



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: November 30, 2005
RE: Rumpke Of Indiana, L.L.C. / 071-21366-00038
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204.

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

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

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

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

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

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

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

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

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

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



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

PART 70 OPERATING PERMIT
OFFICE OF AIR QUALITY

Rumpke of Indiana, LLC – Medora Sanitary Landfill
546 County Road 870 West
Medora, Indiana 47260

(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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Table with permit details: Operation Permit No.: T071-21366-00038, Issuance Date: November 30, 2005, Expiration Date: November 30, 2010, and signature of Paul Dubenetzky.

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary municipal solid waste sanitary landfill, solidification process, and limestone slag screening operation.

Responsible Official:	Operations Manager
Source Address:	546 County Road 870 West, Medora, Indiana 47260
Mailing Address:	10795 Hughes Road, Cincinnati, Ohio 45251-4598
General Source Phone Number:	(513) 851-0122
SIC Code:	4953, 3295
County Location:	Jackson
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 and Emission Offset Rules; Major Source, Section 112 of the Clean Air Act

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

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

- (a) One (1) municipal solid waste sanitary landfill generating landfill gas, constructed in 1971 and modified in 2001 and 2005, with a maximum design capacity of 12,850,395 megagrams (Mg), with the landfill gas being controlled by eight (8) passive flares (ID Flare Nos. 1 through 8), constructed in 2001, each flare having a maximum landfill gas flow rate of 50 actual cubic feet per minute (acfm), and each flare exhausting through one (1) stack (ID Flare Stack Nos. 1 through 8);
- (b) One (1) non-hazardous industrial and commercial liquid waste solidification process, constructed in 2000, located in a portable steel basin for mixing liquid waste, solid waste, and mixing agents, with a maximum throughput of 1,667 gallons per hour of liquid waste, 65 tons per hour of solidified waste, and 50 tons per hour of mixing agent;
- (c) Mixing agent and solid waste material handling operations;
- (d) One (1) portable limestone slag screener, constructed in 2002, with a maximum limestone slag throughput capacity of 35 tons per hour, equipped with one (1) diesel-fired internal combustion engine, rated at 33 horsepower (HP); and
- (e) Paved and unpaved roads and parking lots with public access.

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

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

- (a) Other categories with emissions below insignificant thresholds:
 - (1) Maintenance cold cleaner degreasers, with a maximum annual usage of 240 gallons of solvent, equipped with remote solvent reservoirs and having potential VOC emissions of less than 15 pounds per day. [326 IAC 8-3-2]
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour including: [326 IAC 5-1-2]
 - (1) Four (4) gasoline-fired water pumps, each rated at 8 horsepower (HP);
 - (2) Two (2) gasoline-fired generators, each rated at 16 HP;
 - (3) One (1) gasoline-fired pressure washer, rated at 11 HP;
 - (4) Three (3) diesel-fired water pumps, each rated at 50 HP; and
 - (5) Two (2) diesel-fired light plants, each rated at 30 HP.

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 subject to the provisions of New Source Performance Standard, 326 IAC 12, (40 CFR 60.750 through 60.759, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills).

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, T071-21366-00038, 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent 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:

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 prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation.
- (c) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept 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.11 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;

- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

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

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

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) 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 T071-21366-00038 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised under 326 IAC 2-7-10.5, or
 - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

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

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

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

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

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

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

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

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

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

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

in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34). Request for renewal shall be submitted to:

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

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

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

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:
- Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
- Any such application shall be certified by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (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.

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

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).
- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

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

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

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

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

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

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

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

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

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

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

B.25 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]

- (a) The requirements to obtain a source modification approval under 326 IAC 2-7-10.5 or a permit modification under 326 IAC 2-7-12 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.26 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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.

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).

