). Measurements to determine O2 must be made at the same time as the measurements for CO concentration. |
| | | ii. Measure the CO at the inlet and the outlet of the control device | (1) Portable CO and $O_2$analyzer | (a) Using ASTM D6522–00 (2005)[a](incorporated by reference, see §63.14) or Method 10 of 40 CFR, appendix A. The CO concentration must be at 15 percent O2, dry basis. |
| 2. 4SRB stationary RICE | a. Reduce formaldehyde emissions | i. Select the sampling port location and the number of traverse points; and | (1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i) | (a) Sampling sites must be located at the inlet and outlet of the control device. |
| | | ii. Measure O2 at the inlet and outlet of the control device; and | (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005). | (a) Measurements to determine O2 concentration must be made at the same time as the measurements for formaldehyde concentration. |
| | | iii. Measure moisture content at the inlet and outlet of the control device; and | (1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 | (a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration. |

| | | | | |
|---|---|---|---|---|
| | | iv. Measure formaldehyde at the inlet and the outlet of the control device | (1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03[b], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130 | (a) Formaldehyde concentration must be at 15 percent O2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
| 3. Stationary RICE | a. Limit the concentration of formaldehyde in the stationary RICE exhaust | i. Select the sampling port location and the number of traverse points; and | (1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i) | (a) If using a control device, the sampling site must be located at the outlet of the control device. |
| | | ii. Determine the O2 concentration of the stationary RICE exhaust at the sampling port location; and | (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005) | (a) Measurements to determine O2 concentration must be made at the same time and location as the measurements for formaldehyde concentration. |
| | | iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and | (1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 | (a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration. |
| | | iv. Measure formaldehyde at the exhaust of the stationary RICE | (1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03[b], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal | (a) Formaldehyde concentration must be at 15 percent O2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |

| | | | | |
|---|---|---|---|---|
| | | | to 70 and less than or equal to 130 | |

[a]You may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b]You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[73 FR 3609, Jan. 18, 2008]

**Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations**

[As stated in §§63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following]

| For each . . . | Complying with the requirement to . . . | You have demonstrated initial compliance if . . . |
|---|---|---|
| 1. 2SLB and 4SLB stationary RICE and CI stationary RICE | a. Reduce CO emissions and using oxidation catalyst, and using a CPMS | i. the average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 2. 2SLB and 4SLB stationary RICE and CI stationary RICE | a. Reduce CO emissions and not using oxidation catalyst | i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and |
| | | ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |
| 3. 2SLB and | a. Reduce CO emissions, | i. You have installed a CEMS to continuously |

| | | |
|---|---|---|
| 4SLB stationary RICE and CI stationary RICE | and using a CEMS | monitor CO and either $O_2$or $CO_2$at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and |
| | | ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and |
| | | iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period. |
| 4. 4SRB stationary RICE | a. Reduce formaldehyde emissions and using NSCR | i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 5. 4SRB stationary RICE | a. Reduce formaldehyde emissions and not using NSCR | i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and |
| | | ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |
| 6. Stationary RICE | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR | i. The average formaldehyde concentration, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and |
| | | ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the |

| | | |
|---|---|---|
| | | requirements in §63.6625(b); and |
| | | iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test. |
| 7. Stationary RICE | a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR | i. The average formaldehyde concentration, corrected to 15 percent $O_2$, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and |
| | | ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and |
| | | iii. You have recorded the approved operating parameters (if any) during the initial performance test. |

**Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations and Operating Limitations**

[As stated in §63.6640, you must continuously comply with the emissions and operating limitations as required by the following]

| For each . . . | Complying with the requirement to . . . | You must demonstrate continuous compliance by . . . |
|---|---|---|
| 1. 2SLB and 4SLB stationary RICE and CI stationary RICE | a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS | i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[1]; and |
| | | ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established |

| | | |
|---|---|---|
| | | during the performance test. |
| 2. 2SLB and 4SLB stationary RICE and CI stationary RICE | a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS | i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[1]; and |
| | | ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 3. 2SLB and 4SLB stationary RICE and CI stationary RICE | a. Reduce CO emissions and using a CEMS | i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to §63.6620; and |
| | | ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period; and |
| | | iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1. |
| 4. 4SRB stationary RICE | a. Reduce formaldehyde emissions and using NSCR | i. Collecting the catalyst inlet temperature data according to §63.6625(b); and |
| | | ii. Reducing these data to 4-hour rolling averages; and |
| | | iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established |

| | | |
|---|---|---|
| | | during the performance test. |
| 5. 4SRB stationary RICE | a. Reduce formaldehyde emissions and not using NSCR | i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |
| | | ii. reducing these data to 4-hour rolling averages; |
| | | iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |
| 6. 4SRB stationary RICE with a brake horsepower ≥5,000 | Reduce formaldehyde emissions | Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved[1]. |
| 7. Stationary RICE | Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR | i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[1]; and |
| | | ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and |
| | | iii. Reducing these data to 4-hour rolling averages; and |
| | | iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and |
| | | v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. |
| 8. Stationary RICE | Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR | i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[1]; and |
| | | ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and |

| | | |
|---|---|---|
| | | ii. Reducing these data to 4-hour rolling averages; and |
| | | iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test. |

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

**Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports**

[As stated in §63.6650, you must comply with the following requirements for reports]

| You must submit a(n) | The report must contain . . . | You must submit the report . . . |
|---|---|---|
| 1. Compliance report | a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or | i. Semiannually according to the requirements in §63.6650(b). |
| | b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or | i. Semiannually according to the requirements in §63.6650(b). |
| | c. If you had a startup, shutdown or malfunction during the reporting period, the information in §63.10(d)(5)(i) | i. Semiannually according to the requirements in §63.6650(b). |
| 2. An immediate startup, shutdown, and malfunction | a. Actions taken for the event; and | i. By fax or telephone within 2 working days after |

| | | |
|---|---|---|
| report if actions addressing the startup, shutdown, or malfunction were inconsistent with your startup, shutdown, or malfunction plan during the reporting period | | starting actions inconsistent with the plan. |
| | b. The information in §63.10(d)(5)(ii). | i. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authorities. (§63.10(d)(5)(ii)) |
| 3. Report | a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and | i. Annually, according to the requirements in §63.6650. |
| | b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and | i. See item 3.a.i. |
| | c. Any problems or errors suspected with the meters | i. See item 3.a.i. |

**Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ**

[As stated in §63.6665, you must comply with the following applicable general provisions]

| General provisions citation | Subject of citation | Applies to subpart | Explanation |
|---|---|---|---|
| §63.1 | General applicability of the General Provisions | Yes | |
| §63.2 | Definitions | Yes | Additional terms defined in §63.6675. |
| §63.3 | Units and abbreviations | Yes | |
| §63.4 | Prohibited activities and | Yes | |

| | | | |
|---|---|---|---|
| | circumvention | | |
| §63.5 | Construction and reconstruction | Yes | |
| §63.6(a) | Applicability | Yes | |
| §63.6(b)(1)–(4) | Compliance dates for new and reconstructed sources | Yes | |
| §63.6(b)(5) | Notification | Yes | |
| §63.6(b)(6) | [Reserved] | | |
| §63.6(b)(7) | Compliance dates for new and reconstructed area sources that become major sources | Yes | |
| §63.6(c)(1)–(2) | Compliance dates for existing sources | Yes | |
| §63.6(c)(3)–(4) | [Reserved] | | |
| §36.6(c)(5) | Compliance dates for existing area sources that become major sources | Yes | |
| §63.6(d) | [Reserved] | | |
| §63.6(e)(1) | Operation and maintenance | Yes | |
| §63.6(e)(2) | [Reserved] | | |
| §63.6(e)(3) | Startup, shutdown, and malfunction plan | Yes | |
| §63.6(f)(1) | Applicability of standards except during startup shutdown malfunction (SSM) | Yes | |
| §63.6(f)(2) | Methods for determining compliance | Yes | |
| §63.6(f)(3) | Finding of compliance | Yes | |
| §63.6(g)(1)–(3) | Use of alternate standard | Yes | |
| §63.6(h) | Opacity and visible emission standards | No | Subpart ZZZZ does not contain opacity or visible emission standards. |
| §63.6(i) | Compliance extension | Yes | |

| | | | |
|---|---|---|---|
| | procedures and criteria | | |
| §63.6(j) | Presidential compliance exemption | Yes | |
| §63.7(a)(1)–(2) | Performance test dates | Yes | Subpart ZZZZ contains performance test dates at §§63.6610 and 63.6611. |
| §63.7(a)(3) | CAA section 114 authority | Yes | |
| §63.7(b)(1) | Notification of performance test | Yes | |
| §63.7(b)(2) | Notification of rescheduling | Yes | |
| §63.7(c) | Quality assurance/test plan | Yes | |
| §63.7(d) | Testing facilities | Yes | |
| §63.7(e)(1) | Conditions for conducting performance tests | Yes | |
| §63.7(e)(2) | Conduct of performance tests and reduction of data | Yes | Subpart ZZZZ specifies test methods at §63.6620. |
| §63.7(e)(3) | Test run duration | Yes | |
| §63.7(e)(4) | Administrator may require other testing under section 114 of the CAA | Yes | |
| §63.7(f) | Alternative test method provisions | Yes | |
| §63.7(g) | Performance test data analysis, recordkeeping, and reporting | Yes | |
| §63.7(h) | Waiver of tests | Yes | |
| §63.8(a)(1) | Applicability of monitoring requirements | Yes | Subpart ZZZZ contains specific requirements for monitoring at §63.6625. |
| §63.8(a)(2) | Performance specifications | Yes | |
| §63.8(a)(3) | [Reserved] | | |
| §63.8(a)(4) | Monitoring for control devices | No | |
| §63.8(b)(1) | Monitoring | Yes | |
| §63.8(b)(2)–(3) | Multiple effluents and multiple | Yes | |

| | | | |
|---|---|---|---|
| | monitoring systems | | |
| §63.8(c)(1) | Monitoring system operation and maintenance | Yes | |
| §63.8(c)(1)(i) | Routine and predictable SSM | Yes | |
| §63.8(c)(1)(ii) | SSM not in Startup Shutdown Malfunction Plan | Yes | |
| §63.8(c)(1)(iii) | Compliance with operation and maintenance requirements | Yes | |
| §63.8(c)(2)–(3) | Monitoring system installation | Yes | |
| §63.8(c)(4) | Continuous monitoring system (CMS) requirements | Yes | Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS). |
| §63.8(c)(5) | COMS minimum procedures | No | Subpart ZZZZ does not require COMS. |
| §63.8(c)(6)–(8) | CMS requirements | Yes | Except that subpart ZZZZ does not require COMS. |
| §63.8(d) | CMS quality control | Yes | |
| §63.8(e) | CMS performance evaluation | Yes | Except for §63.8(e)(5)(ii), which applies to COMS. |
| §63.8(f)(1)–(5) | Alternative monitoring method | Yes | |
| §63.8(f)(6) | Alternative to relative accuracy test | Yes | |
| §63.8(g) | Data reduction | Yes | Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640. |
| §63.9(a) | Applicability and State delegation of notification requirements | Yes | |
| §63.9(b)(1)–(5) | Initial notifications | Yes | Except that §63.9(b)(3) is reserved. |
| §63.9(c) | Request for compliance extension | Yes | |
| §63.9(d) | Notification of special | Yes | |

