



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: March 13, 2007
RE: Deercroft Recycling and Disposal Facility / 091-23825-00067
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, 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 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar 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.

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
FNPER.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204-2251
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

Mr. Michael L. Peterson
Project Manager, Closed Sites Group
North 96 West 13600 County Line Road
Germantown, WI 53022

March 13, 2007

Re: 091-23825-00067
Significant Source Modification to
Part 70 Renewal No.: T 091-18150-00067

Dear Mr. Peterson:

Deercroft Recycling and Disposal Facility was issued a Part 70 Operating Permit Renewal on June 28, 2006 for a closed stationary municipal solid waste landfill. A letter requesting changes to this permit was received on October 25, 2006. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- Four (4) landfill gas fueled 4-stroke, lean-burn reciprocating engine/generator sets each rated at 1148 break horsepower, identified as EG-5 through EG-8, permitted to be constructed in 2007. The maximum heat input capacity of each engine/generator set is 9.1 MMBtu per hour and the maximum flow rate of each engine/generator set is 333 standard cubic feet per minute (scfm) of landfill gas.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13 17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

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 Kimberly Cottrell, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Kimberly Cottrell or extension (3-0870), or dial (317) 233-0870.

Sincerely,

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments:

Updated Permit
Technical Support Document
PTE Calculations

KLC

cc: File – LaPorte County
LaPorte County Health Department
U.S. EPA, Region V
Air Compliance Inspectors – Letty Zepeda
Compliance Data Section
Northwest Regional Office
Permits Administration and Development

Ms. Laura Niemann, P.E.
Environmental Information Logistics, LLC
203 East Street, Suite D
Caledonia, MI 49316



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204-2251
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

Deercroft Recycling and Disposal Facility 10501 West 300 North Michigan City, Indiana 46361

(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.

Significant Source Modification No.: 091-23825-00067	
Original signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: March 13, 2007

TABLE OF CONTENTS

A	SOURCE SUMMARY	5
A.1	General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]	
A.2	Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]	
A.3	Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]	
A.4	Part 70 Permit Applicability [326 IAC 2-7-2]	
B	GENERAL CONDITIONS	7
B.1	Definitions [326 IAC 2-7-1]	
B.2	Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]	
B.3	Enforceability [326 IAC 2-7-7]	
B.4	Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]	
B.5	Severability [326 IAC 2-7-5(5)]	
B.6	Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]	
B.7	Duty to Provide Information [326 IAC 2-7-5(6)(E)]	
B.8	Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]	
B.9	Annual Compliance Certification [326 IAC 2-7-6(5)]	
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]	
B.11	Emergency Provisions [326 IAC 2-7-16]	
B.12	Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]	
B.13	Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.14	Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]	
B.15	Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]	
B.16	Permit Renewal [326 IAC 2-7-4]	
B.17	Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]	
B.18	Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]	
B.19	Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]	
B.20	Source Modification Requirement [326 IAC 2-7-10.5]	
B.21	Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-17-3-2] [IC 13-30-3-1]	
B.22	Transfer of Ownership or Operational Control [326 IAC 2-7-11]	
B.23	Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]	
B.24	Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314]	
C	SOURCE OPERATION CONDITIONS	17
	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]	
C.2	Opacity [326 IAC 5-1]	
C.3	Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.4	Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.5	Fugitive Dust Emissions [326 IAC 6-4]	
C.6	Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
	Testing Requirements [326 IAC 2-7-6(1)]	
C.7	Performance Testing [326 IAC 3-6]	
	Compliance Requirements [326 IAC 2-1.1-11]	
C.8	Compliance Requirements [326 IAC 2-1.1-11]	
	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)]	
C.10	Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]	

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

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]
- C.13 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]
- C.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]
- C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

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]
- C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
- C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

- C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

D.1 FACILITY OPERATION CONDITIONS – Landfill and Flare 24

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

- 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]
- D.1.2 Operational Standards for Collection and Control Systems [40 CFR 60.753] [326 IAC 8-8.1] [326 IAC 12]
- D.1.3 Municipal Solid Waste Landfill NESHAP [326 IAC 20] [40 CFR 63, Subpart AAAA]
- D.1.4 NESHAP for Inactive Asbestos Waste Disposal Sites [40 CFR 61.151, Subpart M] [326 IAC 14]
- D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.1.6 Monitoring [40 CFR 60.756] [326 IAC 8-8.1] [326 IAC 12]
- D.1.7 Compliance Provisions [40 CFR 60.755] [326 IAC 8-8.1] [326 IAC 12]
- D.1.8 Calculation of Non-Methane Organic Compound (NMOC) Rate [40 CFR 60.754] [326 IAC 8-8.1] [326 IAC 12]
- 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]
- D.1.10 Compliance Determination [40 CFR 63.1960] [326 IAC 20]

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]
- D.1.12 Reporting Requirements [40 CFR 60.757] [326 IAC 8-8.1]
- D.1.13 Record keeping and Reporting Requirements for NESHAP for Inactive Asbestos Waste Disposal Sites [40 CFR 61.151] [326 IAC 14]
- D.1.14 Record Keeping and Reporting Requirements for NESHAP for Municipal Solid Waste Landfills [40 CFR 63.1980] [326 IAC 20]

D.2 FACILITY OPERATION CONDITIONS – Engines 36

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

None

D.3 FACILITY OPERATION CONDITIONS – VOL Storage Tank 37

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

- D.3.1 Record keeping and Reporting Requirements for Volatile Organic Liquid Storage Vessels [326 IAC 12]

Certification	38
Emergency Occurrence Report	39
Quarterly Deviation and Compliance Monitoring Report	41

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 closed stationary municipal solid waste landfill.

Source Address:	10501 West 300 North, Michigan City, Indiana 46361
Mailing Address:	N96W 13600 County Line Road, Germantown, Wisconsin 53022
Source Phone Number:	(219) 879-4690
SIC Code:	4953
County Location:	LaPorte
Source Location Status:	Nonattainment for 8-hour Ozone Standard Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Minor Source, under Emission Offset; Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) solid waste disposal facility meeting the definition in 40 CFR 60.751, constructed in 1980, modified in 2002, with a maximum design capacity of 9.615 million megagrams of solid waste, with landfill gas emissions collected by a collection system installed in 1994.
- (b) Four (4) landfill gas fueled reciprocating engine/generator sets each rated at 1138 break horsepower, identified as EG-1 through EG-3, installed in 1994, and EG-4 was installed in 1999. The maximum heat input capacity of each engine/generator set is 8.9 MMBtu per hour and the maximum gas input flow rate of each engine/generator set is 275 standard cubic feet per minute (scfm) of landfill gas.
- (c) Four (4) landfill gas fueled 4-stroke, lean-burn reciprocating engine/generator sets each rated at 1148 break horsepower, identified as EG-5 through EG-8, permitted to be constructed in 2007. The maximum heat input capacity of each engine/generator set is 9.1 MMBtu per hour and the maximum flow rate of each engine/generator set is 333 standard cubic feet per minute (scfm) of landfill gas.
- (d) One (1) open flare, identified as FL-3, constructed in 2004, with a maximum heat input capacity of 144 MMBtu per hour and a maximum flow rate of 4,000 standard cubic feet per minute (scfm) of landfill gas. This flare does not have a bypass.

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):

One (1) 20,000 gallon leachate storage tank, constructed in 1980, containing a liquid having a vapor pressure less than 3.5 kPa and emitting less than fifteen lbs per day of VOC. [326 IAC 12]

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 15-13-6(a)]

- (a) This permit, T091-18150-00067, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7]

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

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

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

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

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

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

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

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

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

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

and

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the PMPs, including any required record keeping as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM – Main Office
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

and

Northern Regional Office
Telephone Number: 1-800-753-5519
Telephone Number: 574-245-4870
Facsimile Number: 574-245-4877

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

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

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

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

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
 - (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in 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 T091-18150-00067 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
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

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

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:
- (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

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

B.17 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

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

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

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

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

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

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes 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 increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

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

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

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

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

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.25 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314]

Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.

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
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
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, 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
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 1, 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) 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 and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

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

C.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) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
 - (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
 - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1 (32) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

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

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

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

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

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) Reporting periods are based on calendar years.

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) solid waste disposal facility meeting the definition in 40 CFR 60.751, constructed in 1980, modified in 2002, with a maximum design capacity of 9.615 million megagrams of solid waste, with landfill gas emissions collected by a collection system installed in 1994.
- (d) One (1) open flare, identified as FL-3, constructed in 2004, with a maximum heat input capacity of 144 MMBtu per hour and a maximum flow rate of 4,000 standard cubic feet per minute (scfm) of landfill gas. 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.1.1 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 facility 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 facility 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 facility 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 the Office of Air Quality (OAQ).

- (c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C (except for the Gas Well #55, which shall operate at less than 60°C (140°F), and Gas Wells #34 and #58, which shall operate at less than 57.2°C (135°F)) and with either 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. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.
- (1) The nitrogen level shall be determined using Method 3C, unless an alternative method is established as allowed by 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 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 AAAAA]

Pursuant to 40 CFR 63.1955, the Permittee shall:

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

- (c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, the Permittee must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR 60, Subpart WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with 40 CFR 63, Subpart AAAA, except that all affected sources must comply with the Startup, Shutdown, and Malfunction (SSM) requirements in Subpart A of 40 CFR 63 as specified in Table 1 of 40 CFR 63, Subpart AAAA and all affected sources must submit compliance reports every 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 Inactive Asbestos Waste Disposal Sites [40 CFR 61.151, Subpart M] [326 IAC 14]

Pursuant to 40 CFR 60.151, the Permittee of any inactive waste disposal site that received deposits of asbestos-containing waste material shall:

- (a) Comply with one of the following:
 - (1) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to 40 CFR 61.151; or
 - (2) Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted nonasbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material. In desert areas where vegetation would be difficult to maintain, at least eight (8) additional centimeters (3 inches) of well-graded, nonasbestos crushed rock may be placed on top of the final cover instead of vegetation and maintained to prevent emissions; or
 - (3) Cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted nonasbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste; or
 - (4) For inactive waste disposal sites for asbestos tailings, a resinous or petroleum-based dust suppression agent that effectively binds dust to control surface air emissions may be used instead of the methods in 40 CFR 61.151(a)(1-3). Use the agent in the manner and frequency recommended for the particular asbestos tailings by the manufacturer of the dust suppression agent to achieve and maintain dust control. Obtain prior written approval of the Administrator to use other equally effective dust suppression agents. For purposes of this paragraph, any used, spent, or other waste oil is not considered a dust suppression agent.
- (b) Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as follows, or comply with 40 CFR 61.151(a)(2) or 40 CFR 61.151(a)(3).
 - (1) Display warning signs at all entrances and at intervals of 100 m (328 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material was deposited. The warning signs must:
 - (A) Be posted in such a manner and location that a person can easily read the legend; and
 - (B) Conform to the requirements for 51 cm × 36 cm (20 inch × 14 inch) upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and

- (C) Conform to the requirements for the legend text and notation for the warning sign as specified in 40 CFR 61.151(b)(1)(iii).
- (2) Fence the perimeter of the site in a manner adequate to deter access by the general public.
- (3) When requesting a determination on whether a natural barrier adequately deters public access, supply information enabling the Administrator to determine whether a fence or a natural barrier adequately deters access by the general public.
- (c) The owner or operator may use an alternative control method that has received prior approval of the Administrator rather than comply with the requirements of 40 CFR 61.151(a) or 40 CFR 61.151(b).

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 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 seeking to comply 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 seeking to comply with 40 CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:
 - (1) Heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame
 - (2) A device that records flow to or bypass of the flare. The Permittee shall either:
 - (A) Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or
 - (B) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. If the Permittee elects this option, a visual inspection of the seal or closure of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

- (c) The Permittee seeking to demonstrate compliance with 40 CFR 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

D.1.7 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 specified under 40 CFR 60.754(a)(4) 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:

$$Q_M = \sum 2 k L_o M_i (e^{-kt_i})$$

where,

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

k = methane generation rate constant, year⁻¹

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

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

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

If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in 40 CFR 60.755(a)(1)(i) and (ii). If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in 40 CFR 60.755(a)(1)(i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

- (2) For the purposes of determining sufficient density of gas collector for compliance with 40 CFR 60.752 (b)(2)(ii)(A)(2), the Permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Office of Air Quality (OAQ), capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.
 - (3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 60.752(b)(2)(ii)(A)(3), the Permittee shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within five (5) calendar days, except for the three conditions allowed under 40 CFR 60.753(b). If negative pressure cannot be achieved without excess air infiltration within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.
 - (4) The Permittee is not required to expand the system as required in 40 CFR 60.755(a)(3) during the first 180 days after gas collection system start-up.
 - (5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40 CFR 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within five (5) calendar days. If correction of the exceedance cannot be achieved within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.
 - (6) If the Permittee seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40 CFR 60.759, then the Permittee shall provide information satisfactory to the Office of Air Quality (OAQ) as specified in 40 CFR 60.752 (b)(2)(i)(C) demonstrating that off-site migration is being controlled.
- (b) For purposes of compliance with 40 CFR 60.753(a), the Permittee shall place each well or design component of a controlled landfill as specified in the approved design plan as provided in 40 CFR 60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of five (5) years or more if active or two (2) years or more if closed or at final grade.
- (c) The following procedures shall be used for compliance with the surface methane operational standard as provided in 40 CFR 60.753 (d):
- (1) After installation of the collection system, the Permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR 60.755(d).
 - (2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from perimeter wells.