C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plans submitted on August 9, 1999, December 20, 1999 and July 1, 2004. The requirements of the plans are as follows:

- (a) Fugitive particulate matter emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following methods:
 - (1) Resurfacing with aggregate as needed;
 - (2) Watering on an as needed basis;
 - (3) Speed reduction.
- (b) Fugitive particulate matter emissions from storage piles shall be controlled by one or more of the following methods on an as needed basis:
 - (1) Keep mixing agent storage piles in enclosures whenever possible;
 - (2) Covering the mixing agent storage piles with tarp when piles are outdoors and not in use.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue

Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

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

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) 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.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

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 June 13, 2000.
- (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 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.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

- (a) Pursuant to 326 IAC 2-6-3(b)(3), starting in 2006 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.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. 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.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. 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) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

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

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

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

- (a) One (1) municipal solid waste sanitary landfill generating landfill gas, constructed in 1971 and modified in 2001 and 2005, with a maximum design capacity of 12,850,395 megagrams (Mg), with the landfill gas being controlled by eight (8) passive flares (ID Flare Nos. 1 through 8), constructed in 2001, each flare having a maximum landfill gas flow rate of 50 actual cubic feet per minute (acfm), and each flare exhausting through one (1) stack (ID Flare Stack Nos. 1 through 8);
- (b) One (1) non-hazardous industrial and commercial liquid waste solidification process, constructed in 2000, located in a portable steel basin for mixing liquid waste, solid waste, and mixing agents, with a maximum throughput of 1,667 gallons per hour of liquid waste, 65 tons per hour of solidified waste, and 50 tons per hour of mixing agent;
- (c) Mixing agent and solid waste material handling operations;
- (d) One (1) portable limestone slag screener, constructed in 2002, with a maximum limestone slag throughput capacity of 35 tons per hour, equipped with one (1) diesel-fired internal combustion engine, rated at 33 horsepower (HP); and
- (e) Paved and unpaved roads and parking lots with public access.

(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][326 IAC 14-1][326 IAC 20-1] [40 CFR Part 60, Subpart A][40 CFR Part 61, Subpart A][40 CFR Part 63, Subpart A]

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

D.1.2 New Source Performance Standards for Municipal Solid Waste Landfill [326 IAC 12] [40 CFR 60.752, Subpart WWW]

Pursuant to 40 CFR 60.752(b), if the NMOC emission rate, upon recalculation in accordance with the procedures specified in condition D.1.7, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with 40 CFR 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate.

D.1.3 Municipal Solid Waste Landfills Not Located in Clark, Floyd, Lake and Porter Counties
[326 IAC 8-8.1]

The municipal solid waste landfill is subject to 326 IAC 8-8.1 (Municipal Solid Waste Landfills Not Located in Clark, Floyd, Lake and Porter Counties) which incorporates by reference 40 CFR 60.751, 60.752, 60.753, 60.754, 60.755, 60.756, 60.757, 60.758 and 60.759 (40 CFR 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills).

D.1.4 National Emission Standards for Hazardous Air Pollutants for Active Asbestos Waste Disposal Sites [326 IAC 14][40 CFR 61.154, Subpart M]

Pursuant to 40 CFR 61.154 (c)(1), at the end of each operating day or at least once every 24-hour period, asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall be covered with at least 15 centimeters (6 inches) of compacted non asbestos containing material.

D.1.5 Hazardous Air Pollutants (HAPs) [326 IAC 2-4.1-1]

The throughput of liquid waste to the solidification process shall not exceed 6,240,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. The concentration of any single HAP, that is also a VOC, shall not exceed 200 milligrams (mg) per liter. This will limit potential single HAP and combined HAPs emissions to less than 10 tons per year and 25 tons per year, respectively.

D.1.6 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the mixing agent loading and unloading operations shall not exceed 44.58 pounds per hour, when operating at a maximum process weight rate of 100,000 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from each of the solidified waste and solid waste or refuse loading and unloading operations shall not exceed 51.28 pounds per hour, when each is operating at a maximum process weight rate of 200,000 pounds per hour.
- (c) Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the limestone slag screener shall not exceed 41.32 pounds per hour, when operating at a maximum process weight rate of 70,000 pounds per hour.

The pounds per hour limitations were calculated with the following equation:

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

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

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

D.1.7 Non Methane Organic Compound (NMOC) Rate Calculation [40CFR 60.754]

Pursuant to 40 CFR 60.754 the Permittee shall:

- (1) Calculate the non methane organic compound (NMOC) emission rate using either the equation provided in 40 CFR 60.754(a)(1)(i) or the equation provided in 40 CFR 60.754(a)(1)(ii). Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in 40 CFR 60.754(a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph 40 CFR 60.754(a)(1)(ii), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o , and 4,000 parts per million by volume as hexane for the C_{NMOC} . For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