| | | | |
|---|---|---|---|
| | compliance requirements for new sources | | |
| §63.9(e) | Notification of performance test | Yes | |
| §63.9(f) | Notification of visible emission (VE)/opacity test | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.9(g)(1) | Notification of performance evaluation | Yes | |
| §63.9(g)(2) | Notification of use of COMS data | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.9(g)(3) | Notification that criterion for alternative to RATA is exceeded | Yes | If alternative is in use. |
| §63.9(h)(1)–(6) | Notification of compliance status | Yes | Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved. |
| §63.9(i) | Adjustment of submittal deadlines | Yes | |
| §63.9(j) | Change in previous information | Yes | |
| §63.10(a) | Administrative provisions for record keeping/reporting | Yes | |
| §63.10(b)(1) | Record retention | Yes | |
| §63.10(b)(2)(i)–(v) | Records related to SSM | Yes | |
| §63.10(b)(2)(vi)–(xi) | Records | Yes | |
| §63.10(b)(2)(xii) | Record when under waiver | Yes | |
| §63.10(b)(2)(xiii) | Records when using alternative to RATA | Yes | For CO standard if using RATA alternative. |
| §63.10(b)(2)(xiv) | Records of supporting documentation | Yes | |
| §63.10(b)(3) | Records of applicability determination | Yes | |

| | | | |
|---|---|---|---|
| §63.10(c) | Additional records for sources using CEMS | Yes | Except that §63.10(c)(2)–(4) and (9) are reserved. |
| §63.10(d)(1) | General reporting requirements | Yes | |
| §63.10(d)(2) | Report of performance test results | Yes | |
| §63.10(d)(3) | Reporting opacity or VE observations | No | Subpart ZZZZ does not contain opacity or VE standards. |
| §63.10(d)(4) | Progress reports | Yes | |
| §63.10(d)(5) | Startup, shutdown, and malfunction reports | Yes | |
| §63.10(e)(1) and (2)(i) | Additional CMS reports | Yes | |
| §63.10(e)(2)(ii) | COMS-related report | No | Subpart ZZZZ does not require COMS. |
| §63.10(e)(3) | Excess emission and parameter exceedances reports | Yes | Except that §63.10(e)(3)(i)(C) is reserved. |
| §63.10(e)(4) | Reporting COMS data | No | Subpart ZZZZ does not require COMS. |
| §63.10(f) | Waiver for recordkeeping/reporting | Yes | |
| §63.11 | Flares | No | |
| §63.12 | State authority and delegations | Yes | |
| §63.13 | Addresses | Yes | |
| §63.14 | Incorporation by reference | Yes | |
| §63.15 | Availability of information | Yes | |

# Indiana Department of Environmental Management
# Office of Air Quality

## Addendum to the Technical Support Document (ATSD) for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification

### Source Description and Location

| | |
|---|---|
| Source Name: | Twin Bridges Recycling and Disposal Facility |
| Source Location: | 124 Twin Bridges Road, Danville, Indiana 46122 |
| County: | Hendricks |
| SIC Code: | 4953, 4911 |
| Operation Permit Renewal No.: | T063-18240-00029 |
| Operation Permit Renewal Issuance Date: | June 19, 2007 |
| Significant Source Modification No.: | 063-26461-00029 |
| Significant Permit Modification No.: | 063-26467-00029 |
| Permit Reviewer: | Syed Jaffery |

### Public Notice Information

On August 5, 2008, the Office of Air Quality (OAQ) had a notice published in The Hendricks County Flyer, Avon, Indiana, stating that Twin Bridges Recycling and Disposal Facility located at 124 Twin Bridges Road, Danville, Indiana 46122, had applied for a significant modification to their Part 70 Operating Permit T063-18240-00029, issued on June 19, 2007. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

### Comments Received

On August 20, 2008, OAQ received comments from Matt Rechtin, Environmental Engineer, Twin Bridges Recycling and Disposal Facility. The comments are summarized in the subsequent pages, with IDEM's corresponding responses.

The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

This Addendum to Technical Support Document becomes part of the Technical Support Document.

The summary of the comments and IDEM, OAQ responses, including changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

<u>Comment 1:</u>

The applicant mentioned that Page 37 of the permit was blank.

IDEM Response 1:

IDEM has removed the blank page from the permit document, has renumbered the subsequent pages and has updated Table of Contents, accordingly.

Comment 2:

The applicant requested to add the following language to Section E of the permit to explain why NSPS Subpart WWW and NESHAP Subpart AAAA do not apply to the LFG-to-energy plants:

> "Pursuant to 40 CFR 60.752(b)(2)(iii), the Permittee is required to route all collected landfill gas to a control system that complies with the requirements in either paragraph (b)(iii)(A), (B), or (C) of 40 CFR 60.752. The Permittee's treatment system meets the definition of a treatment system as defined by U.S. EPA in a notice of proposed rulemaking published in the Federal Register [67 FR 36480] on May 23, 2002. In a letter to the Permittee, dated February 10, 2004, regarding EG01 through EG08, the EPA states that "once the landfill gas is treated, the facilities that buy or use the gas have no further obligations under the NSPS (40 CFR 60, Subpart WWW). The treatment system fulfills the Permittee's requirements under 40 CFR 60, Subpart WWW. EG09 through EG12 also employ a similar treatment system. 40 CFR 60, Subpart WWW and, by extension, 40 CFR 63, Subpart AAAA, do not regulate devices that use landfill gas after it is treated pursuant to 40 CFR 60.752(b)(2)(iii)(C). Therefore, the requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA do not apply for the twelve (12) Caterpillar 3516 landfill gas-fueled engine/generators (EG01 through EG12) because these engine/generators use treated landfill gas as fuel."

IDEM Response 2:

IDEM has accepted the explanation and has added the following permit conditions as shown below:

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

**E.1 NSPS Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [40 CFR Part 60, Subpart WWWW]**

**Pursuant to 40 CFR 60.752(b)(2)(iii), the Permittee is required to route all collected landfill gas to a control system that complies with the requirements in either paragraph (b)(iii)(A), (B), or (C) of 40 CFR 60.752. The Permittee's treatment system meets the definition of a treatment system as defined by U.S. EPA in a notice of proposed rulemaking published in the Federal Register [67 FR 36480] on May 23, 2002. In a letter to the Permittee, dated February 10, 2004, regarding engine/generators EG01 through EG08, the EPA states that once the landfill gas is treated, the facilities that buy or use the gas have no further obligations under the NSPS (40 CFR 60, Subpart WWW). The treatment system fulfills the Permittee's requirements under 40 CFR 60, Subpart WWW.**

**Engine/generators EG09 through EG12 also employ a similar treatment system. 40 CFR 60, Subpart WWW and, by extension, 40 CFR 63, Subpart AAAA, do not regulate devices that use landfill gas after it is treated pursuant to 40 CFR 60.752(b)(2)(iii)(C). Therefore, the requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA do not apply for the twelve (12) Caterpillar 3516 landfill gas-fueled engine/generators (EG01 through EG12) because these engine/generators use treated landfill gas as fuel.**

IDEM Change # 1:

Due to an administrative change at OAQ Permits Branch, the title page signature blocks in of the permit documents, Significant Source Modification No. T063-26461-00029, and Significant Permit Modification No. T063-26467-00029 have been changed as follows:

…

| Significant Source Modification No.: T063-26461-00029 | |
|---|---|
| Issued by:<br><br>~~Tripurari P. Sinha, Ph. D., Section Chief~~<br>**Donald F. Robin, P.E., Section Chief**<br>Permits Branch<br>Office of Air Quality | Issuance Date: |

…

| Significant Permit Modification No.: T063-26467-00029 | |
|---|---|
| Issued by:<br><br>~~Tripurari P. Sinha, Ph. D., Section Chief~~<br>**Donald F. Robin, P.E., Section Chief**<br>Permits Branch<br>Office of Air Quality | Issuance Date:<br><br>Expiration Date: June 19, 2012 |

IDEM Change # 2:

IDEM does not include a listing of the previous permits on the title page of significant source modifications therefore the information shown below has been deleted from Significant Source Modification No. T063-26461-00029. However this change does not apply to the corresponding Significant Permit Modification No. T063-26467-00029.

…

| ~~Operation Permit No.: T063-18240-00029~~ | |
|---|---|
| ~~Issued by: Original signed by:~~<br><br>~~Nisha Sizemore, Chief~~<br>~~Permits Branch~~<br>~~Office of Air Quality~~ | ~~Issuance Date: June 19, 2007~~<br><br>~~Expiration Date: June 19, 2012~~ |

~~First Administrative Amendment 063-25392-00029, issued on November 28, 2007~~

IDEM Change # 3:

Upon further review IDEM has updated the source location status as follows:

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.

| | |
|---|---|
| Source Address: | 124 Twin Bridges Road, Danville, IN 46122 |
| Mailing Address: | P.O. Box 17, 124 Twin Bridges Road, Danville, IN 46122 |
| General Source Phone Number: | (317) 745-2878 |
| SIC Code: | 4953 |
| County Location: | Hendricks |
| Source Location Status: | **Nonattainment for PM2.5**<br>Attainment or Unclassified for all **other** criteria pollutants |
| Source Status: | Part 70 Permit Program<br>Major Source, under PSD Rules;<br>Minor Source under Nonattainment NSR<br>Minor Source, Section 112 of the Clean Air Act<br>Not 1 of 28 Source Categories |

IDEM Change # 4:

Upon further review IDEM has decided to remove the permit condition E.1 as illustrated below, because this condition may not be appropriate to address NSPS applicability if more engines are added through a future source modification.

…

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

~~E.1 NSPS Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [40 CFR Part 60, Subpart JJJJ] [326 IAC 12]~~

~~All of the emission units are lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,300 HP and were manufactured prior to January 1, 2008, therefore, pursuant to 40 CFR 60.4230(a)(4)(ii), the requirements of NSPS [40 CFR Part 60, Subpart JJJJ] are not applicable to these units.~~

# Indiana Department of Environmental Management
# Office of Air Quality

## Technical Support Document (TSD) for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification

### Source Description and Location

| | |
|---|---|
| Source Name: | Twin Bridges Recycling and Disposal Facility |
| Source Location: | 124 Twin Bridges Road, Danville, Indiana 46122 |
| County: | Hendricks |
| SIC Code: | 4953, 4911 |
| Operation Permit Renewal No.: | T063-18240-00029 |
| Operation Permit Renewal Issuance Date: | June 19, 2007 |
| Significant Source Modification No.: | 063-26461-00029 |
| Significant Permit Modification No.: | 063-26467-00029 |
| Permit Reviewer: | Syed Jaffery |

### Existing Approvals

The source was issued Part 70 Operating Permit Renewal No.T063-18240-00029 on June 19, 2007. The source has since received the following approval:

(a) First Administrative Amendment 063-25392-00029, issued on November 28, 2007

### County Attainment Status

The source is located in Hendricks County. The following attainment status designations are applicable to Hendricks County:

**Table 1: County Attainment Status**

| Pollutant | Designation |
|---|---|
| $SO_2$ | Better than national standards. |
| CO | Unclassifiable or attainment effective November 15, 1990. |
| $O_3$ | Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1] |
| $PM_{10}$ | Unclassifiable effective November 15, 1990. |
| $NO_2$ | Cannot be classified or better than national standards. |
| Pb | Not designated. |

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

(a) Ozone Standards

(1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in indiana.