- (3) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of Appendix A of 40 CFR 60, except that the probe inlet shall be placed within five (5) to ten(10) centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.
- (4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in 40 CFR 60.755(c)(4)(i) through (v) should be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 60.753(d).

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

Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored 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 re-monitoring 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 seeking to comply with the provisions of 40 CFR 60.755(c) shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:
- (1) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of Appendix A of 40 CFR 60, except 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.1.8 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.1.9 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:

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

where,

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

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

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

- (1) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of Appendix A of 40 CFR 60.
 - (2) The average NMOC concentration, C_{NMOC} , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of 40 CFR 60. If using Method 18 of Appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The Permittee shall divide the NMOC concentration from Method 25C of Appendix A of 40 CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.
 - (3) The Permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Office of Air Quality (OAQ).
- (b) Pursuant to 40 CFR 60.754(d):
For the performance testing required in 40 CFR 60.752(b)(2)(iii)(B), Method 25 or Method 18 of Appendix A of 40 CFR 60 shall be used to determine compliance with 98 weight percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Office of Air Quality (OAQ) as provided by 40 CFR 60.752(b)(2)(i)(B). If using Method 18 of Appendix A, 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:

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}})$$

where,

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

NMOC_{out} = mass of NMOC exiting control device

- (c) For the performance test required in 40 CFR 60.752(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4).

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

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

- (a) The same way it is determined for 40 CFR 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence.
- (b) Continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of 40 CFR 60, Subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation (as defined in 40 CFR 63.1965) occurs, the Permittee has failed to meet the control device operating conditions described in 40 CFR 60, Subpart WWW and has deviated from the requirements of 40 CFR 63, Subpart AAAA.
- (c) The Permittee must develop and implement a written Startup, Shutdown and Malfunction (SSM) plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write, implement, or maintain a copy of the SSM plan is a deviation from the requirements of 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]

- (a) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee subject to 40 CFR 60.752(b) 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 of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment listed in (a) through (d) below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of control device vendor specifications shall be maintained until removal.
- (1) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii):

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) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air -assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.
- (c) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee of a controlled landfill subject to the provisions of this subpart 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 subject to 40 CFR 60.758 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60.756.
 - (2) The Permittee seeking to comply with the provisions of 40 CFR 60.758 by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.
- (d) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.
 - (1) The Permittee subject to the provisions of 40 CFR 60.758 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified in 40 CFR 60.755 (b).
 - (2) The Permittee subject to the provisions of 40 CFR 60.758 shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in 40 CFR 60.759 (a)(3)(i) as well as any non-productive areas excluded from collection as provided in 40 CFR 60.759 (a)(3)(ii).
- (e) Except as provided in 40 CFR 60.752(b)(2)(i)(B) the Permittee subject to the provisions of this subpart shall keep for at least five 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 by July 30 of each year. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c). Pursuant to 40 CFR 63.1980(a) and Condition D.1.14(a), these reports shall be submitted every six (6) months.
 - (1) Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a), (b), (c), and (d).
 - (2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR 60.756.
 - (3) Description and duration of all periods when the control device was not operating for a period exceeding one (1) hour and length of time the control device was not operating.
 - (4) All periods when the collection system was not operating in excess of five (5) days.
 - (5) Location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.
 - (6) Date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 60.755(a)(3), (b), (c)(4), and (d).
- (d) The Permittee seeking to comply with 40 CFR 40.752(b)(2)(iii) shall include the following information with the initial performance test report required under 40 CFR 60.8:
 - (1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion.
 - (2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based.
 - (3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material.

- (4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area.
 - (5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill
 - (6) The provisions for the control of off-site migration.
- (e) 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 Inactive Asbestos Waste Disposal Sites [40 CFR 61.151] [326 IAC 14]

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

- (a) 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 subject to 40 CFR 61.151, and follow the procedures specified in the notification. 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.
- (b) Within 60 days of a site becoming inactive and after the effective date of 40 CFR 61, Subpart M, record, in accordance with State law, a notation on the deed to the facility property and on any other instrument that would normally be examined during a title search; this notation will in perpetuity notify any potential purchaser of the property that:
 - (1) The land has been used for the disposal of asbestos-containing waste material;
 - (2) The survey plot and record of the location and quantity of asbestos-containing waste disposed of within the disposal site required in 40 CFR 61.154(f) have been filed with the Administrator; and
 - (3) The site is subject to 40 CFR 61, Subpart M.

D.1.14 Record Keeping and Reporting Requirements for NESHAP for Municipal Solid Waste Landfills [40 CFR 63.1980] [326 IAC 20]

Pursuant to 40 CFR 63.1980, the Permittee shall:

- (a) Keep records and reports as specified in 40 CFR 60, Subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR 60, Subpart Cc, whichever applies to this landfill, with one exception: The Permittee must submit the annual report described in 40 CFR 60.757(f) and Condition D.1.12(e) every 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.

SECTION D.2

FACILITY OPERATION CONDITIONS

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

- (b) Four (4) landfill gas fueled reciprocating engine/generator sets each rated at 1138 break horsepower, identified as EG-1 through EG-3, installed in 1994, and EG-4 was installed in 1999. The maximum heat input capacity of each engine/generator set is 8.9 MMBtu per hour and the maximum gas input flow rate of each engine/generator set is 275 standard cubic feet per minute (scfm) of landfill gas.
- (c) Four (4) landfill gas fueled 4-stroke, lean-burn reciprocating engine/generator sets each rated at 1148 break horsepower, identified as EG-5 through EG-8, permitted to be constructed in 2007. The maximum heat input capacity of each engine/generator set is 9.1 MMBtu per hour and the maximum flow rate of each engine/generator set is 333 standard cubic feet per minute (scfm) of landfill gas.

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)]

There are no applicable state or federal requirements for these emissions units.

SECTION D.3

FACILITY OPERATION CONDITIONS

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

Insignificant Activity:

- (a) One (1) 20,000 gallon leachate storage tank, constructed in 1980, containing a liquid having a vapor pressure less than 3.5 kPa and emitting less than fifteen pounds per day of VOC [326 IAC 12].

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

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

- D.3.1 Record keeping and Reporting Requirements for Volatile Organic Liquid Storage Vessels [326 IAC 12]

Pursuant to 326 IAC 12, the Permittee shall maintain records of the dimensions of the one (1) 20,000 gallon leachate storage tank and an analysis showing the capacity of the tank. These records shall be maintained for the life of the source.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Deercroft Recycling and Disposal Facility
Source Address: 10501 West 300 North, Michigan City, Indiana 46361
Mailing Address: N96W 13600 County Line Road, Germantown, Wisconsin 53022
Part 70 Permit Renewal No.: T 091-18150-00067

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
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

PART 70 OPERATING PERMIT EMERGENCY OCCURRENCE REPORT

Source Name: Deercroft Recycling and Disposal Facility
Source Address: 10501 West 300 North, Michigan City, Indiana 46361
Mailing Address: N96W 13600 County Line Road, Germantown, Wisconsin 53022
Part 70 Permit Renewal No.: T 091-18150-00067

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• 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) 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? <input type="checkbox"/> Y <input type="checkbox"/> N Describe:
Type of Pollutants Emitted: <input type="checkbox"/> TSP <input type="checkbox"/> PM-10 <input type="checkbox"/> SO ₂ <input type="checkbox"/> VOC <input type="checkbox"/> NO _x <input type="checkbox"/> CO <input type="checkbox"/> Pb <input type="checkbox"/> 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: _____

Attach a signed certification to complete 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: Deercroft Recycling and Disposal Facility
Source Address: 10501 West 300 North, Michigan City, Indiana 46361
Mailing Address: N96W 13600 County Line Road, Germantown, Wisconsin 53022
Part 70 Permit Renewal No.: T 091-18150-00067

Months: _____ to _____ Year: _____

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

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

Source Description and Location	
--	--

Source Name:	Deercroft Recycling and Disposal Facility
Source Location:	10501 West 300 North, Michigan City, Indiana 46361
County:	LaPorte
SIC Code:	4953 and 4911
Operation Permit Renewal No.:	T 091-18150-00067
Operation Permit Renewal Issuance Date:	June 28, 2006
Significant Source Modification No.:	091-23825-00067
Significant Permit Modification No.:	091-23852-00067
Permit Reviewer:	Kimberly Cottrell

Public Notice Information	
----------------------------------	--

On December 23, 2006, the Office of Air Quality (OAQ) had a notice published in The News Dispatch in Michigan City, Indiana, stating that the Deercroft Recycling and Disposal Facility had applied for a significant modification to their Part 70 Operating Permit Renewal issued on June 28, 2006 to install a landfill gas treatment system consisting of four (4) engine/generator sets. 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.

On February 28, 2007, the Office of Air Quality (OAQ) held a public meeting at the Michigan City Public Library for citizens and interested parties to discuss questions and concerns related to the project. The public comment period was extended until March 5, 2007. No additional written comments were received during the extended public comment period.

Comments Received	
--------------------------	--

On January 8, 2007, OAQ received comments from Michael Peterson of the Deercroft Recycling and Disposal Facility. The comments are summarized in the subsequent pages, with IDEM's corresponding responses.

The IDEM does not amend the Technical Support Document (TSD). The TSD is maintained to document the original review. This addendum to the TSD is used to document responses to comments and changes made from the time the permit was drafted until a final decision is made.

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:

Comment 1:

Both permits indicate that the new engines will be installed / constructed in 2006. Construction will take place during the first and second quarters of 2007.

IDEM Response 1:

The emission unit descriptions on each cover letter, in paragraph (c) of each Condition A.2, and in paragraph (c) of each of the facility description for Section D.2 have been updated as follows:

Four (4) landfill gas fueled 4-stroke, lean-burn reciprocating engine/generator sets each rated at 1148 break horsepower, identified as EG-5 through EG-8, permitted to be constructed in ~~2006~~ **2007**. The maximum heat input capacity of each engine/generator set is 9.1 MMBtu per hour and the maximum flow rate of each engine/generator set is 333 standard cubic feet per minute (scfm) of landfill gas.

Other Changes

Upon further review, the OAQ has decided to make the following revisions to the permit:

Change No. 1:

To minimize future amendments to the issued Part 70 Permits, the OAQ decided to delete the name and/or title of the Responsible Official (RO) in Section A.1, General Information, of the permit. However, OAQ will still be evaluating if a change in RO meets the criteria specified in 326 IAC 2-7-1(34). The revised permit condition is 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 closed stationary municipal solid waste landfill.

Responsible Official:	Project Manager, Closed Sites Group
Source Address:	10501 West 300 North, Michigan City, Indiana 46361
Mailing Address:	N96W 13600 County Line Road, Germantown, Wisconsin 53022
Source Phone Number:	(219) 879-4690
SIC Code:	4953
County Location:	LaPorte
Source Location Status:	Nonattainment for 8-hour Ozone Standard Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Minor Source, under Emission Offset; Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

IDEM Contact

Questions regarding this proposed permit can be directed to Kimberly Cottrell at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-0870 or toll free at 1-800-451-6027 extension 3-0870.

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:	Deercroft Recycling and Disposal Facility
Source Location:	10501 West 300 North, Michigan City, Indiana 46361
County:	LaPorte
SIC Code:	4953 and 4911
Operation Permit Renewal No.:	T 091-18150-00067
Operation Permit Renewal Issuance Date:	June 28, 2006
Significant Source Modification No.:	091-23825-00067
Significant Permit Modification No.:	091-23852-00067
Permit Reviewer:	Kimberly Cottrell

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. 091-18150-00067 on June 28, 2006. The source has since received the following approval:

Administrative Amendment No. 091-23303-00067, issued on August 1, 2006.

County Attainment Status

The source is located in LaPorte County.