The following equation shall be used if the actual year-to-year solid waste acceptance rate is known:

$$M_{NMOC} = \sum_{i=1}^n 2 k L_o M_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year
k = methane generation rate constant, year⁻¹
 L_o = methane generation potential, cubic meters per megagram solid waste
 M_i = mass of solid waste in the ith section, megagrams
 t_i = age of the ith section, years
 C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
 3.6×10^{-9} = conversion factor

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

The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown:

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

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year
 L_o = methane generation potential, cubic meters per megagram solid waste
R = average annual acceptance rate, megagrams per year
k = methane generation rate constant, year⁻¹
t = age of landfill, years
 C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
c = time since closure, years. For active landfill c = 0 and $e^{-kc} = 1$
 3.6×10^{-9} = conversion factor

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

- (2) Tier 1. The Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

If the NMOC emission rate calculated in 40 CFR 60.754(a)(1) is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in 40 CFR 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under 40 CFR 60.752(b)(1). If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in 40 CFR 60.754(a)(3).

Tier 2. The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The Permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of appendix A of 40 CFR 60 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), minus carbon monoxide, hydrogen sulfide, and mercury. If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in analysis. The Permittee shall divide the NMOC concentration from Method 25 or 25C of appendix A by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

The Permittee shall recalculate the NMOC mass emission rate using the equations provided in 40 CFR 60.754(a)(1)(i) and (a)(1)(ii) and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in 40 CFR 60.754(a)(1).

If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in 40 CFR 60.754(a)(4).

If the resulting NMOC mass emission rate is less than 50 megagrams per year, the Permittee shall submit a periodic estimate of the emission rate report as provided in 40 CFR 60.757(b)(1) and retest the site-specific NMOC concentration every five (5) years using the methods in 40 CFR 60.754(a)(3).

Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of 40 CFR 60. The Permittee shall estimate the NMOC mass emission rate using equations in 40 CFR 60.754(a)(1)(i) or (a)(1)(ii) and using a site-specific methane generation rate constant k , and the site-specific NMOC concentration as determined in 40 CFR 60.754(a)(3) instead of the default values provided in 40 CFR 60.754(a)(1). The Permittee shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the Permittee shall comply with 40 CFR 60.752(b)(2).

If the NMOC mass emission rate is less than 50 megagrams per year, then the Permittee shall submit a periodic emission rate report as provided in 40 CFR 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in 40 CFR 60.757(b)(1) using the equations in 40 CFR 60.754(a)(1) and using the site-specific methane generation rate constant and NMOC concentration obtained in 40 CFR 60.754(a)(3). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.

The Permittee may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in 40 CFR 60.754(a)(3) and (a)(4) if the method has been approved by the IDEM, OAQ.

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

D.1.8 Record Keeping and Reporting Requirements

- (a) To document compliance with Condition D.1.5, the Permittee shall maintain records of the throughput of liquid waste, in gallons, to the solidification process. The records shall be taken monthly and shall be complete and sufficient to establish compliance with the HAP emission limits established in Condition D.1.5. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (b) A quarterly summary of the information to document compliance with Condition D.1.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.9 Record Keeping and Reporting Requirements [326 IAC 14][40 CFR 61.154, Subpart M]

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

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

- (3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.
- (4) Location of any temporary storage site and the final disposal site.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.10 Record Keeping and Reporting Requirements [326 IAC 12] [40 CFR 60.750, Subpart WWW]

- (a) Pursuant to 40 CFR 60.757, except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee shall submit an initial design capacity report to the Office of Air Quality (OAQ) no later than 90 days after the date of commenced construction, modification or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996. An amended design capacity report shall be submitted to the Office of Air Quality (OAQ) providing notification of any increase in the design capacity of the landfill. The Permittee's initial design capacity report was submitted on June 13, 1996.
- (b) Pursuant to 40 CFR 60.758, except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee subject to the provisions of 40 CFR 60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.
- (c) Pursuant to 40 CFR 60.752(a)(1) and 40 CFR 60.757(a)(3), the Permittee shall submit to the IDEM, OAQ an amended design capacity report providing notification of an increase in the design capacity of the landfill, within ninety (90) days of an increase in the maximum design capacity of the landfill to or above 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in 40 CFR 60.758(f).
- (d) Pursuant to 40 CFR 60.752(b)(1), if the calculated NMOC emission rate is less than 50 megagrams per year, the Permittee shall:
 - (1) Submit an annual emission report to the IDEM, OAQ, except as provided for in 40 CFR 60.757(b)(1)(ii) or 40 CFR 60.757(b)(3); and
 - (2) Recalculate the NMOC emission rate annually using the procedures specified in 40 CFR 60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.
- (e) Pursuant to 40 CFR 60.752(b), if the landfill is permanently closed, a closure notification shall be submitted to the IDEM, OAQ as provided for in 40 CFR 60.757(d).
- (f) Pursuant to 40 CFR 60.757(b), the IDEM, OAQ may request such additional information as may be necessary to verify the reported NMOC emission rate.
 - (1) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR 60.754(a).