(2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, St. Joseph as attainment for the 8-hour ozone standard.

(3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Hoseph as attainment for the 8-hour ozone standard.

(4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone. Hendricks County has been designated as attainment or unclassifiable for 8-hour ozone. Therefore, VOC emissions and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Hendricks County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM2.5 promulgated on May 8$^{th}$, 2008, and effective on July 15$^{th}$ 2008. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Hendricks County has been classified as attainment or unclassifiable for $PM_{10}$, $SO_2$, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD applicability or Emission Offset applicability.

## Source Status

**Past Actual CO and NOx Emissions**

The following table shows the actual emissions from the source. This information reflects the 2004 OAQ emission data.

**Table 3: Past Actual CO and NOx Emissions**

| Year | **Actual Emissions** (ton/yr) | |
|---|---|---|
| | **CO** | **NOx** |
| 2007 | 144.07 | 72.94 |
| 2006 | 140.98 | 71.48 |
| 2005 | 126.58 | 67.33 |
| 2004 | 131 | 198 |
| 2003 | 111 | 167 |
| 2002 | 20 | 5 |
| 2001 | 68 | 91 |

| Table 3: Past Actual CO and NOx Emissions | | |
|---|---|---|
| | **Actual Emissions** (ton/yr) | |
| 2000 | 71 | 94 |
| 1999 | 68 | 92 |
| 1998 | 68 | 92 |
| 1997 | 68 | 103 |

Note 1: 2005 through 2007 data provided by source.
Note 2: 1997 through 2004 OAQ emission data.

(a) Review of past actual emissions from 1997 through 2007 demonstrated that the actual CO and NOx emissions from the source were less than 250 tons per year.

(b) The source has opted to limit CO emissions to less than 250 tons per year; therefore, this existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

## Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Twin Bridges Recycling and Disposal Facility (Twin Bridges Recycling) on April 25, 2008, relating to the installation and operation of a new four-engine gas plant.

The proposed modification consists of installation and operation of the following emission units:

(a) Four (4) Caterpillar 3516 landfill gas-fueled engine/generators, each rated at 800 kilowatts, identified as EG09, EG10, EG11 and EG12, constructed in 2008, each with a maximum capacity of 1148.00 bhp, 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES09 through ES12, respectively.

These four engine generators are subject to 40 CFR 60 Subpart and 40 CFR 63 Subpart.

## Enforcement Issues

There are no enforcement actions pending against the source.

## Stack Summary

The following table summarizes the stacks that correspond to the new emission units.

| Table 4: Stack Summary | | | | | |
|---|---|---|---|---|---|
| **Stack ID** | **Operation** | **Height** (ft) | **Diameter** (ft) | **Flow Rate** (acfm) | **Temperature** ($^0$F) |
| ES09 | MSW Landfill | 25 | 0.83 | 2900 | 800 |
| ES10 | MSW Landfill | 25 | 0.83 | 2900 | 800 |
| ES11 | MSW Landfill | 25 | 0.83 | 2900 | 800 |
| ES12 | MSW Landfill | 25 | 0.83 | 2900 | 800 |
| FL02 | MSW Landfill | 34 | 0.83 | 20000 | 1400 |

MSW: Municipal Solid Waste

## Emission Calculations

See Appendix A of this Technical Support Document (TSD) for detailed emission calculations.

## Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit 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, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

**Table 5: PTE Before Controls of the Modification**

| **Pollutant** | **Potential To Emit** (ton/yr) |
|---|---|
| PM | 8.22 |
| $PM_{10}$ | 8.22 |
| $PM_{2.5}$ | 8.22 |
| $SO_2$ | 2.86 |
| VOC | 0.7 |
| CO | 80.5 |
| $NO_X$ | 42.8 |
| Single HAP | <10 |
| Total HAPs | <25 |

The Part 70 operating permit is being modified through a Part 70 significant source modification. This source modification is subject to 326 IAC 2-7-10.5(f)(4) because the potential to emit NOx is greater than twenty five (25) tons per year before control. Additionally, the modification will be incorporated into the Part 70 Operation Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d) because the modification requires new emission limitations to be added in existing Part 70 permit terms and conditions.

## Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

| **Process/emission unit** | **Table 6: Limited PTE - Existing Source (Pre - 2008)** (tons/year) | | | | | |
|---|---|---|---|---|---|---|
| | **PM** | **PM10** | **$SO_2$** | **VOC** | **CO** | **$NO_X$** |
| Landfill (LF1) | _ | _ | 0 | 63.9 | 6.51 | 0 |
| Utility Flare (FL2) | 4.02 | 4.02 | 3.74 | 0.37 | 79.64 | 14.64 |
| Four (4) Engine/Generators (EG1 – EG4) | 8.22 | 8.22 | 2.86 | 0.7 | 80.5 | 42.8 |
| Four (4) Engine/Generators (EG5 – EG8) | 8.22 | 8.22 | 2.86 | 0.7 | 80.5 | 42.8 |
| Tipper Engines (TIPPER1, TIPPER2) | 0.7 | 0.7 | 0.65 | 0.81 | 2.14 | 13.5 |
| Rock Crusher (PORT-CRUSHER) | 3.52 | 1.57 | 0 | 0 | 0 | 0 |
| **Total PTE** | **24.7** | **22.73** | **10.1** | **66.5** | **249.3** | **113.7** |
| **Major Source Threshold** | **250** | **250** | **250** | **250** | **250** | **250** |

Note 1: Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD applicability or Emission Offset applicability.

Before construction of the proposed emission units the source agreed to accept limits on CO emission, therefore, the existing source, consisting of all emission units constructed prior to 2008, is not major for PSD because CO emissions from the entire source are limited to less than 250 tons per year, the PSD major source threshold. Hence, pursuant to 326 IAC 2-2, the PSD requirements do not apply to the existing units constructed before 2008.

| **Process/emission unit** | **Table 7: PTE - 2008 Modification** (tons/year) | | | | | | |
|---|---|---|---|---|---|---|---|
| | **PM** | **PM10** | **PM2.5** | **$SO_2$** | **VOC** | **CO** | **$NO_X$** |
| Four (4) Engine/Generators (EG9 – EG12) | 8.22 | 8.22 | 8.22 | 2.86 | 0.7 | 80.5 | 42.8 |
| **Major Source Threshold** | **250** | **250** | **100** | **100** | **250** | **250** | **250** |

This modification to an existing minor stationary source is not major because the emissions increases are less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply to the 2008 modification.

This modification to a minor source for non-attainment NSR pollutant is minor because the PM2.5 and $SO_2$ emissions are less than 100 tons per year each.

## Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

(a) New Source Performance Standards (NSPS)

There are no NSPS applicable to the proposed modification.

The emission units proposed for this modification are lean burn engines with a maximum engine power greater than 500 HP and less than 1,300 HP and were manufactured prior to January 1, 2008, therefore, pursuant to 40 CFR 60.4230(a)(4)(ii), the requirements of NSPS [40 CFR Part 60, Subpart JJJJ] are not applicable to these units.

(b) National Emission Standards for Hazardous Air Pollutants (NESHAPs)
The following NESHAPs are applicable to the proposed modification:

<u>40 CFR Part 63, Subpart ZZZZ Reciprocating Internal combustion Engines (RICE)</u>
Four (4) Engine/Generators (EG9 – EG12), proposed for installation under this modification, are subject to NESHAPs for stationary spark ignition (SI) internal combustion engines (ICE) 40 CFR Part 63, Subpart ZZZZ, which is incorporated by reference as 326 IAC 20-82. Engine/Generators are subject to the following portions of 40 CFR Part 63, Subpart ZZZZ.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6665

Pursuant to 40 CFR 63.6590 (c) Permittee must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ, for spark ignition engines.

(c) Compliance Assurance Monitoring (CAM)

<u>40 CFR 64.2, Compliance Assurance Monitoring (CAM)</u>
Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The proposed modification will not add any control devices for engine/generators; therefore, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the new emission units as part of this modification.

## State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

**326 IAC 2-1.1-5** (Nonattainment New Source Review)
Nonattainment New Source Review applicability is discussed under the Permit Level Determination – PSD and Emission Offset section.

**326 IAC 2-2 (PSD)**

(a) Since the unrestricted potential to emit of the existing source (flare, and existing engine generators and all other equipment constructed prior to 2008) is greater than two hundred fifty (250) tons of CO per year, this source has elected to limit the potential to emit for the flare prior to the modification as follows:

The operation of one (1) open flare, identified as FL2, constructed in 2006, with a maximum capacity of 2,100 standard cubic feet per minute (scfm) shall be limited to no more than 946 MM scf per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit, combined with the potential CO emissions from other emission units, will limit the source wide CO emissions to less than 250 tons per year, and render 326 IAC 2-2 not applicable to the existing source, as of 2008.

Since the potential to emit of this modification is less than two hundred fifty (250) tons of CO per year, therefore 326 IAC 2-2 is not applicable to this modification.

(b) The PTE of 2008 modification is less than two hundred fifty (250) tons of CO per year, therefore 326 IAC 2-2 is not applicable to this modification. The source is a major source after this modification.

(c) The CO testing for engine generators is not necessary because the four (4) new engines are of an identical design to an engine that was tested in 2006 which is within the normal five (5) year test cycle.

**326 IAC 2-4.1 Evaluation for Hazardous Air Pollutants (HAPs)**

(a) Since the potential to emit of HAPs from the existing source (flare, and existing engine generators and all other equipment constructed prior to 2008) is greater than ten (10) tons per year of a single worst HAP and is greater than twenty five (25) tons per year of combined HAPs, this source has elected to limit the potential to emit for the flare prior to the modification as follows:

The operation of one (1) open flare, identified as FL2, constructed in 2006, with a maximum capacity of 2,100 standard cubic feet per minute (scfm) shall be limited to no more than 946 MM scf per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit, combined with the potential HAP emissions from other emission units, will limit the source wide HAP emissions to less than ten (10) tons of a single worst HAP and to less than twenty five (25) tons of combined HAPs per year, and render 326 IAC 2-4.1 not applicable to the existing source, as of 2008.

For this modification, the PTE of the worst single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, 326 IAC 2-4.1 does not apply to the modification.

**326 IAC 2-6 (Emission Reporting)**

The source is required to report emissions from the entire source. Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted triennially. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

**State Rule Applicability – Open Flare and Engine/Generators**

**326 IAC 7-1.1 (Sulfur Dioxide Limitations)**

The engine/generators at this source do not have the potential to emit greater than 25 tons per year or 10 pounds per hour of sulfur dioxide. Therefore, the requirements of 326 IAC 7-1.1 do not apply to the engine/generators EG09 through EG12.