Pollutant	Status
PM ₁₀	attainment
PM _{2.5}	attainment
SO ₂	attainment
NO ₂	attainment
8-hour Ozone	nonattainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. LaPorte County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

- (b) LaPorte County has been classified as attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM_{2.5} emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions.
- (c) LaPorte County has been classified as attainment or unclassifiable for PM₁₀, SO₂, NO₂, 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, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.
- (e) On October 25, 2006, a final rule took effect revoking the one-hour ozone standard in Indiana.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (ton/yr)
PM	11.19
PM ₁₀	11.19
SO ₂	5.69
VOC	1.83
CO	170.15
NO _x	56.44

- (a) 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).
- (b) This existing source is not a major stationary source under Emission Offset (326 IAC 2-3) because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.
- (c) These emissions are based upon the Technical Support Document from the Part 70 Operating Permit Renewal No. 091-18150-00067, issued on June 28, 2006.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	Potential To Emit (ton/yr)
1,1,1-Trichloroethane (methyl chloroform)	0.041
1,1,2,2-Tetrachloroethane	0.118
1,1-Dichloroethane (ethylidene dichloride)	0.147
1,1-Dichloroethene (vinylidene chloride)	0.012

HAPs	Potential To Emit (ton/yr)
1,2-Dichloroethane (ethylene dichloride)	0.026
1,2-Dichloropropane (propylene dichloride)	0.013
Acrylonitrile	0.212
Carbon disulfide	0.028
Carbon tetrachloride	0.000
Carbonyl sulfide	0.019
Chlorobenzene	0.018
Chloroethane (ethyl chloride)	0.051
Chloroform	0.002
Dichloromethane (methylene chloride)	0.768
Ethylbenzene	0.310
Hexane	0.358
Methyl ethyl ketone	0.323
Methyl isobutyl ketone	0.118
Perchloroethylene (tetrachloroethene)	0.391
Trichloroethylene (trichloroethene)	0.234
Vinyl chloride	0.290
Benzene	0.094
Methyl chloride (Chloromethane)	0.039
Toluene	2.290
Xylene (isomers and mixture)	0.812
Mercury Compounds	0.000
Hydrogen Chloride	2.706
Total	9.420

This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

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

Pollutant	Actual Emissions (ton/yr)
PM	10.15
PM ₁₀	8.28
PM _{2.5}	5.26
SO ₂	13.14
VOC	25.36
CO	207.94
NO _x	113.32
Total HAPs	not reported

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a new source construction application, submitted by Deercroft Recycling and Disposal Facility on October 25, 2006, relating to the installation of a landfill gas treatment system consisting of four (4) engine/generator sets. The following is a list of the proposed emission units:

- Four (4) landfill gas fueled 4-stroke, lean-burn reciprocating engine/generator sets each rated at 1148 break horsepower, identified as EG-5 through EG-8, permitted to be constructed in 2006. The maximum heat input capacity of each engine/generator set is 9.1 MMBtu per hour and the maximum flow rate of each engine/generator set is 333 standard cubic feet per minute (scfm) of landfill gas.

Four (4) similar landfill gas fueled reciprocating engine/generator sets were approved for construction and installation in 1994 and 1999.

Enforcement Issues

There are no pending enforcement actions.

Stack Summary

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

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (scfm)	Temperature (°F)
ES5	EG5	29	0.83	333	800
ES6	EG6	29	0.83	333	800
ES7	EG7	29	0.83	333	800
ES8	EG8	29	0.83	333	800

Emission Calculations

See Appendix B of this Technical Support Document 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 6: PTE Before Controls of the Modification	
Pollutant	Potential To Emit (ton/yr)
PM	8.32
PM ₁₀	8.32
SO ₂	2.63
VOC	1.20
CO	81.45
NO _x	43.32

Table 7: HAP PTE Before Controls of the Modification	
HAPs	Potential To Emit (ton/yr)
1,1,1-Trichloroethane (methyl chloroform)	0.136
1,1,2,2-Tetrachloroethane	0.397
1,1-Dichloroethane (ethylidene dichloride)	0.495
1,1-Dichloroethene (vinylidene chloride)	0.041
1,2-Dichloroethane (ethylene dichloride)	0.086
1,2-Dichloropropane (propylene dichloride)	0.043
Acrylonitrile	0.715
Carbon disulfide	0.094
Carbon tetrachloride	0.001
Carbonyl sulfide	0.063
Chlorobenzene	0.060
Chloroethane (ethyl chloride)	0.172
Chloroform	0.008
Dichloromethane (methylene chloride)	2.587
Ethylbenzene	1.042
Hexane	1.206
Methyl isobutyl ketone	0.399
Perchloroethylene (tetrachloroethene)	1.317
Trichloroethylene (trichloroethene)	0.789
Vinyl chloride	0.977
Benzene	0.318
Methyl chloride (Chloromethane)	0.130
Toluene	7.712
Xylene (isomers and mixture)	2.736
Mercury Compounds	0.000
Hydrogen Chloride	0.000
Total	21.527

This source modification is subject to 326 IAC 2-7-10.5(f)(4) because the potential to emit nitrogen oxides (NO_x) is greater than twenty-five (25) tons per year before control. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because the modification requires significant changes in existing monitoring Part 70 permit terms and conditions.

Permit Level Determination – PSD and Emission Offset

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

Table 8: Potential to Emit (ton/yr)								
Process / Emission Unit	PM	PM₁₀	SO₂	VOC	CO	NO_x	HAP* – Toluene	Total HAP*
Existing Engines EG-1, EG-2, EG-3, & EG-4	8.14	8.14	2.58	1.17	79.66	42.37	–	–
Existing Flare FL-3	9.83	9.83	8.79	4.00	256.70	46.25	–	–
Total Prior to Modification**	17.96	17.96	11.36	5.17	336.36	88.62	8.641	25.342
New Engines EG-5, EG-6, EG-7, & EG-8	8.32	8.32	2.63	1.20	81.45	43.32	–	–
Total for Modification	8.32	8.32	2.63	1.20	81.45	43.32	–	–
Total Limited PTE after Modification	26.28	26.28	14.00	6.37	417.81	131.95	7.712	22.616
PSD Major Source Threshold	NA	NA	NA	NA	250	NA	10	25
Emission Offset Significant Level	NA	NA	NA	100	NA	100	NA	NA

* Hazardous Air Pollutant (HAP) emissions are reported for the entire landfill using the Landfill Gas Emissions Model. The total prior to the modification was calculated using LandGEM (version 2.01) as reported in the Part 70 Permit Renewal, 091-18150-00067, issued on June 28, 2006. The total after the modification was calculated using LandGEM (version 3.02). The data and results from LandGEM (version 3.02) is included as Attachment A to this Technical Support Document.

** The “Total Prior to Modification” represents what was previously documented in the calculations from the Part 70 Permit Renewal, 091-18150-00067, issued on June 28, 2006.

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

Table 9: Limited Potential to Emit (ton/yr)								
Process / Emission Unit	PM	PM₁₀	SO₂	VOC	CO	NO_x	HAP* – Toluene	Total HAP*
Existing Engines EG-1, EG-2, EG-3, & EG-4	7.49	7.49	2.37	0.76	73.30	38.99	–	–
Existing Flare FL-3	3.71	3.71	3.32	1.07	96.85	17.45	–	–
Total Prior to Modification**	11.19	11.19	5.69	1.83	170.15	56.44	2.290	9.422

Table 9: Limited Potential to Emit (ton/yr)								
Process / Emission Unit	PM	PM₁₀	SO₂	VOC	CO	NO_x	HAP* – Toluene	Total HAP*
New Engines EG-5, EG-6, EG-7, & EG-8	8.32	8.32	2.63	1.20	81.45	43.32	–	–
Total for Modification	7.26	7.26	2.50	1.14	71.07	37.80	–	–
Change in PTE Due to Modification	+ 3.35	+ 3.35	– 0.62	+ 0.48	– 25.79	+ 20.35	– 0.020	– 0.878
Total Limited PTE after Modification	14.74	14.74	5.07	2.31	144.36	76.79	2.090	8.249
PSD Major Source Threshold	NA	NA	NA	NA	250	NA	10	25
Emission Offset Significant Level	NA	NA	NA	100	NA	100	NA	NA

* Hazardous Air Pollutant (HAP) emissions are reported for the entire landfill using the Landfill Gas Emissions Model. The total prior to the modification was calculated using LandGEM (version 2.01) as reported in the Part 70 Permit Renewal, 091-18150-00067, issued on June 28, 2006. The total after the modification was calculated using LandGEM (version 3.02). The data and results from LandGEM (version 3.02) is included as Attachment A to this Technical Support Document.

** The “Total Prior to Modification” represents what was previously permitted in the Part 70 Permit Renewal, 091-18150-00067, issued on June 28, 2006.

This modification to an existing minor stationary source is not major because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. Even after this modification, the source will remain a minor source under 326 IAC 2-2 because the source-wide emissions of CO, NO_x, PM, PM₁₀, SO₂, and VOC are each less than 250 tons per year.

This modification to an existing minor stationary source is not major because the emissions increase is less than the Emission Offset major source thresholds. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply. Even after this modification, the source will remain a minor source under 326 IAC 2-3 because the source-wide emissions of NO_x and VOC are each less than 100 tons per year.

Federal Rule Applicability Determination

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

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to the proposed new emission units. The new engines, EG-5 through EG-8, are part of the landfill gas recovery system that is exempt from the requirements of the NSPS for Municipal Solid Waste Landfills (40 CFR Part 60, Subpart WWW) because the landfill gas is treated pursuant to 40 CFR 60.752(b)(2)(iii)(C).
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to new emission units because the source is not major for any hazardous air pollutants.
- (c) 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 following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

Table 10: CAM Applicability Analysis							
Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (ton/yr)	Controlled PTE (ton/yr)	Major Source Threshold (ton/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
EG-5 – EG-8	none	N	81.45	81.45	250	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new emission units as part of this new source construction permit. The four landfill gas-fired engine/generators at this source are exempt from Compliance Assurance Monitoring under 40 CFR 64.2(b)(i), because none of these facilities has the potential to emit greater than 250 tons per year of any regulated pollutant prior to controls.

State Rule Applicability Determination

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

326 IAC 2-3 (Emission Offset)

This source is located in LaPorte County. Laporte County was designated as a nonattainment area for the 8-hour ozone standard in June 2004. The potential to emit of NO_x and VOC of this source, after limits, is less than 100 tons per year. Therefore, this source is a minor source under Emission Offset.

326 IAC 2-2 (Prevention of Significant Deterioration)

Calculations for production of landfill gas using AP-42 emission factors in accordance with 40 CFR 60.754 show that the amount of landfill gas produced by this closed landfill are less than the maximum input capacity of the engines and control device (flare). Therefore, emissions for PSD purposes are limited by the availability of landfill gas to the engines and flares. Assuming that all landfill gas produced is collected, the maximum emissions of PM, PM₁₀, SO₂, VOC, NO_x and CO from the engines and flare are less than 250 tons per year. This source is a minor source under PSD.

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

The operation of the four (4) landfill gas fueled reciprocating engine/generator sets will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

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 first report is due no later than July 1, 2004, and subsequent reports are due every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Changes to the compliance determination and monitoring requirements are detailed in the Proposed Changes section of this document.

Air Quality Impacts

Pursuant to 326 IAC 2-1.1-5, IDEM, OAQ, has conducted a modeling analysis of the Limited Potential to Emit (PTE) criteria pollutants from this proposed modification to estimate whether the Limited PTE criteria pollutants will cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS).

The modeling results indicate that the Limited PTE criteria pollutants from this modification will not exceed the National Ambient Air Quality Standards (NAAQS). See Appendix C of this Technical Support Document for the complete modeling analysis.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit Renewal No. 091-18150-00067. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Modification No. 1:

The site phone number specified in Condition A.1, General Information, has been corrected 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 closed stationary municipal solid waste landfill.

Responsible Official:	Project Manager, Closed Sites Group
Source Address:	10501 West 300 North, Michigan City, Indiana 46361
Mailing Address:	N96W 13600 County Line Road, Germantown, Wisconsin 53022
Source Phone Number:	(574) 276-8824 (219) 879-4690
SIC Code:	4953
County Location:	LaPorte

Source Location Status: Nonattainment for 8-hour Ozone Standard
Attainment for all other criteria pollutants
Source Status: Part 70 Permit Program
Minor Source, under PSD Rules;
Minor Source, under Emission Offset;
Minor Source, Section 112 of the Clean Air Act
Not 1 of 28 Source Categories

Modification No. 2:

The description of the proposed landfill gas treatment system consisting of four (4) engine/generator sets has been added as paragraph (c) to the list of emission units in Condition A.2, Emission Units and Pollution Control Equipment Summary, and to the Facility Description in Section D.2. In addition, the facility descriptions for the existing emission units have been modified as requested by the applicant. The revised condition is 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:

- (a) One (1) solid waste disposal facility meeting the definition in 40 CFR 60.751, constructed in 1980, modified in 2002, with a maximum design capacity of 9.615 million megagrams of solid waste, with landfill gas emissions collected by a collection system installed in 1994.
- (b) Four (4) landfill gas fueled reciprocating engine/generator sets each rated at 1138 break horsepower, identified as EG-1 through EG-3, installed in 1994, and EG-4 was installed in 1999. The ~~combined~~ maximum heat input capacity of ~~the four (4) units each~~ **engine/generator set is 11.6-8.9 MMBtu per hour and the combined maximum gas input flow rate of each engine/generator set is 386 275 standard cubic feet per minute (scfm) of landfill gas.**
- (c) **Four (4) landfill gas fueled 4-stroke, lean-burn reciprocating engine/generator sets each rated at 1148 break horsepower, identified as EG-5 through EG-8, permitted to be constructed in 2006. The maximum heat input capacity of each engine/generator set is 9.1 MMBtu per hour and the maximum flow rate of each engine/generator set is 333 standard cubic feet per minute (scfm) of landfill gas.**
- (d) One (1) open flare, identified as FL-3, constructed in 2004, with a maximum heat input capacity of 144 MMBtu per hour and a maximum flow rate of 4,000 standard cubic feet per minute (scfm) of landfill gas. **This flare does not have a bypass.**

SECTION D.1

FACILITY OPERATION CONDITIONS

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

- (a) One (1) solid waste disposal facility meeting the definition in 40 CFR 60.751, constructed in 1980, modified in 2002, with a maximum design capacity of 9.615 million megagrams of solid waste, with landfill gas emissions collected by a collection system installed in 1994.
- (d) One (1) open flare, identified as FL-3, constructed in 2004, with a maximum heat input capacity of 144 MMBtu per hour and a maximum flow rate of 4,000 standard cubic feet per minute (scfm) of landfill gas. **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.