- (i) The initial NMOC emission rate report may be combined with the initial design capacity report required in 40 CFR 60.757(a) and shall be submitted no later than indicated as follows. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in 40 CFR 60.757 (b)(1)(ii) and (b)(3).
 - (A) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.
 - (ii) If the estimated NMOC emission rate as reported in the annual report to the IDEM, OAQ is less than 50 megagrams per year in each of the next 5 consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the IDEM, OAQ. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the IDEM, OAQ. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.
- (2) The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12]
[326 IAC 2-7-5]

- (a) The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information regarding which compliance option or options will be chosen when the landfill is required to install a collection and control system in accordance with 40 CFR 60.752(b)(2) of subpart WWW.
- (b) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Part 70 permit the applicable requirements of 40 CFR 63, Subpart AAAAA, a description of the affected source and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.
- (c) The significant permit modification application shall be submitted within thirty (30) days of the submittal of a landfill gas collection and control system design plan to the IDEM, OAQ in accordance with 40 CFR 60.752 (b)(2).
- (d) The significant permit modification application shall be submitted to:

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

SECTION D.2

FACILITY OPERATION CONDITIONS

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

Insignificant Activities:

- (a) Other categories with emissions below insignificant thresholds:
 - (1) Maintenance cold cleaner degreasers, with a maximum annual usage of 240 gallons of solvent, equipped with remote solvent reservoirs and having potential VOC emissions of less than 15 pounds per day. [326 IAC 8-3-2]

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

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

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for maintenance cold cleaner degreasers constructed after January 1, 1980, the Permittee shall:

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Rumpke of Indiana, LLC – Medora Sanitary Landfill
Source Address: 546 County Road 870 West, Medora, Indiana 47260
Mailing Address: 10795 Hughes Road, Cincinnati, Ohio 45251
Part 70 Permit No.: 071-21366-00038

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: 317-233-5674
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Rumpke of Indiana, LLC – Medora Sanitary Landfill
Source Address: 546 County Road 870 West, Medora, Indiana 47260
Mailing Address: 10795 Hughes Road, Cincinnati, Ohio 45251
Part 70 Permit No.: 071-21366-00038

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) |
| X | The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and |
| X | The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), 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

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:

Title / Position:

Date:

Phone:

A certification is not required for this report.

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

Part 70 Quarterly Report

Source Name: Rumpke of Indiana, LLC – Medora Sanitary Landfill
Source Address: 546 County Road 870 West, Medora, Indiana 47260
Mailing Address: 10795 Hughes Road, Cincinnati, Ohio 45251-4598
Part 70 No.: T071-21366-00038
Facility: Solidification process
Parameter: throughput of liquid waste
Limit: The throughput of liquid waste to the solidification process shall not exceed 6,240,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Liquid Waste Throughput This Month (gallons)	Liquid Waste Throughput Previous 11 Months (gallons)	12 Month Total Liquid Waste Throughput (gallons)
Month 1			
Month 2			
Month 3			

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

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

Attach a signed certification to complete this report.

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

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

Source Name: Rumpke of Indiana, LLC – Medora Sanitary Landfill
 Source Address: 546 County Road 870 West, Medora, Indiana 47260
 Mailing Address: 10795 Hughes Road, Cincinnati, Ohio 45251
 Part 70 Permit No.: 071-21366-00038

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

<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>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed By:

Title/Position:

Date:

Phone:

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

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

Source Background and Description

Source Name:	Rumpke of Indiana, LLC – Medora Sanitary Landfill
Source Location:	546 County Road 870 West, Medora, Indiana 47260
County:	Jackson
SIC Code:	4953, 3295
Operation Permit No.:	071-21366-00038
Operation Permit Issuance Date:	November 30, 2005
Permit Reviewer:	Gaurav Shil/EVP