**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 engine/generators.

**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 the engine/generators EG09 through EG12.

## Compliance Determination and Monitoring 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 approporiate corrective actions within a specific time period.

### Compliance Determination Requirements

There are no new Compliance Determination Requirements applicable to the proposed modification beyond what is required by NESHAP 40 CFR Part 63, Subpart ZZZZ.

### Compliance Monitoring Requirements

There are no new Compliance Monitoring Requirements applicable to the proposed modification beyond what is required by NESHAP 40 CFR Part 63, Subpart ZZZZ.

**Proposed Changes**

The changes listed below have been made to Part 70 Operating Permit No.T063-18240-00029. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold** face:

Change 1:

Permit condition A.1 General Information is updated as shown below:

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.

| | |
|---|---|
| Source Address: | 124 Twin Bridges Road, Danville, IN 46122 |
| Mailing Address: | P.O. Box 17, 124 Twin Bridges Road, Danville, IN 46122 |
| General Source Phone Number: | (317) 745-2878 |
| SIC Code: | 4953 |
| County Location: | Hendricks |
| Source Location Status: | ~~Nonattainment for PM2.5~~<br>Attainment **or Unclassified** for all ~~other~~ criteria pollutants |
| Source Status: | Part 70 Permit Program<br>Major Source, under PSD Rules;<br>~~Major Source, under Emission Offset;~~<br>**Minor Source under Nonattainment NSR**<br>~~Major~~ **Minor** Source, Section 112 of the Clean Air Act<br>Not 1 of 28 Source Categories |

Change 2:

The following description for new emission units is added to Section A.2 as follows:

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:

…

**(e) Four (4) Caterpillar 3516 landfill gas-fueled engine/generators, each rated at 800 kilowatts, identified as EG09, EG10, EG11 and EG12, to be constructed during 2008, each with a maximum capacity of 1148.00 bhp, 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES09 through ES12, respectively.**

**These four engine generators are subject to 40 CFR 63 Subpart ZZZZ.**

Change 3:

IDEM has revised permit condition C.17 as follows:

~~C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]~~

~~(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) If there is a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit or at a source with Plant-wide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee) and/or 326 IAC 2-3-1(z)) and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:~~

~~(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll) at an existing emissions unit, document and maintain the following records:~~

~~(A) A description of the project.~~

~~(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.~~

~~(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:~~

~~(i) Baseline actual emissions;~~

~~(ii) Projected actual emissions;~~

~~(iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1(mm)(2)(A)(iii); and~~

~~(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.~~

~~(2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and~~

~~(3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.~~

**C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]**

**(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) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:**

**(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, document and maintain the following records:**

**(A) A description of the project.**

**(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.**

**(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:**

**(i) Baseline actual emissions;**

**(ii) Projected actual emissions;**

**(iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and**

**(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.**

**(d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:**

**(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and**

**(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.**

Change 4:

IDEM has revised permit condition C.18 as follows:

~~C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]~~

~~(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~~
~~MC 61-53 IGCN 1003~~
~~Indianapolis, Indiana 46204-2251~~

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

~~(d) 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.~~

~~(f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C- General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll) at an existing emissions unit and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:~~

~~(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) and/or 326 IAC 2-3-1(qq), for that regulated NSR pollutant, and~~

~~(2) The emissions differ from the preconstruction projection as documented and~~

~~maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).~~

~~(g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:~~

~~(1) The name, address, and telephone number of the major stationary source.~~

~~(2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C- General Record Keeping Requirements.~~

~~(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).~~

~~(4) Any other information that the Permittee deems fit to include in this report,~~

~~Reports required in this part shall be submitted to:~~

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

~~(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ 326 IAC 17.1.~~

**C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]**

**(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**
**MC 61-53 IGCN 1003**
**Indianapolis, Indiana 46204-2251**

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

**(d) 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.**

**(f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:**

**(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and**

**(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).**

**(g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:**

**(1) The name, address, and telephone number of the major stationary source.**

**(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.**

**(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).**

**(4) Any other information that the Permittee deems fit to include in this report.**

**Reports required in this part shall be submitted to:**

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

**(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.**

Change 5:

The source has agreed to accept a PSD Minor Limit for CO. For this purpose the source has agreed to restrict the operation of 2,100 standard cubic feet per minute (scfm) open flare to no more than 946 million standard cubic feet per year - equivalent to 1,800 scfm, therefore, a new permit condition D.1.0 PSD Minor Limit [326 IAC 2-2] has been added to the permit as follows:

**D.1.0 PSD Minor Limit [326 IAC 2-2]**

**The amount of landfill gas (LFG) vented to one (1) open flare, identified as FL2, constructed in 2006, shall be limited to less than 946 MM scf of landfill gas (LFG) per twelve (12) consecutive month period with compliance determined at the end of each month. This is equivalent to an emission limit of 79.64 tons of CO per twelve (12) consecutive month period, based on emissions of 0.17 lbs of CO per thousand scf of LFG.**

**Compliance with the above limits, combined with the potential CO emissions from existing emission units, will limit the source wide CO emissions to less than 250 tons per year, and render 326 IAC 2-2 not applicable to the existing emissions units constructed before 2008.**

Change 6:

A new permit condition D.1.15 Record Keeping Requirements for open flare is added in accordance with the addition of a new PSD Minor Limit as follows:

**D.1.15 Record Keeping Requirements for open flare**

To document compliance with Condition D.1.0, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) and (2) shall be sufficient to demonstrate compliance using a thirty (30) day rolling weighted average and shall be complete and sufficient to establish compliance with the LFG throughput limit established in Condition D.1.0.

(1) Actual landfill gas usage in open flare each month;

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

Change 7:

A new permit condition D.1.16 Reporting Requirements for open flare is added in accordance with the addition of a new PSD Minor Limit as follows:

**D.1.16 Reporting Requirements for open flare**

**A quarterly summary of the information to document compliance with Condition D.1.0 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).**

Change 8:

A new E section is added to the permit for the new engine/generators as shown below:

## SECTION E FACILITY OPERATION CONDITIONS

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

**(a) Four (4) Caterpillar 3516 landfill gas-fueled engine/generators, each rated at 800 kilowatts, identified as EG1, EG2, EG3 and EG4, with EG1 and EG2 constructed in 1994 and EG3 and EG4 constructed in 1996, each with a maximum capacity of 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES1 through ES4, respectively.**

**(b) Four (4) Caterpillar 3516 landfill gas fueled engine/generators, each rated at 800 kilowatts, identified as EG5, EG6, EG7 and EG8, constructed in 2002, each with a maximum capacity of 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES5 through ES8, respectively.**

**(c) Four (4) Caterpillar 3516 landfill gas-fueled engine/generators, each rated at 800 kilowatts, identified as EG09, EG10, EG11 and EG12, to be constructed during 2008, each with a maximum capacity of 1148.00 bhp 326 standard cubic feet per minute (scfm) of landfill gas (8.9 MMBtu/hr), and exhausting to stacks ES09 through ES12, respectively.**

**These four engine generators are subject to 40 CFR 63 Subpart ZZZZ.**

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

**New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]**

### E.1 NSPS Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [40 CFR Part 60, Subpart JJJJ] [326 IAC 12]

**All of the emission units are lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,300 HP and were manufactured prior to January 1, 2008, therefore, pursuant to 40 CFR 60.4230(a)(4)(ii), the requirements of NSPS [40 CFR Part 60, Subpart JJJJ] are not applicable to these units.**

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]**

### E.2 NESHAP: Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

**(a) Permittee as an owner/operator of Stationary Spark Ignition Internal Combustion Engines shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment A of this permit):**

**(4) 40 CFR 63.6580**
**(5) 40 CFR 63.6585**
**(6) 40 CFR 63.6665**

**(b) Pursuant to 40 CFR 63.6590 (c) Permittee must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ, for spark ignition engines.**

Change 9:

A new reporting form is added to the permit as illustrated below:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
**OFFICE OF AIR QUALITY**
**COMPLIANCE DATA SECTION**
**Part 70 Quarterly Report**

**Source Name:** **Twin Bridges Recycling and Disposal Facility**

**Source Address:** **124 Twin Bridges Road, Danville, IN 46122**
**Mailing Address:** **P.O. Box 17, 124 Twin Bridges Road, Danville, IN 46122**
**Part 70 Permit No.:** **T063-18240-00029**
**Facility:** **2,100 scfm Open Flare (FL2)**
**Parameter:** **Landfill gas (LFG) usage**
**Limit:** **LFG vented to the open flare shall be limited to less than 946 MM scf per 12 month period rolled on a monthly basis**

**YEAR:**

| Month | Landfill gas (LFG) (MM scf) | Landfill gas (LFG) (MM scf) | Column 1 + Column 2 |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

☐ **No deviation occurred in this quarter.**

☐ **Deviation/s occurred in this quarter.**
**Deviation has been reported on:**

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

**Attach a signed certification to complete this report.**

Change 10:

The following attachment has been attached to the permit in accordance with Federal Rule Applicability Determination:

**Attachment A – National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]**

## Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 063-26461-00029 and Significant Permit Modification No. 063-26467-00029, respectively. Based on the facts, conditions and evaluations made, OAQ recommends to the IDEM Commissioner that these Part 70 SSM and SPM be approved.

# Indiana Department of Environmental Management
# Office of Air Quality

Appendix A to the
Technical Support Document (TSD)
Emission Calculations

## Source Description and Location

| | |
|---|---|
| Company Name: | Twin Bridges Recycling and Disposal Facility |
| Address City IN Zip: | 124 Twin Bridges Road, Danville, Indiana 46122 |
| County: | Hendricks |
| SIC / NAICS Code: | 4953, 4911 |
| Permit Number: | T063-18240-00029 |
| Significant Source Modification No.: | 063-26461-00029 |
| Significant Permit Modification No.: | 063-26467-00029 |
| Permit Reviewer: | Syed Jaffery |
| Date: | July 8, 2008 |

## Summary of Potential to Emit (PTE)

## Modification

| | Uncontrolled PTE of the Modification (tons/year) | | | | | | |
|---|---|---|---|---|---|---|---|
| Process/emission unit | PM | PM10 | $SO_2$ | VOC | CO | $NO_X$ | HAPs |
| Four (4) Engine/Generators (EG9 – EG12) | 8.22 | 8.22 | 2.86 | 0.7 | 80.5 | 42.8 | Single HAP: <10<br>Total HAPs: <25 |
| **Major Source Threshold** | **250** | **250** | **250** | **250** | **250** | **250** | |

| | Limitted PTE of the Modification (tons/year) | | | | | | |
|---|---|---|---|---|---|---|---|
| Process/emission unit | PM | PM10 | $SO_2$ | VOC | CO | $NO_X$ | HAPs |
| Four (4) Engine/Generators (EG9 – EG12) | 8.22 | 8.22 | 2.86 | 0.7 | 80.5 | 42.8 | Single HAP: <10<br>Total HAPs: <25 |
| **Major Source Threshold** | **250** | **250** | **250** | **250** | **250** | **250** | |