SECTION D.2

FACILITY OPERATION CONDITIONS

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

- (b) Four (4) landfill gas fueled reciprocating engine/generator sets each rated at 1138 break horsepower, identified as EG-1 through EG-3, installed in 1994, and EG-4 was installed in 1999. The ~~combined~~ maximum heat input capacity of ~~the four (4) units~~ **each engine/generator set** is ~~41.6~~ **8.9** MMBtu per hour and the ~~combined~~ maximum **gas input** flow rate of **each engine/generator set** is ~~386~~ **275** standard cubic feet per minute (scfm) of landfill gas.
- (c) **Four (4) landfill gas fueled 4-stroke, lean-burn reciprocating engine/generator sets each rated at 1148 break horsepower, identified as EG-5 through EG-8, permitted to be constructed in 2006. The maximum heat input capacity of each engine/generator set is 9.1 MMBtu per hour and the maximum flow rate of each engine/generator set is 333 standard cubic feet per minute (scfm) of landfill gas.**

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

Modification No. 3:

The instructions in paragraph (a) of Condition B.9, Annual Compliance Certification (ACC), have been revised as follows:

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 ~~in letter form~~ no later than July 1 of each year to:

Modification No. 4:

To clarify the provisions for a timely permit renewal, the second paragraph (2) under paragraph (b) of Condition B.17, Permit Renewal, has been removed. The descriptive title under paragraph (c) of Condition B.17 has been removed since it is not needed.

B.17 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

- (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.
 - ~~(2) If IDEM, OAQ, upon receiving a timely and complete 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.~~
- (c) ~~Right to Operate After Application for Renewal [326 IAC 2-7-3]~~

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.

Modification No. 5:

IDEM has decided to remove paragraph (d) concerning nonroad engines from Condition B.18, Permit Amendment or Modification. 40 CFR 89, Appendix A specifically indicates that states are not precluded from regulating the use and operation of nonroad engines, such as regulations on hours of usage, daily mass emission limits, or sulfur limits on fuel; nor are permits regulating such operations precluded, once the engine is no longer new.

B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

~~(d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.~~

Modification No. 6:

Revisions to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) became effective on June 12, 2002 and were approved into the State Implementation Plan on September 23, 2005. These rules replace the previous version of 326 IAC 6-3 that had been part of the SIP; therefore, the requirements of the previous version of 326 IAC 6-3-2 are no longer applicable to this source. Condition C.1, Particulate Emission Limitations for Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour, has been revised to remove paragraph (a) which contained these requirements.

~~C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P] [326 IAC 6-3-2]~~

~~(a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.~~

~~(b) 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. This condition is not federally enforceable.~~

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.

Modification No. 7:

In order to avoid duplication of requirements that may be included in D sections, Condition C.6, Operation of Equipment, has been removed from the permit. The remaining Section C conditions are renumbered.

~~C.6 — Operation of Equipment [326 IAC 2-7-6(6)]~~

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

Modification No. 8:

IDEM realizes that the specifications of original Condition C.12, Pressure Gauge and Other Instrument Specifications (now Condition C.11, Instrument Specifications), can only be practically applied to analog units, and has therefore clarified the condition to state that the condition only applies to analog units. IDEM has also determined that the accuracy of the instruments is not nearly as important as whether the instrument has a range that is appropriate for the normal expected reading of the parameter. Therefore, original Condition C.12 has been removed and replaced with Condition C.11, Instrument Specifications, as follows:

~~C.12 — Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]~~

- ~~(a) — Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (± 2%) of full scale reading.~~
- ~~(b) — Whenever a condition in this permit requires the measurement of a temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (± 2%) of full scale reading.~~

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.**

Modification No. 9:

IDEM has reconsidered the requirement to develop and follow a Compliance Response Plan (original Condition C.15). The Permittee will still be required to take reasonable response steps when a compliance monitoring parameter is determined to be out of range or abnormal. Replacing the requirement to develop and follow a Compliance Response Plan with a requirement to take reasonable response steps will ensure that the control equipment is returned to proper operation as soon as practicable, while still allowing the Permittee the flexibility to respond to situations that were not anticipated. Therefore, Condition Original C.15, Compliance Response Plan – Preparation, Implementation, Records, and Reports, has been removed and replaced with Condition C.14, Response to Excursions or Exceedances.

~~C.15 Compliance Response Plan – Preparation, Implementation, Records, and Reports [326 IAC 2-7-5]
[326 IAC 2-7-6]~~

- ~~(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. If a Permittee is required to have a Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan under 40 CFR 60/63, such plans shall be deemed to satisfy the requirements for a CRP for those compliance monitoring conditions. A CRP shall be submitted to IDEM, upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on-site, and comprised of:~~
- ~~(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.~~
 - ~~(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan to include such response steps taken.~~

~~The Parametric Monitoring and SMM Plan shall be submitted within the time frames specified by the applicable 40 CFR60/63 requirement.~~

- ~~(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:~~
- ~~(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan; or~~
 - ~~(2) If none of the reasonable response steps listed in the Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.~~

- ~~(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.~~
- ~~(4) Failure to take reasonable response steps shall be considered a deviation from the permit.~~
- ~~(c) The Permittee is not required to take any further response steps for any of the following reasons:~~
- ~~(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.~~
- ~~(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.~~
- ~~(3) An automatic measurement was taken when the process was not operating.~~
- ~~(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.~~
- ~~(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.~~
- ~~(e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.~~
- ~~(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.~~

C.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.**
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:**
- (1) initial inspection and evaluation**
- (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or**

- (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.**
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:**
 - (1) monitoring results;**
 - (2) review of operation and maintenance procedures and records;**
 - (3) inspection of the control device, associated capture system, and the process.**
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.**
- (e) The Permittee shall maintain the following records:**
 - (1) monitoring data;**
 - (2) monitor performance data, if applicable; and**
 - (3) corrective actions taken.**

Modification No. 10:

Paragraph (c) of Condition D.1.2, Operational Standards for Collection and Control Systems, is revised to include higher operating temperature allowances for gas wells #34 and #58. These higher operating values were approved in the Part 70 Operating Permit Renewal No. 091-18150-00067, issued on June 28, 2006, but were not included in the Administrative Amendment No. 091-23303-00067, issued on August 1, 2006. The revised condition is as follows:

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

- (c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C (except for the Gas Well #55, which shall operate at less than 60°C (140°F), and Gas Wells #34 and #58, which shall operate at less than 57.2°C (135°F)) and with either 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. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.**

Modification No. 11:

A new paragraph (c) is added to Condition D.1.9, Testing Requirements, to include an update from the New Source Performance Standard (NSPS) as amended on September 21, 2006. This change has not yet been incorporated into Indiana state rules incorporating the NSPS (326 IAC 12). The revised condition is as follows:

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]

- (c) **For the performance test required in 40 CFR 60.752(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4).**

Modification No. 12:

Paragraph (f) of Condition D.1.11, Record Keeping Requirements, is deleted because the Deercroft Recycling and Disposal Facility has chosen not to exercise this option provided in the New Source Performance Standard (NSPS). This option was not included in the Part 70 Operating Permit Renewal No. 091-18150-00067, issued on June 28, 2006, but was incorrectly added in the Administrative Amendment No. 091-23303-00067, issued on August 1, 2006. The revised condition is as follows:

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

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

Modification No. 13:

Paragraph (c) of Condition D.1.12, Reporting Requirements, is revised to include new requirements for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills. This language was included in the Part 70 Operating Permit Renewal No. 091-18150-00067, issued on June 28, 2006, but was omitted from the Administrative Amendment No. 091-23303-00067, issued on August 1, 2006. The revised condition is as follows:

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

- (c) ~~Annual reports of the following recorded information.~~ **Submit annual reports of the following recorded information by July 30 of each year.** The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c). **Pursuant to 40 CFR 63.1980(a) and Condition D.1.14(a), these reports shall be submitted every six (6) months.**

TSD Appendices

The following are the appendices of this TSD:

- (1) Appendix A – LandGEM 3.02 Modeling Results
- (2) Appendix B – Emissions Calculations
- (3) Appendix C – Minor Source Modeling Analysis

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 091-23825-00067 and Significant Permit Modification No. 091-23852-00067. The staff recommend to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

Indiana Department of Environmental Management Office of Air Quality

Appendix A – LandGEM 3.02 Modeling Results Technical Support Document (TSD) for a Part 70 Significant Source Modification and Part 70 Significant Permit Modification

Source Background and Description

Source Name:	Deercroft Recycling and Disposal Facility
Source Location:	10501 West 300 North, Michigan City, Indiana 46361
County:	LaPorte
SIC Code:	4953 and 4911
Operation Permit Renewal No.:	T 091-18150-00067
Operation Permit Renewal Issuance Date:	June 28, 2006
Significant Source Modification No.:	091-23825-00067
Significant Permit Modification No.:	091-23852-00067
Permit Reviewer:	Kimberly Cottrell

Summary of the Landfill Gas Emissions Model (LandGEM)

The details included with this attachment documents the results for the Deercroft Recycling and Disposal Facility used to calculate the potential to emit for the facility provided in Attachment B.

The Landfill Gas Emissions Model (LandGEM) is an automated estimation tool with a Microsoft Excel interface that can be used to estimate emission rates for total landfill gas, methane (CH₄), carbon dioxide (CO₂), nonmethane organic compounds (NMOCs), and individual air pollutants from municipal solid waste landfills. LandGEM can use either site-specific data to estimate emissions or default parameters if no site-specific data are available. LandGEM contains two sets of default parameters.

CAA Defaults – The CAA defaults are based on requirements for MSW landfills laid out by the Clean Air Act (CAA), including the NSPS/EG and NESHAP. This set of default parameters yields conservative emission estimates and can be used for determining whether a landfill is subject to the control requirements of the NSPS/EG or NESHAP.

Inventory Defaults – With the exception of wet landfill defaults, the inventory defaults are based on emission factors in the U.S. Environmental Protection Agency's (EPA's) Compilation of Air Pollutant Emission Factors (AP-42). This set of defaults yields average emissions and can be used to generate emission estimates for use in emission inventories and air permits in the absence of site-specific test data.

The default parameters in Version 3.02 of LandGEM represent values specified by NSPS/EG and NESHAP for determining applicability of CAA requirements.

The LandGEM software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. LandGEM uses the following first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills to estimate annual emissions over a specified time period.

$$Q_{CH_4} = \sum_{i=1}^n \sum_{j=0.1}^1 kL_o \left(\frac{M_i}{10} \right) e^{-kt_{ij}}$$

where

Q_{CH_4} = annual methane generation in the year of the calculation (m^3 /year)

i = 1 year time increment

n = (year of the calculation) – (initial year of waste acceptance)

j = 0.1 year time increment

k = methane generation rate (year⁻¹)

L_o = potential methane generation capacity (m^3 /Mg)

M_i = mass of waste accepted in the i^{th} year (Mg)

t_{ij} = age of the j^{th} section of waste mass M_i accepted in the i^{th} year (decimal years, e.g., 3.2 years)

Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at www.epa.gov/ttnatw01/landfill/landflpg.html.

IDEM Contact

Questions regarding this proposed permit can be directed to Kimberly Cottrell at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-0870 or toll free at 1-800-451-6027 extension 3-0870.