On September 22, 2005, the Office of Air Quality (OAQ) had a notice published in the Tribune, Seymour, Indiana, stating that Rumpke of Indiana, LLC – Medora Sanitary Landfill had applied for a Part 70 permit T071-21366-00038. This notice was for the operation of a municipal solid waste sanitary landfill, solidification process, and limestone slag screening operation. 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 October 19, 2005, OAQ received comments from Rumpke of Indiana, LLC – Medora Sanitary Landfill on the proposed Part 70 permit. Upon further consideration, IDEM, OAQ has decided to make changes to the permit as indicated below. The summary of the comments and corresponding responses is shown below. Changes made to the permit as a result of the comments are shown in bold and deleted permit language is shown with a line through it. Any permit changes affecting the permit's Table of Contents are also revised without replication herein.

Comment 1:

40 CFR 60 Subpart Kb Requirements on Leachate Storage Basins:

On October 14, 2005, the facility conducted a vapor pressure test on the leachate, which indicated the maximum true vapor pressure of leachate was 4.33 kPa. Because the leachate vapor pressure is between 3.5 kPa and 5.2 kPa, the requirements in New Source Performance Standards (NSPS) 40 CFR 60 Subpart Kb potentially apply to several leachate storage basins at the facility. Please note the two 20,000-gallon leachate storage tanks are not subject to the 40 CFR 60 Subpart Kb requirements because their capacity is below the cut-off size of 75 m³. For these tanks, the vapor pressure must be \geq 15 kPa for Subpart Kb requirements to apply. The storage basins that are of concern include: the existing leachate storage basin #1 (480,000 gal), proposed leachate storage basin #2 (750,000 gal), proposed temporary leachate basin #1 (270,000 gal) and proposed temporary leachate basin #2 (480,000 gal).

The NSPS Subpart Kb requirements apply to "storage vessels". The definition of "storage vessel" under 40 CFR 60.111b includes "each tank, reservoir, or container used for the storage of organic liquids...". We consider the leachate storage basins as surface impoundments rather than tanks.

The terms "surface impoundment" and "tank" are defined differently in several NESHAP and NSPS subparts:

Surface impoundments means a unit that is a natural topographical depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquids. Examples of surface impoundments include holding, storage, settling and aeration pits, ponds and lagoons.

Tank means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass or plastic) which provide structural support and is designed to hold an accumulation of liquids or other materials.

The leachate storage basins at the facility are made of earthen materials and therefore, should be considered surface impoundments rather than tanks. An applicability determination made by the Texas Natural Resource Conservation Commission (TNRCC) clearly illustrated: "Because brine ponds and other surface impoundments were not considered in the source category of storage vessels used to store petroleum, petroleum products or volatile organic liquids when the standards were promulgated, brine ponds and surface impoundments are not subject to the requirements of 40 CFR 60, Subpart K, Ka and/or Kb".

Therefore, we believe that the leachate storage basins are exempt from the 40 CFR 60 Subpart Kb requirements. We respectfully request an applicability determination should IDEM, OAQ not agree with our conclusion.

Response to Comment 1:

IDEM agrees that 40 CFR 60, Subpart Kb requirements apply to "storage vessels". Pursuant to 40 CFR 60.111b, the leachate storage basins at the facility are made of earthen materials and therefore, should be considered surface impoundments. The leachate storage basins should not be considered in the source category of storage vessels used to store petroleum, petroleum products or volatile organic liquids. Hence, the leachate storage basins are exempt from the 40 CFR 60 Subpart Kb requirements.

Since the source requested an applicability determination the following changes are noted in this addendum. IDEM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the Technical Support Document that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that all comments and responses are documented and part of the records regarding this permit decision.

IDEM agrees that the TSD should have read as follows:

Federal Rule Applicability

-
- (c) Pursuant to 40 CFR 60.110b (a), the requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb)* apply to any volatile organic liquid (VOL) storage vessel with a capacity of 75 m³ (19,800 gallons) or greater for which construction commenced after July 23, 1984. Pursuant to 40 CFR 60.110b (b), the requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb)* do not apply to any VOL storage vessel with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m³ (19,800 gallons) but less than 151 m³ (39,890 gallons) storing a liquid with a maximum true vapor pressure less than 15 kPa.