# Indiana Department of Environmental Management
# Office of Air Quality

Appendix A to the
Technical Support Document (TSD)
Emission Calculations

## Summary of PTE (continues)

| | Uncontrolled PTE before the Modification (tons/year) | | | | | | |
|---|---|---|---|---|---|---|---|
| Process/emission unit | PM | PM10 | $SO_2$ | VOC | CO | $NO_X$ | HAPs |
| Landfill (LF1) | – | – | 0 | 63.9 | 6.51 | 0 | Single HAP: 6.06<br>Total HAPs: 16.9 |
| Utility Flare (FL2) | 4.69 | 4.69 | 4.61 | 1.12 | 92.9 | 17.1 | Single HAP: 7.7<br>Total HAPs: 8.71 |
| Four (4) Engine/Generators (EG1 – EG4) | 8.22 | 8.22 | 2.86 | 0.7 | 80.5 | 42.8 | |
| Four (4) Engine/Generators (EG5 – EG8) | 8.22 | 8.22 | 2.86 | 0.7 | 80.5 | 42.8 | |
| Tipper Engines (TIPPER1, TIPPER2) | 0.7 | 0.7 | 0.65 | 0.81 | 2.14 | 13.5 | – |
| Rock Crusher (PORT-CRUSHER) | 3.52 | 1.57 | 0 | 0 | 0 | 0 | 0 |
| Total PTE * | 25.4 | 23.4 | 11.0 | 67.2 | 262.6 | 116.2 | Single HAP: 7.7<br>Total HAPs: 25.6 |
| **Major Source Threshold** | **250** | **250** | **250** | **250** | **250** | **250** | |

Note: Pursuant to Part 70 Operating Permit No. T063-18240-00029 issued on June 19, 2007 the source was a Major Source of CO under PSD rules because CO emissions were not limited to less than 250 tons/year.

Data source: Part 70 Operating Permit No. T063-18240-00029 issued on June 19, 2007

| | Limited Potential to Emit before the Modification, after taking a limit of less than 250 tons/year of CO | | | | | | |
|---|---|---|---|---|---|---|---|
| Process/emission unit | PM | PM10 | $SO_2$ | VOC | CO | $NO_X$ | HAPs |
| Landfill (LF1) | – | – | 0 | 63.9 | 6.51 | 0 | Single HAP: 6.06<br>Total HAPs: 16.9 |
| Utility Flare (FL2) | 4.02 | 4.02 | 3.74 | 0.37 | 79.64 | 14.64 | Single HAP: 7.7<br>Total HAPs: 8.71 |
| Four (4) Engine/Generators (EG1 – EG4) | 8.22 | 8.22 | 2.86 | 0.7 | 80.5 | 42.8 | |
| Four (4) Engine/Generators (EG5 – EG8) | 8.22 | 8.22 | 2.86 | 0.7 | 80.5 | 42.8 | |
| Tipper Engines (TIPPER1, TIPPER2) | 0.7 | 0.7 | 0.65 | 0.81 | 2.14 | 13.5 | – |
| Rock Crusher (PORT-CRUSHER) | 3.52 | 1.57 | 0 | 0 | 0 | 0 | 0 |
| Total PTE * | 24.7 | 22.73 | 10.1 | 66.5 | 249.3 | 113.7 | Single HAP: <10<br>Total HAPs: <25 |
| **Major Source Threshold** | **250** | **250** | **250** | **250** | **250** | **250** | |

Note: In order to attain a PSD Minor Source status before construction of the proposed emission units the source agreed to accept limits on the Utility Flare .

**Appendix A: New Limted Emissions Calculations**
**Combustion Emissions from the Flare and Engine/Generators**

**Company Name: Twin Bridges Recycling and Disposal Facility**
**Address: 124 Twin Bridges Road, Danville, Indiana 46122**
**Title V: T063-18240-00029**

| Fuel Input MMBtu/hr | NMOC ppmv | Flow Rate scfm | Facility Description: | Emissions Unit ID # |
|---|---|---|---|---|
| 49.1 | 450 | 1,800 | Utility Flare with a maximum capacity of 2,100 scfm restricted to 946 MM SCF/yr | FL2 |
| 35.6 | 450 | 1,304 | Four (4) Caterpillar 3516 landfill gas fueled engine/generators | EG09, EG10, EG11 and EG12 |

| Pollutant Emission Factors | | | | | | |
|---|---|---|---|---|---|---|
| Emission Unit | PM[a] | PM10[a] | $SO_2$[a] | NOx[a] | CO[a] | NMOC[a] |
| Flare | 17 | 17 | 46.9 | 0.068 | 0.37 | 450 |
| | (lb/$10^6$ dscf) | (lb/$10^6$ dscf) | (ppmv) | (lb/MMBtu) | (lb/MMBtu) | (ppmv) |
| IC Engines | 48 | 48 | 46.9 | 250 | 470 | 450 |
| | (lb/$10^6$ dscf) | (lb/$10^6$ dscf) | (ppmv) | (lb/$10^6$ dscf) | (lb/$10^6$ dscf) | (ppmv) |

| Potential To Emit (tons/year) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Emission Unit | PM | PM10 | $SO_2$ | NOx | CO | NMOC | VOC |
| FL2 | 4.02 | 4.02 | 3.74 | 14.64 | 79.64 | 0.96 | 0.38 |
| EG9 - EG12 | 8.22 | 8.22 | 2.71 | 42.84 | 80.53 | 0.70 | 0.27 |
| **PTE Total** | **12.2** | **12.2** | **6.45** | **57.5** | **160.2** | **1.66** | **0.65** |

[a] All Emission Factors are from Part 70 Operating Permit No. 063-18240-00029, Issued June 19, 2007. Assume PM emissions equal to PM10 emissions.

**Methodology**

CO / NOx Emissions (tons/yr) = Fuel Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760 hrs/yr x 1 ton/2,000 lbs

PM / PM10 / NOx / CO Emissions (tons/yr) = Flow Rate (scfm landfill gas) / $10^6$ x Emission Factor (lb/$10^6$ dscf) x 50% (Methane % in landfill gas) x 60 (min/hr) x 8760 (hr/yr) x .0005 (ton/lb)

$SO_2$ Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) /1000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of $SO_2$ (64 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs

NMOC Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) /1000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of Hexane ( lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1-98% control efficiency)

VOC = 39% of NMOC

**Calculations for CO PSD Minor Limit**

| CO Emissions | Conversion | LFG Throughput | Conversion | Conversion | CO Emission Rate |
|---|---|---|---|---|---|
| tpy | lb/ton | MMSCF/yr | SCF/MMSCF | KSCF/SCF | lb/KSCF |
| 79.64 | 2000 | 946 | 1000000 | 1 | 0.17 |
| | | | 1 | 1000 | |

**Methodology**

CO Emission Rate (lbs/Kscf) = CO Emissions (tons/yr) x 2000 lbs/tons / LFG (MMscf/yr) / Kscf/MMscf

Kscf = Thousand scf

MMscf = Million scf

**Appendix A: Potential Emission Calculations (after restriction on the flare)**
**CO, VOC and HAPs Emissions from the Landfill**

**Company Name: Twin Bridges Recycling and Disposal Facility**
**Address: 124 Twin Bridges Road, Danville, Indiana 46122**
**Title V: T063-18240-00029**

| **Inputs from Landfill Gas Model (Emissions Before Controls)** | | | | |
|---|---|---|---|---|
| Product | $m^3$/yr | scfm | mg/yr | tons/year |
| Methane | 6.89E+07 | 4.63E+03 | | |
| $CO_2$ | 6.89E+07 | 4.63E+03 | | |
| CO | 2.00E+04 | | 2.21E+01 | 24.3 |
| NMOC | 6.41E+04 | | 2.22E+02 | 245 |
| **Fugitive Emissions from Landfill after Controls** | | | | tons/yr |
| CO | | | | 6.06 |
| VOC | | | | 61.2 |

| | | |
|---|---|---|
| **1. Landfill Gas (LFG) Production Rate:** | **1.38E+08** | $m^3$/yr (= $CH_4$ + $CO_2$ production rate from the EPA Landfill Air Emission Model - Appendix A) |
| | **9.26E+03** | scfm (= $CH_4$ + $CO_2$ production rate from the EPA Landfill Air Emission Model - Appendix A) |
| **2. Collection Efficiency:** | **75%** | (AP42, Chapter 2.4) |
| **2a. Collectable LFG***** | **6948** | scfm (=LFG production rate * Collection efficiency) |
| **2b. Total LFG combustion capacity***** | **5712** | scfm (= Flare, FL2, restricted to 1800 scfm + 12 engines, EG01 - EG12, each @ 326 scfm) |
| **3. Control Efficiency:** | **98%** | (required by NSPS) |

| **CAS Number** | **Compound** | ***HAP Concentration (ppmv)** | **Molecular Weight** | **Uncontrolled HAPs Emissions (tons/yr)** | **Fugitive HAPs Emissions (tons/yr)** | **Captured HAPs after Control Devices (tons/yr)** | **Total HAP Emissions (tons/yr)** |
|---|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane (methyl chloroform) | 0.48 | 133.41 | 0.411 | 0.103 | 0.006 | 0.109 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.11 | 167.85 | 1.194 | 0.299 | 0.018 | 0.317 |
| 75-34-3 | 1,1-Dichloroethane (ethylidene dichloride) | 2.35 | 98.97 | 1.491 | 0.373 | 0.022 | 0.395 |
| 75-35-4 | 1,1-Dichloroethene (vinylidene chloride) | 0.20 | 96.94 | 0.124 | 0.031 | 0.002 | 0.033 |
| 107-06-2 | 1,2-Dichloroethane (ethylene dichloride) | 0.41 | 98.96 | 0.260 | 0.065 | 0.004 | 0.069 |
| 78-87-5 | 1,2-Dichloropropane (propylene dichloride) | 0.18 | 112.99 | 0.130 | 0.033 | 0.002 | 0.035 |
| 107-13-1 | Acrylonitrile | 6.33 | 53.06 | 2.153 | 0.538 | 0.032 | 0.571 |
| 75-15-0 | Carbon disulfide | 0.58 | 76.13 | 0.283 | 0.071 | 0.004 | 0.075 |
| 56-23-5 | Carbon tetrachloride | 0.00 | 153.84 | 0.004 | 0.001 | 0.000 | 0.001 |
| 463-58-1 | Carbonyl sulfide | 0.49 | 60.07 | 0.189 | 0.047 | 0.003 | 0.050 |
| 108-90-7 | Chlorobenzene | 0.25 | 112.56 | 0.180 | 0.045 | 0.003 | 0.048 |
| 75-00-3 | Chloroethane (ethyl chloride) | 1.25 | 64.52 | 0.517 | 0.129 | 0.008 | 0.137 |
| 67-66-3 | Chloroform | 0.03 | 119.39 | 0.023 | 0.006 | 0.000 | 0.006 |
| 75-09-2 | Dichloromethane (methylene chloride) | 14.30 | 84.94 | 7.787 | 1.947 | 0.117 | 2.064 |
| 100-41-4 | Ethylbenzene | 4.61 | 106.16 | 3.138 | 0.784 | 0.047 | 0.831 |
| 110-54-3 | Hexane | 6.57 | 86.18 | 3.630 | 0.907 | 0.054 | 0.962 |
| 108-10-1 | Methyl isobutyl ketone | 1.87 | 100.16 | 1.201 | 0.300 | 0.018 | 0.318 |
| 127-18-4 | Perchloroethylene (tetrachloroethene) | 3.73 | 165.83 | 3.965 | 0.991 | 0.059 | 1.051 |
| 79-01-6 | Trichloroethlyene (trichloroethene) | 2.82 | 131.4 | 2.376 | 0.594 | 0.036 | 0.630 |
| 75-01-4 | Vinyl chloride | 7.34 | 62.5 | 2.941 | 0.735 | 0.044 | 0.779 |
| 71-43-2 | Benzene | 1.91 | 78.11 | 0.956 | 0.239 | 0.014 | 0.253 |
| 74-87-3 | Methyl chloride (Chloromethane) | 1.21 | 50.49 | 0.392 | 0.098 | 0.006 | 0.104 |
| 108-88-3 | Toluene | 39.30 | 92.13 | 23.212 | 5.803 | 0.348 | 6.151 |
| 1330-20-7 | Xylene (isomers and mixture) | 12.10 | 106.16 | 8.235 | 2.059 | 0.124 | 2.182 |
| | Mercury Compounds | 0.000292 | 200.61 | 0.000 | 0.000 | 0.000 | 0.000 |
| 7647-01-0 | **Hydrogen Chloride | 42.0 | 36.46 | **-** | **-** | **7.363** | 7.363 |
| **Total Emissions** | | | | **64.8** | **16.20** | **8.33** | **24.53** |