INPUT REVIEW

Landfill Name or Identifier: Deercroft Recycling and Disposal Facility

LANDFILL CHARACTERISTICS

Landfill Open Year **1980**
 Landfill Closure Year (with 80-year limit) **2002**
 Actual Closure Year (without limit) **2002**
 Have Model Calculate Closure Year? **No**
 Waste Design Capacity **9,615,000 megagrams**

MODEL PARAMETERS

Methane Generation Rate, k **0.040 year⁻¹**
 Potential Methane Generation Capacity, L₀ **100 m³/Mg**
 NMOC Concentration **600 ppmv as hexane**
 Methane Content **55 % by volume**

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1: **Carbon monoxide**
 Gas / Pollutant #2: **Methane**
 Gas / Pollutant #3: **Carbon dioxide**
 Gas / Pollutant #4: **NMOC**

Description/Comments:

WASTE ACCEPTANCE RATES

Year	(Mg/year)	(short tons/year)
1980	418,050	459,855
1981	418,050	459,855
1982	418,050	459,855
1983	418,050	459,855
1984	418,050	459,855
1985	418,050	459,855
1986	418,050	459,855
1987	418,050	459,855
1988	418,050	459,855
1989	418,050	459,855
1990	418,050	459,855
1991	418,050	459,855
1992	418,050	459,855
1993	418,050	459,855
1994	418,050	459,855
1995	418,050	459,855
1996	418,050	459,855
1997	418,050	459,855
1998	418,050	459,855
1999	418,050	459,855
2000	418,050	459,855
2001	418,050	459,855
2002	417,900	459,690
2003	0	0

METHANE

Landfill Name or Identifier: Deercroft Recycling and Disposal Facility

First-Order Decomposition Rate Equation:

$$Q_{CH_4} = \sum_{i=1}^n \sum_{j=0.1}^1 kL_o \left(\frac{M_i}{10} \right) e^{-kt_{ij}}$$

Where,

Q_{CH_4} = annual methane generation in the year of the calculation ($m^3/year$)

M_i = mass of waste accepted in the i^{th} year (Mg)

i = 1-year time increment

t_{ij} = age of the j^{th} section of waste mass M_i accepted in the i^{th} year (decimal years, e.g., 3.2 years)

n = (year of the calculation) - (initial year of waste acceptance)

j = 0.1-year time increment

k = methane generation rate ($year^{-1}$)

Model Parameters from User Inputs:

L_o = potential methane generation capacity (m^3/Mg)

k = 0.040 $year^{-1}$

L_o = 100 m^3/Mg

When Model Calculates Closure Year...

Final Non-Zero Acceptance Entered =	417,900 megagrams in	2002
Waste Design Capacity =	9,615,000 megagrams	
Closure Year (with 80-year limit) =		2002
Actual Closure Year (without limit) =		2002
Model Waste Acceptance Limit =	80 years	

Year	User Waste Acceptance Inputs (Mg/year)	User Waste-In-Place (Mg)	Waste Acceptance (Mg/year)	Waste-In-Place (Mg)
1980	418,050	0	418,050	0
1981	418,050	418,050	418,050	418,050
1982	418,050	836,100	418,050	836,100
1983	418,050	1,254,150	418,050	1,254,150
1984	418,050	1,672,200	418,050	1,672,200
1985	418,050	2,090,250	418,050	2,090,250
1986	418,050	2,508,300	418,050	2,508,300
1987	418,050	2,926,350	418,050	2,926,350
1988	418,050	3,344,400	418,050	3,344,400
1989	418,050	3,762,450	418,050	3,762,450
1990	418,050	4,180,500	418,050	4,180,500
1991	418,050	4,598,550	418,050	4,598,550
1992	418,050	5,016,600	418,050	5,016,600
1993	418,050	5,434,650	418,050	5,434,650
1994	418,050	5,852,700	418,050	5,852,700
1995	418,050	6,270,750	418,050	6,270,750
1996	418,050	6,688,800	418,050	6,688,800
1997	418,050	7,106,850	418,050	7,106,850
1998	418,050	7,524,900	418,050	7,524,900
1999	418,050	7,942,950	418,050	7,942,950
2000	418,050	8,361,000	418,050	8,361,000
2001	418,050	8,779,050	418,050	8,779,050
2002	417,900	9,197,100	417,900	9,197,100
2003	0	9,615,000	0	9,615,000
2004	0	9,615,000	0	9,615,000
2005	0	9,615,000	0	9,615,000
2006	0	9,615,000	0	9,615,000
2007	0	9,615,000	0	9,615,000
2008	0	9,615,000	0	9,615,000
2009	0	9,615,000	0	9,615,000
2010	0	9,615,000	0	9,615,000
2011	0	9,615,000	0	9,615,000
2012	0	9,615,000	0	9,615,000
2013	0	9,615,000	0	9,615,000
2014	0	9,615,000	0	9,615,000
2015	0	9,615,000	0	9,615,000
2016	0	9,615,000	0	9,615,000
2017	0	9,615,000	0	9,615,000
2018	0	9,615,000	0	9,615,000
2019	0	9,615,000	0	9,615,000
2020	0	9,615,000	0	9,615,000
2021	0	9,615,000	0	9,615,000

Year	Methane Emissions ($m^3/year$)
1981	1.642E+06
1982	3.221E+06
1983	4.737E+06
1984	6.193E+06
1985	7.593E+06
1986	8.938E+06
1987	1.023E+07
1988	1.147E+07
1989	1.266E+07
1990	1.381E+07
1991	1.491E+07
1992	1.597E+07
1993	1.698E+07
1994	1.796E+07
1995	1.890E+07
1996	1.980E+07
1997	2.067E+07
1998	2.150E+07
1999	2.230E+07
2000	2.307E+07
2001	2.380E+07
2002	2.451E+07
2003	2.519E+07
2004	2.421E+07
2005	2.326E+07
2006	2.235E+07
2007	2.147E+07
2008	2.063E+07
2009	1.982E+07
2010	1.904E+07
2011	1.830E+07
2012	1.758E+07
2013	1.689E+07
2014	1.623E+07
2015	1.559E+07
2016	1.498E+07
2017	1.439E+07
2018	1.383E+07
2019	1.328E+07
2020	1.276E+07
2021	1.226E+07

RESULTS

Landfill Name or Identifier: Deercroft Recycling and Disposal Facility

Closure Year (with 80-year limit) = 2002
 Methane = 55 % by volume
 Please choose a third unit of measure to represent all of the emission rates below.
 User-specified Unit:

Year	Waste Accepted		Waste-In-Place		Carbon monoxide			Methane		
	(Mg/year)	(short tons/year)	(Mg)	(short tons)	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
1980	418,050	459,855	0	0	0	0	0	0	0	0
1981	418,050	459,855	418,050	459,855	4.871E-01	4.181E+02	2.809E-02	1.096E+03	1.642E+06	1.104E+02
1982	418,050	459,855	836,100	919,710	9.551E-01	8.198E+02	5.508E-02	2.149E+03	3.221E+06	2.164E+02
1983	418,050	459,855	1,254,150	1,379,565	1.405E+00	1.206E+03	8.101E-02	3.160E+03	4.737E+06	3.183E+02
1984	418,050	459,855	1,672,200	1,839,420	1.837E+00	1.577E+03	1.059E-01	4.132E+03	6.193E+06	4.161E+02
1985	418,050	459,855	2,090,250	2,299,275	2.252E+00	1.933E+03	1.299E-01	5.066E+03	7.593E+06	5.102E+02
1986	418,050	459,855	2,508,300	2,759,130	2.651E+00	2.275E+03	1.529E-01	5.963E+03	8.938E+06	6.005E+02
1987	418,050	459,855	2,926,350	3,218,985	3.034E+00	2.604E+03	1.750E-01	6.825E+03	1.023E+07	6.873E+02
1988	418,050	459,855	3,344,400	3,678,840	3.402E+00	2.920E+03	1.962E-01	7.653E+03	1.147E+07	7.708E+02
1989	418,050	459,855	3,762,450	4,138,695	3.755E+00	3.224E+03	2.166E-01	8.449E+03	1.266E+07	8.509E+02
1990	418,050	459,855	4,180,500	4,598,550	4.095E+00	3.515E+03	2.362E-01	9.213E+03	1.381E+07	9.279E+02
1991	418,050	459,855	4,598,550	5,058,405	4.422E+00	3.795E+03	2.550E-01	9.948E+03	1.491E+07	1.002E+03
1992	418,050	459,855	5,016,600	5,518,260	4.735E+00	4.065E+03	2.731E-01	1.065E+04	1.597E+07	1.073E+03
1993	418,050	459,855	5,434,650	5,978,115	5.037E+00	4.323E+03	2.905E-01	1.133E+04	1.698E+07	1.141E+03
1994	418,050	459,855	5,852,700	6,437,970	5.326E+00	4.572E+03	3.072E-01	1.198E+04	1.796E+07	1.207E+03
1995	418,050	459,855	6,270,750	6,897,825	5.605E+00	4.811E+03	3.232E-01	1.261E+04	1.890E+07	1.270E+03
1996	418,050	459,855	6,688,800	7,357,680	5.872E+00	5.040E+03	3.387E-01	1.321E+04	1.980E+07	1.330E+03
1997	418,050	459,855	7,106,850	7,817,535	6.129E+00	5.261E+03	3.535E-01	1.379E+04	2.067E+07	1.389E+03
1998	418,050	459,855	7,524,900	8,277,390	6.376E+00	5.473E+03	3.677E-01	1.434E+04	2.150E+07	1.445E+03
1999	418,050	459,855	7,942,950	8,737,245	6.613E+00	5.676E+03	3.814E-01	1.488E+04	2.230E+07	1.498E+03
2000	418,050	459,855	8,361,000	9,197,100	6.840E+00	5.872E+03	3.945E-01	1.539E+04	2.307E+07	1.550E+03
2001	418,050	459,855	8,779,050	9,656,955	7.059E+00	6.059E+03	4.071E-01	1.588E+04	2.380E+07	1.599E+03
2002	417,900	459,690	9,197,100	10,116,810	7.270E+00	6.240E+03	4.193E-01	1.635E+04	2.451E+07	1.647E+03
2003	0	0	9,615,000	10,576,500	7.471E+00	6.413E+03	4.309E-01	1.681E+04	2.519E+07	1.693E+03
2004	0	0	9,615,000	10,576,500	7.178E+00	6.162E+03	4.140E-01	1.615E+04	2.421E+07	1.626E+03
2005	0	0	9,615,000	10,576,500	6.897E+00	5.920E+03	3.978E-01	1.552E+04	2.326E+07	1.563E+03
2006	0	0	9,615,000	10,576,500	6.627E+00	5.688E+03	3.822E-01	1.491E+04	2.235E+07	1.501E+03
2007	0	0	9,615,000	10,576,500	6.367E+00	5.465E+03	3.672E-01	1.432E+04	2.147E+07	1.443E+03
2008	0	0	9,615,000	10,576,500	6.117E+00	5.251E+03	3.528E-01	1.376E+04	2.063E+07	1.386E+03
2009	0	0	9,615,000	10,576,500	5.877E+00	5.045E+03	3.390E-01	1.322E+04	1.982E+07	1.332E+03
2010	0	0	9,615,000	10,576,500	5.647E+00	4.847E+03	3.257E-01	1.270E+04	1.904E+07	1.279E+03
2011	0	0	9,615,000	10,576,500	5.425E+00	4.657E+03	3.129E-01	1.221E+04	1.830E+07	1.229E+03
2012	0	0	9,615,000	10,576,500	5.213E+00	4.474E+03	3.006E-01	1.173E+04	1.758E+07	1.181E+03
2013	0	0	9,615,000	10,576,500	5.008E+00	4.299E+03	2.888E-01	1.127E+04	1.689E+07	1.135E+03
2014	0	0	9,615,000	10,576,500	4.812E+00	4.130E+03	2.775E-01	1.083E+04	1.623E+07	1.090E+03
2015	0	0	9,615,000	10,576,500	4.623E+00	3.968E+03	2.666E-01	1.040E+04	1.559E+07	1.047E+03
2016	0	0	9,615,000	10,576,500	4.442E+00	3.813E+03	2.562E-01	9.993E+03	1.498E+07	1.006E+03
2017	0	0	9,615,000	10,576,500	4.268E+00	3.663E+03	2.461E-01	9.601E+03	1.439E+07	9.670E+02
2018	0	0	9,615,000	10,576,500	4.100E+00	3.520E+03	2.365E-01	9.225E+03	1.383E+07	9.290E+02
2019	0	0	9,615,000	10,576,500	3.940E+00	3.382E+03	2.272E-01	8.863E+03	1.328E+07	8.926E+02
2020	0	0	9,615,000	10,576,500	3.785E+00	3.249E+03	2.183E-01	8.516E+03	1.276E+07	8.576E+02
2021	0	0	9,615,000	10,576,500	3.637E+00	3.122E+03	2.097E-01	8.182E+03	1.226E+07	8.240E+02