*The HAP concentrations are from AP-42, Chapter 2.4 - Municipal Solid Waste Landfills - Tables 2.4-1 and 2.4-2 (AP-42, 11/98).
** HCl concentration is from AP-42, Chapter 2.4, Section 2.4.4.2. HCl only occurs in the combustion process of the control device.
*** HAP emissions are calculated on the basis of all collected LFG being combusted, which exceeds the actual total LFG combustion capacity

**Methodology**

Uncontrolled Emissions of CO and VOC (tons/yr) = CO / VOC emissions at closure (Mg/yr)(from LandGEM 3.02) x 1.1 tons/Mg
Fugitive CO and VOC Emissions from Landfill emissions = Uncontrolled Emissions of CO and VOC (tons/yr) x (1 - Collection Efficiency)
Uncontrolled HAPs Emissions (tons/yr) = LFG Production Rate ($m^3$/yr) x 35.31 $ft^3/m^3$x (Concentration (ppmv) /1000,000) x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460F) x Mole weight of HAPs ( lbs/lbs mole) x (1 ton/2000 lbs)
Fugitive HAP Emissions = Uncontrolled HAPs Emissions (tons/yr) x (1 - Collection Efficiency)
Captured HAPs after control device = Uncontrolled HAPs Emissions (tons/yr) x Collection Efficiency x (1 - Control Efficiency)
HCl Emissions (tons/yr) = LFG Production Rate ($m^3$/yr) x 35.31 $ft^3/m^3$x Chlorinated Compound Concentrations (ppmv) /1000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460F) x Mole weight of HCl ( lbs/lbs mole) x (1 ton/2000 lbs) x Collection Efficiency
Total HAP Emissions (tons/yr) = Fugitive HAP Emissions (tons/yr) + HAPs after Control Device (tons/yr)

# Twin Bridges Recycling & Disposal Facility Utility Flare
## PTE Calculation for the Restricted Flare
## Criteria Pollutants

| | | |
|---|---|---|
| Maximum Gas Flow Rate: | 1800 | scfm |
| | 108000 | scfh |
| Maximum Operating Hours | 8760 | hours |
| Gas Quality | 454 | btu/ft3 (lower heating value) |
| Other Data: | | |
| NMOC | 450 | ppmv as hexane from site-specific Tier 2 test |
| H2S | 46.9 | ppmv from page 2.4-8 of AP-42 (11/98) |
| PM10 | 17 | lbs/MMDSCF methane - from AP-42, Chapter 2.4 - Table 2.4-5 (11/98) |
| NMOC | 99.2% | From AP-42, Table 2.4-3 (11/98) |
| CH4 | | Average landfill methane concentration |
| % VOC | 39% | of total NMOC (per AP-42, Chapter 2.4) |

Calculate maximum throughput in mmbtu/hr:

1800 cfm x 454 btu/ft3 x 1 mmbtu/1,000,000 btu = 0.8172 mmbtu/min

= 49.032 mmbtu/hr

***Emission Factors:***

| | | | |
|---|---|---|---|
| NOx | 0.068 | lbs/mmbtu | Flare Vendor Guarantee |
| CO | 0.37 | lbs/mmbtu | Flare Vendor Guarantee |

***Calculate Emissions for Criteria Pollutants***

**SO2**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 46.9 | ppm H2S x | 64 | mol. Wt. SO2 x | 108,000 | scfh x | 8760 | hrs x | 1 T x | = | | actual | = | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | | yr | 2000 lbs | | **3.68** | tons/year | **0.84** | lbs/hour |

**NOx**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | actual | = | |
| 49.03 | mmbtu/hr x | 0.068 | lbs/mmbtu x | 8760 | hrs x | 1 ton/2000 lbs | = | | | **14.60** | tons/year | **3.33** | lbs/hour |

**NMOC**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 450 | ppm NMOC x | 86 | mol. Wt. Hex. * | 108,000 | scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | | actual | = | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | | year | 2000 lbs | | **0.38** | tons/year | **0.09** | lbs/hour |

**VOC**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 175.5 | ppm NMOC x | 86 | mol. Wt. Hex. * | 108,000 | scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | | actual | = | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | | year | 2000 lbs | | **0.15** | tons/year | **0.03** | lbs/hour |

**CO**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | actual | = | |
| 49.03 | mmbtu/hr x | 0.37 | lbs/mmbtu x | 8760 | hrs x | 1 ton/2000 lbs | = | | | **79.5** | tons/year | **18.14** | lbs/hour |

**PM-10**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17.00 | lb PM x | 108,000 | MM dscf LFG x | 0.5 | dscf CH4 | X | 8760 | hrs x | 1 T = | | actual | = | |
| | MM dscf CH4 | 1,000,000 | hr | 1 | dscf LFG | | | year | 2000 lbs | **4.02** | tons/year | **0.92** | lbs/hour |

# Twin Bridges Recycling & Disposal Facility Utility Flare
## PTE Calculation for the Restricted Flare
## Hazardous Air Pollutants

***Note: Information on pollutant concentrations and control efficiencies were taken from Section 2.4 of AP-42***

| | | |
|---|---|---|
| Maximum Gas Flow Rate: | 1800 | scfm |
| | 108000 | scfh |
| Maximum Operating Hours | 8760 | hours |
| Gas Quality | 454 | btu/ft3 (lower heating value) |

| | Molecular Weight | Conc., ppmv | CAS No. |
|---|---|---|---|
| **1,1,1-Trichloroethane** | 133.41 | 0.48 | 71556 |
| **1,1,2,2-Tetrachloroethane** | 167.85 | 1.11 | 79345 |
| **1,1-Dichloroethane** | 98.97 | 2.35 | 75343 |
| **1,1-Dichloroethene** | 96.94 | 0.2 | 75354 |
| **1,2-Dichloroethane** | 98.96 | 0.41 | 107062 |
| **1,2-Dichloropropane** | 112.99 | 0.18 | 78875 |
| **Acyrylonitrile** | 53.06 | 6.33 | 107131 |
| **Benzene** | 78.11 | 1.91 | 71432 |
| **Carbon disulfide** | 76.13 | 0.58 | 75150 |
| **Carbon tetrachloride** | 153.84 | 0.004 | 56235 |
| **Carbonyl sulfide** | 60.07 | 0.49 | 463581 |
| **Chlorobenzene** | 112.56 | 0.25 | 108907 |
| **Chloroethane** | 64.52 | 1.25 | 75003 |
| **Dichlorobenzene** | 147 | 0.21 | 106467 |
| **Chloroform** | 119.39 | 0.03 | 67663 |
| **Dichloromethane** | 84.94 | 14.3 | 75092 |
| **Ethylbenzene** | 106.16 | 4.61 | 100414 |
| **Hexane** | 86.18 | 6.57 | 110543 |
| **Mercury** | 200.61 | 0.0003 | 7439976 |
| **Methyl chloride** | 50.49 | 1.21 | 74873 |
| **Methyl isobutyl ketone** | 100.16 | 1.87 | 108101 |
| **Perchloroethylene** | 165.83 | 3.73 | 127184 |
| **Toluene** | 92.13 | 39.3 | 108883 |
| **Trichloroethylene** | 131.4 | 2.82 | 79016 |
| **Vinyl chloride** | 62.5 | 7.34 | 75014 |
| **Xylenes** | 106.16 | 12.1 | 1330207 |
| **HCl** | 36.5 | 42 | 7647010 |

| | | |
|---|---|---|
| Control Efficiency | 98.00% | For Halogenated Species (AP-42, Table 2.4-3) |
| Control Efficiency | 99.70% | For Non Halogenated Species (AP-42, Table 2.4-3) |

Calculate maximum throughput in mmbtu/hr:

1800 cfm x 454 btu/ft3 x 1 mmbtu/1,000,000 btu = 0.8172 mmbtu/min

= 49.032 mmbtu/hr

***Calculate Actual Emissions for Hazardous Air Pollutants***

**1,1,1-Trichloroethane**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.48 | ppm NMOC x | 167.85 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0020** | tons/year | | **0.0005** | lbs/hour |

**1,1,2,2-Tetrachloroethane**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.11 | ppm NMOC x | 98.96 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0027** | tons/year | | **0.0006** | lbs/hour |

**1,1-Dichloroethane**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.35 | ppm NMOC x | 98.97 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0057** | tons/year | | **0.0013** | lbs/hour |

**1,1-Dichloroethene**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.2 | ppm NMOC x | 96.94 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0005** | tons/year | | **0.0001** | lbs/hour |

**1,2-Dichloroethane**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.41 | ppm NMOC x | 98.96 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0010** | tons/year | | **0.0002** | lbs/hour |

**1,2-Dichloropropane**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.18 | ppm NMOC x | 112.99 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0005** | tons/year | | **0.0001** | lbs/hour |

**Acyrylonitrile**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.33 | ppm NMOC x | 53.06 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0012** | tons/year | | **0.0003** | lbs/hour |

**Benzene**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.91 | ppm NMOC x | 60.07 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0004** tons/year | | **0.0001** | lbs/hour | | |

**Carbondisulfide**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.58 | ppm NMOC x | 76.13 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0002** tons/year | | **0.0000** | lbs/hour | | |

**Carbontetrachloride**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.004 | ppm NMOC x | 153.84 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0000** tons/year | | **0.0000** | lbs/hour | | |

**Carbonylsulfide**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.49 | ppm NMOC x | 60.07 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0001** tons/year | | **0.0000** | lbs/hour | | |

**Chlorobenzene**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.25 | ppm NMOC x | 112.56 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0007** tons/year | | **0.0002** | lbs/hour | | |