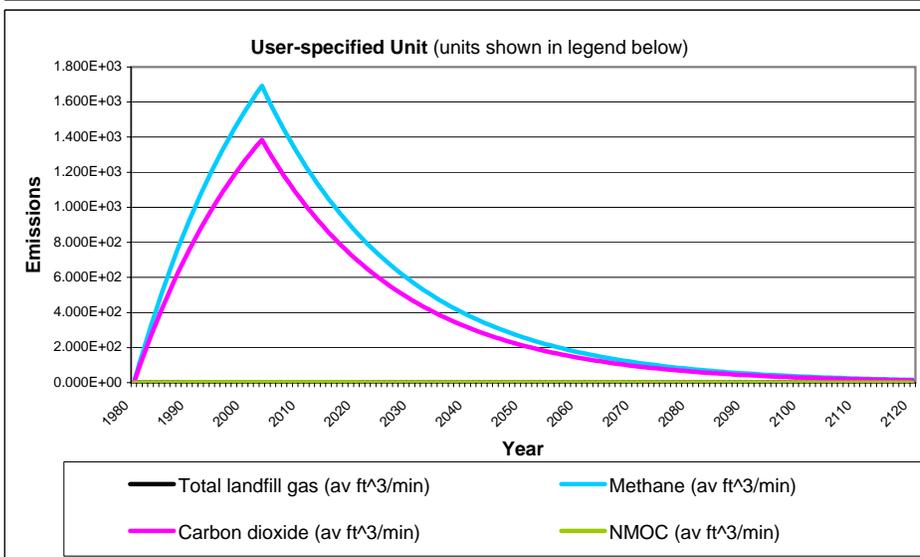
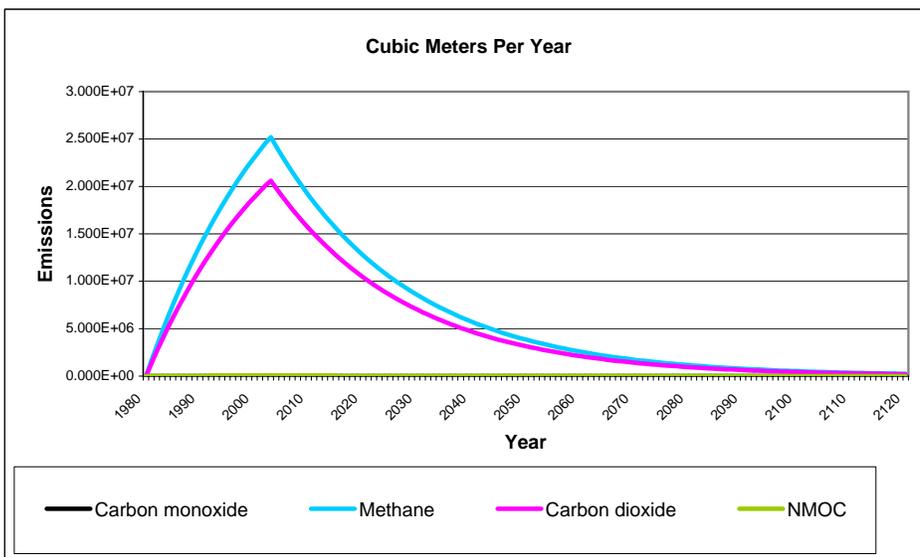
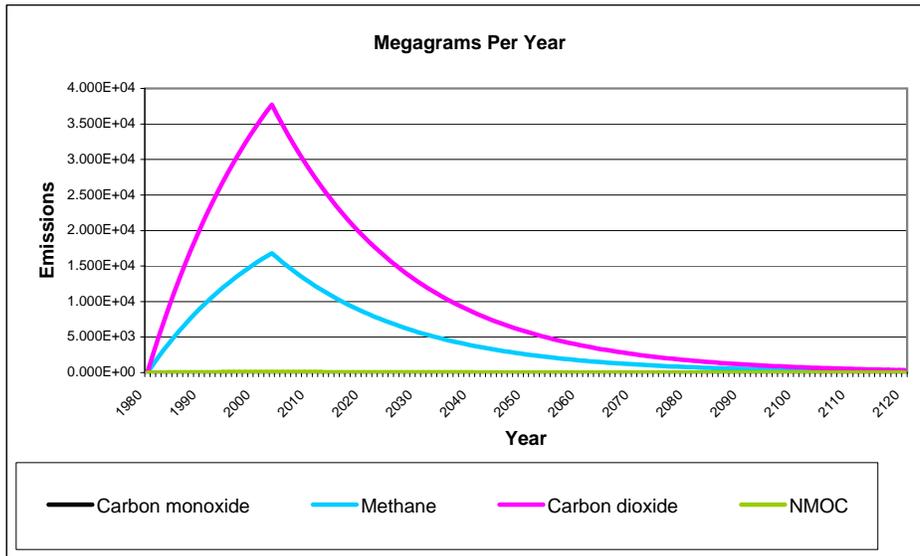
RESULTS Landfill Name or Identifier: Deercroft Recycling

Closure Year (with 80-year limit) = 2002
 Methane = 55 % by volume

Year	Waste Accepted		Waste-In-Place		Carbon dioxide			NMOC		
	(Mg/year)	(short tons/year)	(Mg)	(short tons)	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
1980	418,050	459,855	0	0	0	0	0	0	0	0
1981	418,050	459,855	418,050	459,855	2.460E+03	1.344E+06	9.029E+01	6.423E+00	1.792E+03	1.204E-01
1982	418,050	459,855	836,100	919,710	4.823E+03	2.635E+06	1.770E+02	1.259E+01	3.513E+03	2.361E-01
1983	418,050	459,855	1,254,150	1,379,565	7.094E+03	3.876E+06	2.604E+02	1.852E+01	5.167E+03	3.472E-01
1984	418,050	459,855	1,672,200	1,839,420	9.276E+03	5.067E+06	3.405E+02	2.422E+01	6.757E+03	4.540E-01
1985	418,050	459,855	2,090,250	2,299,275	1.137E+04	6.213E+06	4.174E+02	2.969E+01	8.283E+03	5.566E-01
1986	418,050	459,855	2,508,300	2,759,130	1.339E+04	7.313E+06	4.913E+02	3.495E+01	9.750E+03	6.551E-01
1987	418,050	459,855	2,926,350	3,218,985	1.532E+04	8.370E+06	5.624E+02	4.000E+01	1.116E+04	7.498E-01
1988	418,050	459,855	3,344,400	3,678,840	1.718E+04	9.386E+06	6.306E+02	4.486E+01	1.251E+04	8.408E-01
1989	418,050	459,855	3,762,450	4,138,695	1.897E+04	1.036E+07	6.962E+02	4.952E+01	1.382E+04	9.282E-01
1990	418,050	459,855	4,180,500	4,598,550	2.068E+04	1.130E+07	7.592E+02	5.400E+01	1.507E+04	1.012E+00
1991	418,050	459,855	4,598,550	5,058,405	2.233E+04	1.220E+07	8.197E+02	5.831E+01	1.627E+04	1.093E+00
1992	418,050	459,855	5,016,600	5,518,260	2.392E+04	1.307E+07	8.779E+02	6.244E+01	1.742E+04	1.170E+00
1993	418,050	459,855	5,434,650	5,978,115	2.544E+04	1.390E+07	9.337E+02	6.642E+01	1.853E+04	1.245E+00
1994	418,050	459,855	5,852,700	6,437,970	2.690E+04	1.470E+07	9.874E+02	7.024E+01	1.959E+04	1.317E+00
1995	418,050	459,855	6,270,750	6,897,825	2.831E+04	1.546E+07	1.039E+03	7.390E+01	2.062E+04	1.385E+00
1996	418,050	459,855	6,688,800	7,357,680	2.966E+04	1.620E+07	1.089E+03	7.743E+01	2.160E+04	1.451E+00
1997	418,050	459,855	7,106,850	7,817,535	3.095E+04	1.691E+07	1.136E+03	8.082E+01	2.255E+04	1.515E+00
1998	418,050	459,855	7,524,900	8,277,390	3.220E+04	1.759E+07	1.182E+03	8.407E+01	2.345E+04	1.576E+00
1999	418,050	459,855	7,942,950	8,737,245	3.340E+04	1.824E+07	1.226E+03	8.720E+01	2.433E+04	1.634E+00
2000	418,050	459,855	8,361,000	9,197,100	3.455E+04	1.887E+07	1.268E+03	9.020E+01	2.516E+04	1.691E+00
2001	418,050	459,855	8,779,050	9,656,955	3.565E+04	1.948E+07	1.309E+03	9.308E+01	2.597E+04	1.745E+00
2002	417,900	459,690	9,197,100	10,116,810	3.671E+04	2.006E+07	1.348E+03	9.586E+01	2.674E+04	1.797E+00
2003	0	0	9,615,000	10,576,500	3.773E+04	2.061E+07	1.385E+03	9.852E+01	2.749E+04	1.847E+00
2004	0	0	9,615,000	10,576,500	3.625E+04	1.981E+07	1.331E+03	9.466E+01	2.641E+04	1.774E+00
2005	0	0	9,615,000	10,576,500	3.483E+04	1.903E+07	1.279E+03	9.094E+01	2.537E+04	1.705E+00
2006	0	0	9,615,000	10,576,500	3.347E+04	1.828E+07	1.228E+03	8.738E+01	2.438E+04	1.638E+00
2007	0	0	9,615,000	10,576,500	3.215E+04	1.757E+07	1.180E+03	8.395E+01	2.342E+04	1.574E+00
2008	0	0	9,615,000	10,576,500	3.089E+04	1.688E+07	1.134E+03	8.066E+01	2.250E+04	1.512E+00
2009	0	0	9,615,000	10,576,500	2.968E+04	1.622E+07	1.090E+03	7.750E+01	2.162E+04	1.453E+00
2010	0	0	9,615,000	10,576,500	2.852E+04	1.558E+07	1.047E+03	7.446E+01	2.077E+04	1.396E+00
2011	0	0	9,615,000	10,576,500	2.740E+04	1.497E+07	1.006E+03	7.154E+01	1.996E+04	1.341E+00
2012	0	0	9,615,000	10,576,500	2.633E+04	1.438E+07	9.663E+02	6.873E+01	1.918E+04	1.288E+00
2013	0	0	9,615,000	10,576,500	2.529E+04	1.382E+07	9.284E+02	6.604E+01	1.842E+04	1.238E+00
2014	0	0	9,615,000	10,576,500	2.430E+04	1.328E+07	8.920E+02	6.345E+01	1.770E+04	1.189E+00
2015	0	0	9,615,000	10,576,500	2.335E+04	1.276E+07	8.570E+02	6.096E+01	1.701E+04	1.143E+00
2016	0	0	9,615,000	10,576,500	2.243E+04	1.226E+07	8.234E+02	5.857E+01	1.634E+04	1.098E+00
2017	0	0	9,615,000	10,576,500	2.155E+04	1.177E+07	7.911E+02	5.628E+01	1.570E+04	1.055E+00
2018	0	0	9,615,000	10,576,500	2.071E+04	1.131E+07	7.601E+02	5.407E+01	1.508E+04	1.014E+00
2019	0	0	9,615,000	10,576,500	1.990E+04	1.087E+07	7.303E+02	5.195E+01	1.449E+04	9.738E-01
2020	0	0	9,615,000	10,576,500	1.912E+04	1.044E+07	7.017E+02	4.991E+01	1.392E+04	9.356E-01
2021	0	0	9,615,000	10,576,500	1.837E+04	1.003E+07	6.742E+02	4.795E+01	1.338E+04	8.989E-01

GRAPHS

Landfill Name or Identifier: Deercroft Recycling and Disposal Facility



INVENTORY

Landfill Name or Identifier: Deercroft Recycling and Disposal Facility

Enter year of emissions inventory:

Gas / Pollutant	Emission Rate				
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(ft ³ /year)	(short tons/year)
Total landfill gas	5.873E+04	4.581E+07	3.078E+03	1.618E+09	6.461E+04
Methane	1.681E+04	2.519E+07	1.693E+03	8.897E+08	1.849E+04
Carbon dioxide	3.773E+04	2.061E+07	1.385E+03	7.280E+08	4.151E+04
NMOC	9.852E+01	2.749E+04	1.847E+00	9.706E+05	1.084E+02
1,1,1-Trichloroethane (methyl chloroform) - HAP	1.220E-01	2.199E+01	1.477E-03	7.765E+02	1.342E-01
1,1,2,2-Tetrachloroethane - HAP/VOC	3.518E-01	5.039E+01	3.386E-03	1.779E+03	3.870E-01
1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	4.526E-01	1.099E+02	7.387E-03	3.883E+03	4.978E-01
1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	3.694E-02	9.162E+00	6.156E-04	3.235E+02	4.063E-02
1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	7.730E-02	1.878E+01	1.262E-03	6.633E+02	8.504E-02
1,2-Dichloropropane (propylene dichloride) - HAP/VOC	3.875E-02	8.246E+00	5.540E-04	2.912E+02	4.263E-02
2-Propanol (isopropyl alcohol) - VOC	5.726E+00	2.290E+03	1.539E-01	8.089E+04	6.299E+00
Acetone	7.746E-01	3.207E+02	2.155E-02	1.132E+04	8.521E-01
Acrylonitrile - HAP/VOC	6.369E-01	2.886E+02	1.939E-02	1.019E+04	7.006E-01
Benzene - No or Unknown Co-disposal - HAP/VOC	2.828E-01	8.704E+01	5.848E-03	3.074E+03	3.110E-01
Benzene - Co-disposal - HAP/VOC	1.637E+00	5.039E+02	3.386E-02	1.779E+04	1.801E+00
Bromodichloromethane - VOC	9.677E-01	1.420E+02	9.541E-03	5.015E+03	1.064E+00
Butane - VOC	5.537E-01	2.290E+02	1.539E-02	8.089E+03	6.090E-01
Carbon disulfide - HAP/VOC	8.413E-02	2.657E+01	1.785E-03	9.383E+02	9.254E-02
Carbon monoxide	7.471E+00	6.413E+03	4.309E-01	2.265E+05	8.219E+00
Carbon tetrachloride - HAP/VOC	1.172E-03	1.832E-01	1.231E-05	6.471E+00	1.290E-03
Carbonyl sulfide - HAP/VOC	5.608E-02	2.245E+01	1.508E-03	7.927E+02	6.169E-02
Chlorobenzene - HAP/VOC	5.362E-02	1.145E+01	7.695E-04	4.044E+02	5.898E-02
Chlorodifluoromethane	2.142E-01	5.955E+01	4.001E-03	2.103E+03	2.356E-01
Chloroethane (ethyl chloride) - HAP/VOC	1.598E-01	5.955E+01	4.001E-03	2.103E+03	1.758E-01
Chloroform - HAP/VOC	6.824E-03	1.374E+00	9.234E-05	4.853E+01	7.507E-03
Chloromethane - VOC	1.154E-01	5.497E+01	3.693E-03	1.941E+03	1.270E-01
Dichlorobenzene - (HAP for para isomer/VOC)	5.882E-02	9.620E+00	6.464E-04	3.397E+02	6.470E-02
Dichlorodifluoromethane	3.686E+00	7.329E+02	4.925E-02	2.588E+04	4.055E+00
Dichlorofluoromethane - VOC	5.098E-01	1.191E+02	8.002E-03	4.206E+03	5.608E-01
Dichloromethane (methylene chloride) - HAP	2.266E+00	6.413E+02	4.309E-02	2.265E+04	2.492E+00
Dimethyl sulfide (methyl sulfide) - VOC	9.233E-01	3.573E+02	2.401E-02	1.262E+04	1.016E+00
Ethane	5.099E+01	4.077E+04	2.739E+00	1.440E+06	5.609E+01
Ethanol - VOC	2.370E+00	1.237E+03	8.310E-02	4.368E+04	2.608E+00
Ethyl mercaptan (ethanethiol) - VOC	2.723E-01	1.054E+02	7.079E-03	3.721E+03	2.995E-01
Ethylbenzene - HAP/VOC	9.304E-01	2.107E+02	1.416E-02	7.442E+03	1.023E+00
Ethylene dibromide - HAP/VOC	3.580E-04	4.581E-02	3.078E-06	1.618E+00	3.938E-04
Fluorotrichloromethane - VOC	1.989E-01	3.481E+01	2.339E-03	1.229E+03	2.188E-01
Hexane - HAP/VOC	1.084E+00	3.023E+02	2.031E-02	1.068E+04	1.192E+00
Hydrogen sulfide	2.338E+00	1.649E+03	1.108E-01	5.824E+04	2.571E+00
Mercury (total) - HAP	1.108E-04	1.328E-02	8.926E-07	4.691E-01	1.219E-04
Methyl ethyl ketone - HAP/VOC	9.755E-01	3.252E+02	2.185E-02	1.149E+04	1.073E+00
Methyl isobutyl ketone - HAP/VOC	3.626E-01	8.704E+01	5.848E-03	3.074E+03	3.988E-01
Methyl mercaptan - VOC	2.292E-01	1.145E+02	7.695E-03	4.044E+03	2.521E-01
Pentane - VOC	4.536E-01	1.512E+02	1.016E-02	5.338E+03	4.990E-01
Perchloroethylene (tetrachloroethylene) - HAP	1.169E+00	1.695E+02	1.139E-02	5.986E+03	1.286E+00
Propane - VOC	9.241E-01	5.039E+02	3.386E-02	1.779E+04	1.016E+00
trans-1,2-Dichloroethene - VOC	5.172E-01	1.283E+02	8.618E-03	4.530E+03	5.689E-01
Toluene - No or Unknown Co-disposal - HAP/VOC	6.846E+00	1.787E+03	1.200E-01	6.309E+04	7.530E+00
Toluene - Co-disposal - HAP/VOC	2.984E+01	7.787E+03	5.232E-01	2.750E+05	3.283E+01
Trichloroethylene (trichloroethene) - HAP/VOC	7.010E-01	1.283E+02	8.618E-03	4.530E+03	7.711E-01
Vinyl chloride - HAP/VOC	8.693E-01	3.344E+02	2.247E-02	1.181E+04	9.562E-01
Xylenes - HAP/VOC	2.427E+00	5.497E+02	3.693E-02	1.941E+04	2.670E+00

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

**Appendix B - Emission Calculations
Technical Support Document (TSD)
CO, VOC and HAP Emissions From the Landfill**

Company Name: Deercroft Recycling and Disposal Facility
Address City IN Zip: 10501 West 300 North, Michigan City, Indiana, 46360
County: LaPorte
SIC Code: 4953, 4911
Part 70 Operating Permit Renewal Number: 091-18150-00067
Source Modification Number: 091-23825-00067
Permit Modification Number: 091-23852-00067
Permit Reviewer: Kimberly Cottrell
Date: November 30, 2006

Inputs from Landfill Gas Model ^a (Emissions Before Controls)			
Product	m ³ /yr	mg/yr	ton/yr
Methane	2.519E+07	1.681E+04	18,489
CO ₂	2.061E+07	3.773E+04	41,507
CO	6.413E+03	7.471E+00	8.2
NMOC	2.749E+04	9.852E+01	108
Fugitive Emissions from Landfill (after controls)			ton/yr
CO			2.05
VOC			27.1

Assume landfill gas is 55% methane (AP 42, 4.4.4.1)

Landfill Gas (LFG) Production Rate:	4.581E+07	m ³ /yr (= CH ₄ + CO ₂ production rate from the EPA Landfill Air Emission Model - Appendix A)
Collection Efficiency:	75%	(AP42, Chapter 2.4) Assume collection efficiency of 75%.
Control Efficiency:	97.2%	(required by NSPS)

CAS Number	Compound	^b HAP Concentration (ppmv)	Molecular Weight	Uncontrolled HAPs Emissions (ton/yr)	Fugitive HAPs Emissions (ton/yr)	Captured HAPs after Control Devices (ton/yr)	Total HAP Emissions (ton/yr)
71-55-6	1,1,1-Trichloroethane (methyl chloroform)	0.48	133.41	0.136	0.034	0.003	0.037
79-34-5	1,1,2,2-Tetrachloroethane	1.11	167.85	0.397	0.099	0.008	0.108
75-34-3	1,1-Dichloroethane (ethylidene dichloride)	2.35	98.97	0.495	0.124	0.010	0.134
75-35-4	1,1-Dichloroethene (vinylidene chloride)	0.20	96.94	0.041	0.010	0.001	0.011
107-06-2	1,2-Dichloroethane (ethylene dichloride)	0.41	98.96	0.086	0.022	0.002	0.023
78-87-5	1,2-Dichloropropane (propylene dichloride)	0.18	112.99	0.043	0.011	0.001	0.012
107-13-1	Acrylonitrile	6.33	53.06	0.715	0.179	0.015	0.194
75-15-0	Carbon disulfide	0.58	76.13	0.094	0.024	0.002	0.025
56-23-5	Carbon tetrachloride	0.00	153.84	0.001	0.000	0.000	0.000
463-58-1	Carbonyl sulfide	0.49	60.07	0.063	0.016	0.001	0.017
108-90-7	Chlorobenzene	0.25	112.56	0.060	0.015	0.001	0.016
75-00-3	Chloroethane (ethyl chloride)	1.25	64.52	0.172	0.043	0.004	0.047
67-66-3	Chloroform	0.03	119.39	0.008	0.002	0.000	0.002
75-09-2	Dichloromethane (methylene chloride)	14.3	84.94	2.587	0.647	0.054	0.701
100-41-4	Ethylbenzene	4.61	106.16	1.042	0.261	0.022	0.282
110-54-3	Hexane	6.57	86.18	1.206	0.301	0.025	0.327
78-93-3	Methyl ethyl ketone (delisted HAP) ^d	7.09	72.11	1.089	0.272	0.023	0.295
108-10-1	Methyl isobutyl ketone	1.87	100.16	0.399	0.100	0.008	0.108
127-18-4	Perchloroethylene (tetrachloroethene)	3.73	165.83	1.317	0.329	0.028	0.357
79-01-6	Trichloroethylene (trichloroethene)	2.82	131.4	0.789	0.197	0.017	0.214
75-01-4	Vinyl chloride	7.34	62.5	0.977	0.244	0.021	0.265
71-43-2	Benzene	1.91	78.11	0.318	0.079	0.007	0.086
74-87-3	Methyl chloride (Chloromethane)	1.21	50.49	0.130	0.033	0.003	0.035
108-88-3	Toluene	39.3	92.13	7.712	1.928	0.162	2.090
1330-20-7	Xylene (isomers and mixture)	12.1	106.16	2.736	0.684	0.057	0.741
	Mercury Compounds	0.000292	200.61	0.000	0.000	0.000	0.000
7647-01-0	^c Hydrogen Chloride	42.0	36.0	-	-	2.415	2.415
Total Emissions				21.527	5.382	2.867	8.249

^a These input values come from the LandGEM (version 3.02) output done for this landfill. Values represent maximum uncontrolled emissions at closure

^b 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)

^c 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

^d MEK emissions have been deleted from the total since MEK was removed from the HAP list by EPA and IDEM

Methodology

Uncontrolled Emissions of CO and VOC (ton/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 (ton/yr) x (1 - Collection Efficiency)

Uncontrolled HAPs Emissions (ton/yr) = LFG Production Rate (m³/yr) x 35.31 ft³/m³ x (Concentration (ppmv) /1,000,000) x 1 atm / Gas Constant (0.7302 atm-ft³/lb mole-R) / Temp (60F+ 460) x Mole weight of HAPs (lb/lb mole) x (1 ton/2000 lb)

Fugitive HAP Emissions = Uncontrolled HAPs Emissions (ton/yr) x (1 - Collection Efficiency)

Captured HAPs after Control Device = Uncontrolled HAPs Emissions (ton/yr) x Collection Efficiency x (1 - Control Efficiency)

HCl Emissions (ton/yr) = LFG Production Rate (m³/yr) x 35.31 ft³/m³ x Chlorinated Compound Concentrations (ppmv) /1,000,000 x 1 atm / Gas Constant (0.7302 atm-ft³/lb mole-R) / Temp (60F+ 460) x Mole weight of HCl (lb/lb mole) x (1 ton/2000 lb) x Collection Efficiency

Total HAP Emissions (ton/yr) = Fugitive HAP Emissions (ton/yr) + HAPs after Control Device (ton/yr)

Combustion Emissions From the Open Flare and Engines

INPUTS			Facility Description:	Emission Unit ID #
Fuel Input (MMBtu/hr)	NMOC ^c (ppmv)	Flow Rate (scfm)		
35.6	600	1,173	Four (4) landfill gas engine/generators (1138 brake horsepower each)	EG-1, EG-2, EG-3, EG-4
36.4	600	1,199	Four (4) landfill gas engine/generators (1148 brake horsepower each)	EG-5, EG-6, EG-7, EG-8
121.4	600	4,000	One (1) open flare w/ capacity of 4,000 scfm landfill gas	FL-3

- Operating Scenario 1:** Operation of all eight (8) engines only
- Operating Scenario 2:** Operation of Engines (EG-1 through EG-4) and operation of the flare (FL-3) because EG-5 through EG-8 are not operating.
- Operating Scenario 3:** Operation of all Engines (EG-1 through EG-8) and minimal operation of the flare (FL-3) for remaining landfill gas emissions.

Pollutant Emission Factors						
Emission Unit	PM ^a	PM ₁₀ ^a	SO ₂ ^b	NO _x ^{a, d}	CO ^{a, d}	NMOC ^c
	(lb/10 ⁶ dscf methane)	(lb/10 ⁶ dscf methane)	(ppmv)	(lb/10 ⁶ dscf methane)	(lb/10 ⁶ dscf methane)	(ppmv)
Engines 1-4	48	48	49.6	250	470	600
Engines 5-8	48	48	49.6	250	470	600
Flare	17	17	49.6	80	444	600

Potential To Emit (ton/yr)						
Emission Unit	PM ^a	PM ₁₀ ^a	SO ₂ ^b	NO _x ^{a, d}	CO ^{a, d}	NMOC ^c
	(lb/10 ⁶ dscf methane)	(lb/10 ⁶ dscf methane)	(ppmv)	(lb/10 ⁶ dscf methane)	(lb/10 ⁶ dscf methane)	(ppmv)
Engines 1-4	8.14	8.14	2.58	42.37	79.66	1.17
Engines 5-8	8.32	8.32	2.63	43.32	81.45	1.20
Flare	9.83	9.83	8.79	46.25	256.70	4.00

Operating Scenario 1: PTE Total	16.45	16.45	5.21	85.70	161.11	2.37
Operating Scenario 2: PTE Total	17.96	17.96	11.36	88.62	336.36	5.17
Operating Scenario 3: PTE Total	26.28	26.28	14.00	131.95	417.81	6.37

Change in PTE from Current Operating Scenario (#2) and the proposed new Operating Scenario (#1)	-1.51	-1.51	-6.15	-2.93	-175.25	-2.80
--	-------	-------	-------	-------	---------	-------

Change in PTE from Current Operating Scenario (#2) and the worst case Operating Scenario (#3)	8.32	8.32	2.63	43.32	81.45	1.20
--	------	------	------	-------	-------	------

Estimated heating value for the landfill gas is 506 British thermal units per cubic foot (Btu/ft³).
 Assume landfill gas is 55% methane and one (1) cubic foot of landfill gas has heat capacity of 550 Btu.
 Fuel Input to Flares (MMBtu/hr) = Flow rate (scfm) x 60 (min/hr) x 506 (Btu/scf) x 1/1,000,000 (MMBtu/Btu).
 Assume PM emissions equal to PM₁₀ emissions.