**Chloroethane**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.25 | ppm NMOC x | 64.52 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0020** tons/year | | **0.0005** | lbs/hour | | |

**Dichlorobenzene**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.21 | ppm NMOC x | 147 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0008** tons/year | | **0.0002** | lbs/hour | | |

**Chloroform**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.03 | ppm NMOC x | 119.39 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0001** tons/year | | **0.0000** | lbs/hour | | |

**Dichloromethane**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.3 | ppm NMOC x | 84.94 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0298** tons/year | | **0.0068** | lbs/hour | | |

**Ethylbenzene**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.61 | ppm NMOC x | 106.16 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0018** tons/year | | **0.0004** | lbs/hour | | |

**Hexane**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.57 | ppm NMOC x | 86.18 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0021** tons/year | | **0.0005** | lbs/hour | | |

**Mercury**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.000292 | ppm NMOC x | 200.61 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0000** tons/year | | **0.0000** | lbs/hour | | |

**Methyl chloride**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.21 | ppm NMOC x | 50.49 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0015** tons/year | | **0.0003** | lbs/hour | | |

**Methyl isobutyl ketone**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.87 | ppm NMOC x | 100.16 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0007** tons/year | | **0.0002** | lbs/hour | | |

**Perchloroethylene**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.73 | ppm NMOC x | 165.83 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0152** tons/year | | **0.0035** | lbs/hour | | |

**Toluene**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39.3 | ppm NMOC x | 106.16 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0154** tons/year | | **0.0035** | lbs/hour | | |

**Trichloroethylene**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.82 | ppm NMOC x | 131.4 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0091** tons/year | | **0.0021** | lbs/hour | | |

**VinylChloride**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.34 | ppm NMOC x | 62.5 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .98) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0113** tons/year | | **0.0026** | lbs/hour | | |

**Xylenes**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.1 | ppm NMOC x | 106.16 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - .997) = | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0047** tons/year | | **0.0011** | lbs/hour | | |

**HCl** (HCl is a product of combustion and therefore does not have a control efficiency)

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | ppm NMOC x | 36.5 | mol. Wt. Hex. * | 108,000 scfh x | 8760 | hrs x | 1 T x | (1 - 0)= | actual | = | | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **1.8816** tons/year | | **0.4296** | lbs/hour | | |

**TOTAL: 1.9909 tons/year 0.4546 lbs/hour**

**Appendix B: Existing Emission Calculations**
**Combustion Emissions from the Flare and Engine/Generators**

**Company Name: Twin Bridges Recycling and Disposal Facility**
**Address: 124 Twin Bridges Road, Danville, Indiana 46122**
**Title V: T063-18240-00029**

| Fuel Input MMBtu/hr | NMOC ppmv | Flow Rate scfm | Facility Description: | Emissions Unit ID # |
|---|---|---|---|---|
| 57.3 | 450 | 2,100 | Utility Flare with a maximum capacity of 2,100 scfm | FL2 |
| 35.6 | 450 | 1,304 | Four (4) Caterpillar 3516 landfill gas fueled engine/generators | EG1, EG2, EG3 and EG4 |
| 35.6 | 450 | 1,304 | Four (4) Caterpillar 3516 landfill gas fueled engine/generators | EG5, EG6, EG7 and EG8 |

| Pollutant Emission Factors | | | | | | |
|---|---|---|---|---|---|---|
| Emission Unit | PM[a] | PM10[a] | $SO_2$[a] | NOx[a] | CO[a] | NMOC[a] |
| Flare | 17 | 17 | 49.6 | 0.068 | 0.37 | 450 |
| | (lb/$10^6$ dscf) | (lb/$10^6$ dscf) | (ppmv) | (lb/MMBtu) | (lb/MMBtu) | (ppmv) |
| IC Engines | 48 | 48 | 49.6 | 250 | 470 | 450 |
| | (lb/$10^6$ dscf) | (lb/$10^6$ dscf) | (ppmv) | (lb/$10^6$ dscf) | (lb/$10^6$ dscf) | (ppmv) |

| Potential To Emit (tons/year) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Emission Unit | PM | PM10 | $SO_2$ | NOx | CO | NMOC | VOC |
| FL2 | 4.69 | 4.69 | 4.61 | 17.1 | 92.9 | 1.12 | 0.44 |
| EG1 - EG4 | 8.22 | 8.22 | 2.86 | 42.8 | 80.5 | 0.70 | 0.27 |
| EG5 - EG8 | 8.22 | 8.22 | 2.86 | 42.8 | 80.5 | 0.70 | 0.27 |
| **PTE Total** | **21.1** | **21.1** | **10.3** | **102.7** | **254.0** | **2.52** | **0.98** |

[a] All Emission Factors are from Part 70 Operating Permit No. 063-18240-00029, Issued June 19, 2007. Assume PM emissions equal to PM10 emi

**Methodology**

CO / NOx Emissions (tons/yr) = Fuel Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760 hrs/yr x 1 ton/2,000 lbs

PM / PM10 / NOx / CO Emissions (tons/yr) = Flow Rate (scfm landfill gas) / $10^6$ x Emission Factor (lb/$10^6$ dscf) x 50% (Methane % in landfill gas) x 60 (min/hr) x 8760 (hr/yr) x .0005 (ton/lb)

$SO_2$ Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) /1000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 4 x Mole weight of $SO_2$ (64 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs

NMOC Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) /1000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ x Mole weight of Hexane ( lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1-98% control efficiency)

VOC is 39% of NMOC

ssions.

60)

460)

**Appendix B: Exisiting Emission Calculations**
**Emissions From Tipper Engines**

**Company Name: Twin Bridges Recycling and Disposal Facility**
**Address: 124 Twin Bridges Road, Danville, Indiana 46122**
**Title V: T063-18240-00029**

| Emission Unit | Maximum Capacity | Pollutant | Emission Factor (lbs/MMBTU) | PTE | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | PM (Tons/Year) | PM10 (Tons/Year) | SOx (Tons/Year) | NOx (Tons/Year) | VOC (Tons/Year) | CO (Tons/Year) |
| TIPPER1 SCC 2-02-001-02 | 115 Horsepower | PM | 0.31 | 0.40 | | | | | |
| | | PM10 | 0.31 | | 0.40 | | | | |
| | | SOx | 0.29 | | | 0.37 | | | |
| | 0.29 (MMBtu/hr) | NOx | 5.97 | | | | 7.67 | | |
| | | VOC | 0.36 | | | | | 0.46 | |
| | | CO | 0.95 | | | | | | 1.22 |

| Emission Unit | Maximum Capacity | Pollutant | Emission Factor (lbs/MMBTU) | PTE | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | PM (Tons/Year) | PM10 (Tons/Year) | SOx (Tons/Year) | NOx (Tons/Year) | VOC (Tons/Year) | CO (Tons/Year) |
| TIPPER2 SCC 2-02-001-02 | 88 Horsepower | PM | 0.31 | 0.30 | | | | | |
| | | PM10 | 0.31 | | 0.30 | | | | |
| | | SOx | 0.29 | | | 0.28 | | | |
| | 0.22 (MMBtu/hr) | NOx | 5.97 | | | | 5.80 | | |
| | | VOC | 0.36 | | | | | 0.35 | |
| | | CO | 0.95 | | | | | | 0.92 |

Emission factors for PM, PM10, $SO_2$ VOC and CO are from AP-42, Chapter 3.3 - Gasoline and Diesel Industrial Engines, Table 3.3-1. (10/96)

Emission factor for NOx is from EPA, Control of Emissions of Air Pollution From Nonroad Diesel Engines [Federal Register: September 24, 1997 (Volume 62, Number 185)] (6.9 grams/brake-horsepower-hr) for nonroad diesel engines built after 1997.

**Methodology**

PTE (tons/year) = Maximum Capacity (MMBtu/hour) x Emission Factor (lbs/MMBtu) x 1 ton/2000 lbs x 8760 hours/year
PTE (tons/year) = Maximum Capacity (tons/hour) x Emission Factor (lbs/MMBtu) x 1 ton/2000 lbs x 8760 hours/year

**Twin Brides**
**Engine Potential Emissions Calculations**
**Criteria Pollutants**

**Purpose:**

Calculate criteria pollutant emissions from each engine using manufacturer's guaranteed emissions rates, site-specific gas quality data, and AP-42 factors (as applicable).

**Data Inputs:**

*Manufacturer's Emissions/Performance Data for the Caterpillar 3516 Engines:*

| | | |
|---|---|---|
| NOx: | 250 | lbs/MMDSCF methane - from AP-42, Chapter 2.4 - Table 2.4-5 (11/98) |
| CO: | 470 | grams/brakehorsepower-hour (from April 2006 emissions testing) |
| Rating: | 1148 | brake horsepower-hour per engine (engine at 100% full load) |
| Rating: | 8.9 | million BTU per hour of heat input |
| LFG heat input | | BTU per scf of LFG |
| Flow: | 326 | scfm landfill gas per engine |
| | 19560 | scfh landfill gas per engine |

*Other Data:*

| | | |
|---|---|---|
| NMOC: | 450 | ppmv as hexane from site-specific Tier 2 test |
| % VOC | 39% | of total NMOC (per AP-42, Chapter 2.4) |
| Sulfur | 46.9 | ppmv from page 2.4-8 of AP-42 (11/98) |
| PM10: | 48 | lbs/MMDSCF methane - from AP-42, Chapter 2.4 - Table 2.4-5 (11/98) |
| D.E. NMOC | 97.2% | From AP-42, Table 2.4-3 (11/98) |
| CH4: | 50.0% | Average landfill methane concentration |

**Calculations:**

| | | | | | | | | | | | EACH ENGINE | | **ALL FOUR ENGINES** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***NOx:*** | | | | | | | | | | | | | | |
| 250 | lbs PM * | 19560 | scf LFG * | 50.0% | CH4 * | 1 MMDSCF * | 8760 | hrs * | 1 | ton = | 10.71 | tons/yr | **42.84** | **tons/yr** |
| | MMDSCF CH4 | | hr | | LFG | 1,000,000 | | yr | 2000 | lbs | 2.45 | lbs/hr | **9.78** | **lbs/hr** |
| ***CO:*** | | | | | | | | | | | | | | |
| 470 | lbs PM * | 19560 | scf LFG * | 50.0% | CH4 * | 1 MMDSCF * | 8760 | hrs * | 1 | ton = | 20.13 | tons/yr | **80.53** | **tons/yr** |
| | MMDSCF CH4 | | hr | | LFG | 1,000,000 | | yr | 2000 | lbs | 4.60 | lbs/hr | **18.39** | **lbs/hr** |
| ***SOx:*** | | | | | | | | | | | | | | |
| 46.9 | ppm H2S * | 64 | mol.wt. SO2 * | 19560 | scfh * | 8760 | hrs * | 1 | ton = | | 0.67 | tons/yr | **2.67** | **tons/yr** |
| 1,000,000 | | 385.4 | scf/lb-mole | | | | yr | 2000 | lbs | | 0.15 | lbs/hr | **0.61** | **lbs/hr** |
| ***NMOC:*** | | | | | | | | | | | | | | |
| 450 | ppm NMOC * | 86 | mol. Wt. Hex. * | 19560 | scfh * | 8760 | hrs * | 1 | ton * | (1-.972) = | 0.24 | tons/yr | **0.96** | **tons/yr** |
| 1,000,000 | | 385.4 | scf/lb-mole | | | | yr | 2000 | lbs | | 0.05 | lbs/hr | **0.22** | **lbs/hr** |
| ***VOC:*** | | | | | | | | | | | | | | |
| 175.5 | ppm NMOC * | 86 | mol. Wt. Hex. * | 19560 | scfh * | 8760 | hrs * | 1 | ton * | (1-.972) = | 0.09 | tons/yr | **0.38** | **tons/yr** |
| 1,000,000 | | 385.4 | scf/lb-mole | | | | yr | 2000 | lbs | | 0.02 | lbs/hr | **0.09** | **lbs/hr** |
| ***PM:*** | | | | | | | | | | | | | | |
| 48 | lbs PM * | 19560 | scf LFG * | 50.0% | CH4 * | 1 MMDSCF * | 8760 | hrs * | 1 | ton = | 2.06 | tons/yr | **8.22** | **tons/yr** |
| | MMDSCF CH4 | | hr | | LFG | 1,000,000 | | yr | 2000 | lbs | 0.47 | lbs/hr | **1.88** | **lbs/hr** |

**Twin Bridges**
**Engine Potential Emissions Calculations**
**Hazardous Air Pollutants**

***Note: Information on pollutant concentrations and control efficiencies were taken from Section 2.4 of AP-42***

| | | |
|---|---|---|
| Maximum Gas Flow Rate: | 326 | scfm per engine |
| | 19560 | scfh per engine |
| Maximum Heat Input | 8.9 | MM BTU/hour per engine |
| Maximum Operating Hours | 8760 | hours |
| Gas Quality | 454 | btu/ft3 (LHV) |

| | Molecular Weight | Conc., ppmv | CAS No. |
|---|---|---|---|
| **1,1,1-Trichloroethane** | 133.41 | 0.48 | 71556 |
| **1,1,2,2-Tetrachloroethane** | 167.85 | 1.11 | 79345 |
| **1,1-Dichloroethane** | 98.97 | 2.35 | 75343 |
| **1,1-Dichloroethene** | 96.94 | 0.2 | 75354 |
| **1,2-Dichloroethane** | 98.96 | 0.41 | 107062 |
| **1,2-Dichloropropane** | 112.99 | 0.18 | 78875 |
| **Acrylonitrile** | 53.06 | 6.33 | 107131 |
| **Benzene** | 78.11 | 1.91 | 71432 |
| **Carbon disulfide** | 76.13 | 0.58 | 75150 |
| **Carbon tetrachloride** | 153.84 | 0.004 | 56235 |
| **Carbonyl sulfide** | 60.07 | 0.49 | 463581 |
| **Chlorobenzene** | 112.56 | 0.25 | 108907 |
| **Chloroethane** | 64.52 | 1.25 | 75003 |
| **Dichlorobenzene** | 147 | 0.21 | 106467 |
| **Chloroform** | 119.39 | 0.03 | 67663 |
| **Dichloromethane** | 84.94 | 14.3 | 75092 |
| **Ethylbenzene** | 106.16 | 4.61 | 100414 |
| **Hexane** | 86.18 | 6.57 | 110543 |
| **Mercury** | 200.61 | 0.0003 | 7439976 |
| **Methyl chloride** | 50.49 | 1.21 | 74873 |
| **Methyl isobutyl ketone** | 100.16 | 1.87 | 108101 |
| **Perchloroethylene** | 165.83 | 3.73 | 127184 |
| **Toluene** | 92.13 | 39.3 | 108883 |
| **Trichloroethylene** | 131.4 | 2.82 | 79016 |
| **Vinyl chloride** | 62.5 | 7.34 | 75014 |
| **Xylenes** | 106.16 | 12.1 | 1330207 |
| **HCl** | 36.5 | 42 | 7647010 |

| | | |
|---|---|---|
| Control Efficiency | 93.00% | For Halogenated Species (AP-42, Table 2.4-3) |
| Control Efficiency | 86.10% | For Non Halogenated Species (AP-42, Table 2.4-3) |

Calculate maximum throughput in mmbtu/hr:

326 cfm x 454 btu/ft3 x 1 mmbtu/1,000,000 btu = 0.148 mmbtu/min
= 8.8802 mmbtu/hr

***Calculate Actual Emissions for Hazardous Air Pollutants for Each Engine***

**1,1,1-Trichloroethane**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.48 | ppm NMOC x | 167.85 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0013** tons/year | | **0.0003** | lbs/hour |

**1,1,2,2-Tetrachloroethane**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.11 | ppm NMOC x | 98.96 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0017** tons/year | | **0.0004** | lbs/hour |

**1,1-Dichloroethane**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.35 | ppm NMOC x | 98.97 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0036** tons/year | | **0.0008** | lbs/hour |

**1,1-Dichloroethene**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.2 | ppm NMOC x | 96.94 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0003** tons/year | | **0.0001** | lbs/hour |

**1,2-Dichloroethane**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.41 | ppm NMOC x | 98.96 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0006** tons/year | | **0.0001** | lbs/hour |

**1,2-Dichloropropane**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.18 | ppm NMOC x | 112.99 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0003** tons/year | | **0.0001** | lbs/hour |

**Acrylonitrile**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.33 | ppm NMOC x | 53.06 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0104** tons/year | | **0.0024** | lbs/hour |

**Benzene**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.91 | ppm NMOC x | 60.07 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0035** tons/year | | **0.0008** | lbs/hour | |

**Carbondisulfide**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.58 | ppm NMOC x | 76.13 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0014** tons/year | | **0.0003** | lbs/hour | |

**Carbontetrachloride**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.004 | ppm NMOC x | 153.84 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0000** tons/year | | **0.0000** | lbs/hour | |

**Carbonylsulfide**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.49 | ppm NMOC x | 60.07 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0009** tons/year | | **0.0002** | lbs/hour | |

**Chlorobenzene**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.25 | ppm NMOC x | 112.56 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0004** tons/year | | **0.0001** | lbs/hour | |

**Chloroethane**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.25 | ppm NMOC x | 64.52 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0013** tons/year | | **0.0003** | lbs/hour | |

**Dichlorobenzene**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.21 | ppm NMOC x | 147 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0005** tons/year | | **0.0001** | lbs/hour | |

**Chloroform**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.03 | ppm NMOC x | 119.39 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0001** tons/year | | **0.0000** | lbs/hour | |

**Dichloromethane**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.3 | ppm NMOC x | 84.94 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0189** tons/year | | **0.0043** | lbs/hour | |

**Ethylbenzene**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.61 | ppm NMOC x | 106.16 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0151** tons/year | | **0.0035** | lbs/hour | |

**Hexane**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.57 | ppm NMOC x | 86.18 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0175** tons/year | | **0.0040** | lbs/hour | |

**Mercury**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.000292 | ppm NMOC x | 200.61 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0000** tons/year | | **0.0000** | lbs/hour | |

**Methyl chloride**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.21 | ppm NMOC x | 50.49 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0010** tons/year | | **0.0002** | lbs/hour | |

**Methyl isobutyl ketone**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.87 | ppm NMOC x | 100.16 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0058** tons/year | | **0.0013** | lbs/hour | |

**Perchloroethylene**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.73 | ppm NMOC x | 165.83 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0096** tons/year | | **0.0022** | lbs/hour | |

**Toluene**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39.3 | ppm NMOC x | 106.16 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.1289** tons/year | | **0.0294** | lbs/hour | |

**Trichloroethylene**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.82 | ppm NMOC x | 131.4 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0058** tons/year | | **0.0013** | lbs/hour | |

**VinylChloride**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.34 | ppm NMOC x | 62.5 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .93) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0071** tons/year | | **0.0016** | lbs/hour | |

**Xylenes**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.1 | ppm NMOC x | 106.16 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - .861) = | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.0397** tons/year | | **0.0091** | lbs/hour | |

**HCl** (HCl is a product of combustion and therefore does not have a control efficiency)

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | ppm NMOC x | 36.5 | mol. Wt. Hex. * | 19,560 scfh x | 8760 | hrs x | 1 T x | (1 - 0)= | actual | = | | | |
| 1,000,000 | | 385.4 | scf/lb-mole | | | year | 2000 lbs | | **0.3408** tons/year | | **0.0778** | lbs/hour | |

**TOTAL PER ENGINE: 0.6164 tons/year 0.1407 lbs/hour**

**TOTAL FOUR ENGINES: 2.4658 tons/year 0.5630 lbs/hour**

# Twin Bridges RDF
## 2005 Total Emissions, tons per year

| | NMOC | VOC | $SO_2$ | $NO_X$ | CO | Total HAP | $PM_{2.5}$ | $PM_{10}$ | PM/TSP |
|---|---|---|---|---|---|---|---|---|---|
| Landfill | 36.65 | 14.29 | | | | 9.42 | | | |
| Roads | | | | | | | 0.07 | 0.56 | 2.35 |
| Gas Plant | 1.51 | 0.59 | 4.19 | 67.33 | 126.58 | 3.88 | | 12.93 | |
| Flare | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | |
| Totals | 38.17 | 14.88 | 4.19 | 67.33 | 126.58 | 13.30 | 0.07 | 13.49 | 2.35 |

VOC is 39% of NMOC

# Twin Bridges RDF
## 2006 Total Emissions, tons per year

| | NMOC | VOC | $SO_2$ | $NO_X$ | CO | Total HAP | $PM_{2.5}$ | $PM_{10}$ | PM/TSP |
|---|---|---|---|---|---|---|---|---|---|
| Landfill | 37.89 | 14.78 | | | | 9.74 | | | |
| Roads | | | | | | | 0.07 | 0.56 | 2.35 |
| Gas Plant | 1.57 | 0.61 | 4.34 | 69.63 | 130.91 | 4.01 | | 13.37 | |
| Flare | 0.04 | 0.02 | 0.39 | 1.85 | 10.07 | 0.21 | | 0.42 | |
| Totals | 39.50 | 15.40 | 4.72 | 71.48 | 140.98 | 13.95 | 0.07 | 14.35 | 2.35 |

VOC is 39% of NMOC

# Twin Bridges RDF
## 2007 Total Emissions, tons per year

| | NMOC | VOC | $SO_2$ | $NO_X$ | CO | Total HAP | $PM_{2.5}$ | $PM_{10}$ | PM/TSP |
|---|---|---|---|---|---|---|---|---|---|
| Landfill | 39.13 | 15.26 | | | | 10.06 | | | |
| Roads | | | | | | | 0.07 | 0.56 | 2.35 |
| Gas Plant | 1.60 | 0.62 | 4.42 | 71.00 | 133.47 | 4.09 | | 13.63 | |
| Flare | 0.04 | 0.02 | 0.41 | 1.95 | 10.60 | 0.22 | | 0.44 | |
| Totals | 40.77 | 15.90 | 4.83 | 72.94 | 144.07 | 14.36 | 0.07 | 14.63 | 2.35 |

VOC is 39% of NMOC