- ^a Emission Factors are from AP-42, Chapter 2.4 - Municipal Solid Waste Landfills, Table 2.4-5: Flares and IC Engines (AP-42, 11/98).
- ^b The total inlet concentration of Sulfur content compounds in AP-42, Chapter 2.4 - Municipal Solid Waste Landfills - Table 2.4-1 (AP-42, 11/98).
- ^c The NMOC concentration is the default value in EPA Landfill Gas Emissions Model, Version 3.02 and AP-42.
- ^d The emission factors for NO_x and CO for the 4,000 scfm open flare are provided by the manufacturer as guaranteed stack gas emission factors for this equipment.

Methodology

PTE of PM / PM₁₀ / NO_x / CO Emissions (ton/yr) = Flow Rate (scfm landfill gas) / 10⁶ x Emission Factor (lb/10⁶ dscf) x 0.55 (conc. Methane in landfill gas) x 60 (min/hr) x 8760 (hr/yr) / 2000 (lb/ton)

PTE of SO₂ Emissions (ton/yr) = Flow Rate (scfm) x Emission Factor (ppmv) / 1,000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of SO₂ (64 lb/lb mole) x 60 (min/hr) x 8760 (hr/yr) / 2000 (lb/ton)

PTE of NMOC Emissions (ton/yr) = Flow Rate (scfm) x Emission Factor (ppmv) / 1,000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of Hexane (lb/lb mole) x 60 (min/hr) x 8760 (hr/yr) / (2000 lb/ton) x (1-97.2% Control Efficiency)

PSD Calculations: Gas-Limited Emissions From the Engines and Flare

Emissions for PSD purposes are limited by landfill gas inputs to engines and flare. The input of landfill gas to the engines and flares is limited by the gas production of the landfill and the ability of the collection system to collect the landfill gas. LandGEM 3.02 is used to estimate the amount of landfill gas generated. Emissions under two collection scenarios (100% and 75% collection efficiency) are modeled. Assuming 100% collection efficiency will create a scenario in which the maximum possible emissions are estimated. In actuality, 100% collection efficiency is not practical. AP 42 assumes a 75% collection efficiency.

LANDFILL GAS INPUTS (from LandGEM 3.02)		
(gas)	(m ³ /yr)	(ft ³ /yr)
Methane	25,194,646	889,748,906
NMOC	27,485	970,635
CO ₂	20,613,801	727,976,378

Input of Landfill Gas to Engines and Flare (Two Scenarios)				
Scenario	Available Landfill Gas		Allocation of Available Landfill Gas (scfm)	
	Assume 100% Collection Efficiency	616,316,206	(ft ³ /yr)	Engines 1-4
630,166,008		(ft ³ /yr)	Engines 5-8	1,199
372,213,705		(ft ³ /yr)	Flare	708
	1,618,695,919	(ft ³ /yr)	Total	3,080

Total Landfill Gas (100%)	45,835,931	1,618,695,919
---------------------------	------------	---------------

Assume 75% Collection Efficiency	616,316,206	(ft ³ /yr)	Engines 1-4	1,173
	597,705,733	(ft ³ /yr)	Engines 5-8	1,137
	0	(ft ³ /yr)	Flare	0
	1,214,021,939	(ft ³ /yr)	Total	2,310

Total Landfill Gas (75%)	34,376,949	1,214,021,939
--------------------------	------------	---------------

Emission Unit	Pollutant Emission Factors					
	PM ^a (lb/10 ⁶ dscf methane)	PM ₁₀ ^a (lb/10 ⁶ dscf methane)	SO ₂ ^b (ppmv)	NO _x ^{a,d} (lb/10 ⁶ dscf methane)	CO ^{a,d} (lb/10 ⁶ dscf methane)	NMOC ^c (ppmv)
Engines 1-4	48	48	49.6	250	470	600
Engines 5-8	48	48	49.6	250	470	600
Flare	17	17	49.6	80	444	600

Emission Unit	Limited Potential To Emit (ton/yr) (Assuming 100% collection of landfill gas)					
	PM ^a	PM ₁₀ ^a	SO ₂ ^b	NO _x ^{a,d}	CO ^{a,d}	NMOC ^c
Engines 1-4	7.48	7.48	2.58	38.98	73.29	1.17
Engines 5-8	7.65	7.65	2.63	39.86	74.93	1.20
Flare	1.60	1.60	1.56	7.53	41.81	0.71
PTE Total (for Engines 1-8 only)	15.14	15.14	5.21	78.84	148.22	2.37
PTE Total (for Engines 1-4 & flare only)	9.09	9.09	4.13	46.52	115.10	1.88
PTE Total (for all units)	16.74	16.74	6.77	86.37	190.03	3.08

Emission Unit	Limited Potential To Emit (ton/yr) (Assuming 75% collection of landfill gas)					
	PM ^a	PM ₁₀ ^a	SO ₂ ^b	NO _x ^{a,d}	CO ^{a,d}	NMOC ^c
Engines 1-4	7.48	7.48	2.58	38.98	73.29	1.17
Engines 5-8	7.26	7.26	2.50	37.80	71.07	1.14
Flare	0.00	0.00	0.00	0.00	0.00	0.00
PTE Total (for Engines 1-8 only)	14.74	14.74	5.07	76.79	144.36	2.31
PTE Total (for Engines 1-4 & flare only)	7.48	7.48	2.58	38.98	73.29	1.17
PTE Total (for all units)	14.74	14.74	5.07	76.79	144.36	2.31

PSD Minor Limits from the Renewal 18150	11.19	11.19	5.69	56.44	170.15	1.83
PTE for Engines 1-8 only (proposed scenario)	14.74	14.74	5.07	76.79	144.36	2.31
Change in PTE due to Modification	3.55	3.55	-0.62	20.35	-25.79	0.48

One cubic meter equals 35.315 cubic feet. One year equals 8760 x 60 = 525,600 minutes.
Assume landfill gas is 55% methane and one (1) cubic foot of landfill gas has heat capacity of 506 Btu.
Fuel Input to Flares (MMBtu/hr) = Flow rate (scfm) x 60 (min/hr) x 506 (Btu/scf) x 1/1,000,000 (MMBtu/Btu).
Assume PM emissions equal to PM₁₀ emissions.

^a Emission Factors are from AP-42, Chapter 2.4 - Municipal Solid Waste Landfills, Table 2.4-5: Flares and IC Engines (AP-42, 11/98).

^b The total inlet concentration of Sulfur content compounds in AP-42, Chapter 2.4 - Municipal Solid Waste Landfills - Table 2.4-1 (AP-42, 11/98).

^c The NMOC concentration is the default value in EPA Landfill Gas Emissions Model, Version 3.02 and AP-42.

^d The emission factors for NO_x and CO for the 4,000 scfm open flare are provided by the manufacturer as guaranteed stack gas emission factors for this equipment.

Methodology

PTE of PM / PM₁₀ / NO_x / CO Emissions (ton/yr) = Flow Rate (scfm landfill gas) / 10⁶ x Emission Factor (lb/10⁶ dscf) x 0.55 (conc. Methane in landfill gas) x 60 (min/hr) x 8760 (hr/yr) / 2000 (lb/ton)

PTE of SO₂ Emissions (ton/yr) = Flow Rate (scfm) x Emission Factor (ppmv) / 1,000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of SO₂ (64 lb/lb mole) x 60 (min/hr) x 8760 (hr/yr) / 2000 (lb/ton)

PTE of NMOC Emissions (ton/yr) = Flow Rate (scfm) x Emission Factor (ppmv) / 1,000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of Hexane (lb/lb mole) x 60 (min/hr) x 8760 (hr/yr) / (2000 lb/ton) x (1-97.2% Control Efficiency)

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

**Appendix C - Minor Source Modeling Analysis
Technical Support Document (TSD)
Screening Form - Raw Data**

Permit Summary

Company Name: Deercroft Recycling and Disposal Facility
Source Location: 10501 West 300 North, Michigan City, Indiana, 46360
County: LaPorte
SIC Code: 4953, 4911
Part 70 Operating Permit Renewal No.: 091-18150-00067
Source Modification No.: 091-23825-00067
Permit Modification No.: 091-23852-00067
Permit Reviewer: Kimberly Cottrell

Source Specific Information

TABLE 1 - Pollutant Emission Rates (lb/hr) - based on the highest allowable emissions rate

Unit ID	Stack ID	CO	NO _x	PM ₁₀	Pb	SO ₂
EG-5	ES-5	18.73326	9.9645	1.913184	0	0.658538946
EG-6	ES-6	18.73326	9.9645	1.913184	0	0.658538946
EG-7	ES-7	18.73326	9.9645	1.913184	0	0.658538946
EG-8	ES-8	18.73326	9.9645	1.913184	0	0.658538946
Max. Emissions Rate (lb/hr) :		74.93304	39.858	7.652736	0	2.634155784

TABLE 2 - Stack Information: (all heights are from ground level)

For non-circular stacks, take the average of the stack dimensions as the stack diameter.
 If there is no building near the stack, zero out the building height, width, and length.

Stack ID	Stack Height (ft)	Flow Rate (acfm)	Stack Temp. (°F)	Stack Diameter (ft)	Closest building related to stack:			Closest Property Line (ft)
					Height (ft)	Width (ft)	Length (ft)	
ES-5	29	6000	800	0.83	23	25	150	300
ES-6	29	6000	800	0.83	23	25	150	300
ES-7	29	6000	800	0.83	23	25	150	300
ES-8	29	6000	800	0.83	23	25	150	300

Modeling Data

TABLE 3 - Pollutant Modeling Data - grams per second

Pollutant:	CO	NO _x	PM ₁₀	Pb	SO ₂
Totals (g/s):	9.44156304	5.022108	0.964244736	0	0.331903629

TABLE 4 - Stack Modeling Data

The M-Value is calculated using a unit emission rate of 1 g/s.

The stack with the lowest M value represents the lowest dispersion coefficient and should be modeled.

Stack ID	Stack Height (m)	Stack Gas Velocity (m/s)	Stack Temp. (K)	Stack Diameter (m)	Closest building related to stack			Closest Property Line (m)	Volumetric Flow Rate (m ³ /s)	Stack M-Value
					Height (m)	Width (m)	Length (m)			
ES-5	8.841463415	56.37678618	699.82	0.25304878	7.012195122	7.62195122	45.73170732	91.46341463	2.835304512	348825.9216
ES-6	8.841463415	56.37678618	699.82	0.25304878	7.012195122	7.62195122	45.73170732	91.46341463	2.835304512	348825.9216
ES-7	8.841463415	56.37678618	699.82	0.25304878	7.012195122	7.62195122	45.73170732	91.46341463	2.835304512	348825.9216
ES-8	8.841463415	56.37678618	699.82	0.25304878	7.012195122	7.62195122	45.73170732	91.46341463	2.835304512	348825.9216

Screening Form - Modeling Results

Modeling Method

Model Used:

- SCREEN3 AERSCREEN
 ISC3 AERMOD

Date Modeling Completed: 11/30/2006

Modeler: Kimberly Cottrell

Modeling Results

TABLE 5 - Pollutants Modeling Results: 1 Hour Concentration ($\mu\text{g}/\text{m}^3$):

The modeled concentrations in this table are the 1-hour concentrations for each pollutant.
 Use tables 6 and 7 to compare the modeled data to the air quality standard.

Pollutant:	CO	NO _x	PM ₁₀	Pb	SO ₂
<i>Concentration ($\mu\text{g}/\text{m}^3$):</i>	524.3	278.8	53.31		18.33

TABLE 6 - Pollutants Maximum Concentration ($\mu\text{g}/\text{m}^3$):

Averaging Period	CO	NO _x	PM ₁₀	Pb	SO ₂
1-hour modeled concentration	524.3				
NAAQ Standard	40000				
PASS or FAIL	PASS				
3-hour modeled concentration					16.497
NAAQ Standard					1300
PASS or FAIL					PASS
8-hour modeled concentration	367.01				
NAAQ Standard/CEP Benchmark	10000				
PASS or FAIL	PASS				
24-hour modeled concentration			21.324	0	7.332
NAAQ Standard			150	1.5	365
PASS or FAIL			PASS	PASS	PASS
Annual modeled concentration		22.304	4.2648		1.4664
NAAQ Standard/CEP Benchmark		100	50		80
PASS or FAIL		PASS	PASS		PASS