The maximum true vapor pressure of leachate in leachate storage basin #1 (480,000 gal), leachate storage basin #2 (750,000 gal), temporary leachate basin #1 (270,000 gal) and temporary leachate basin #2 (480,000 gal) is 4.33 kPa, is between the rule applicability range of 3.5 kPa and 5.2 kPa. However, pursuant to 40 CFR 60.111b, these basins are surface impoundments and are not considered in the source category of storage vessels used to store petroleum, petroleum products

or volatile organic liquids. Therefore, the requirements of 40 CFR 60, Subpart Kb, are not included in the permit for these storage basins.

The liquid stored in ~~each~~ **all other** VOL storage vessels with a capacity greater than or equal to 39,890 gallons has a maximum true vapor pressure less than 3.5 kilopascals (kPa) and the liquid stored in each VOL storage vessel with a capacity greater than 19,800 gallons but less than 39,890 gallons has a maximum true vapor pressure less than 15 kPa.

Therefore, pursuant to 40 CFR 60.110b (b), as amended in the October 15, 2003 Federal Register, the requirements of this rule are not included in the permit for any storage tank.

Comment 2:

Specifically Regulated Insignificant Activities (Section A.3):

This section should also include the gasoline and diesel IC engines because they are subject to the opacity limitations in 326 IAC 5-1-2.

Response to Comment 2:

IDEM agrees that Section A.3, Specifically Regulated Insignificant Activities, should include the gasoline and diesel IC engines because they are subject to the opacity limitations in 326 IAC 5-1-2. The following changes are made to the permit as a result of this comment:

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

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

- (a) Other categories with emissions below insignificant thresholds:
 - (1) Maintenance cold cleaner degreasers, with a maximum annual usage of 240 gallons of solvent, equipped with remote solvent reservoirs and having potential VOC emissions of less than 15 pounds per day. [326 IAC 8-3-2]
- (b) **Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour including: [326 IAC 5-1-2]**
 - (1) **Four (4) gasoline-fired water pumps, each rated at 8 horsepower (HP);**
 - (2) **Two (2) gasoline-fired generators, each rated at 16 HP;**
 - (3) **One (1) gasoline-fired pressure washer, rated at 11 HP;**
 - (4) **Three (3) diesel-fired water pumps, each rated at 50 HP; and**
 - (5) **Two (2) diesel-fired light plants, each rated at 30 HP.**

Comment 3:

NSPS 40 CFR 60 Subpart WWW Tier 2 Testing Requirements (Condition D.1.7):

In addition to Method 25C, NSPS 40 CFR 60 Subpart WWW also allows Method 25 for the non-methane organic compounds (NMOC) concentrations in Tier 2 tests. Also, when using Method 18, the compounds carbon monoxide, hydrogen sulfide and mercury are not required to be tested. Therefore, we respectfully request that the third paragraph on page 29 of 40 to be revised to read: "...The permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or Method 25C of appendix A of 40 CFR 60 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), minus carbon

monoxide, hydrogen sulfide, and mercury... The Permittee shall divide the NMOC concentration from Method 25 or Method 25C of appendix A by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

Response to Comment 3:

IDEM agrees that 40 CFR 60 Subpart WWW also allows Method 25 for the measurement of non-methane organic compounds (NMOC) concentrations in Tier 2 tests in addition to Method 25C. Also, when using Method 18, the compounds carbon monoxide, hydrogen sulfide and mercury are not required to be tested. Therefore, the following changes are made to the permit:

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

D.1.7 Non Methane Organic Compound (NMOC) Rate Calculation [40CFR 60.754]

Pursuant to 40 CFR 60.754 the Permittee shall:

.....

- (2) Tier 1. The Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

If the NMOC emission rate calculated in 40 CFR 60.754(a)(1) is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in 40 CFR 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under 40 CFR 60.752(b)(1). If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in 40 CFR 60.754(a)(3).

Tier 2. The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The Permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method **25 or 25C** of appendix A of 40 CFR 60 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), **minus carbon monoxide, hydrogen sulfide, and mercury**. If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in analysis. The Permittee shall divide the NMOC concentration from Method **25 or 25C** of appendix A by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

Comment 4:

Initial Design Capacity Report Submittal (Condition D.1.10):

We are uncertain of the significance of the date October 8, 1997 that appeared under Condition D.1.10(a) (page 32 of 40). We respectfully request that this paragraph be revised using the language in 40 CFR 60.757(a)(1)(ii): "...the Permittee shall submit an initial design capacity report to the Office of Air Quality (OAQ) no later than 90 days after ~~October 8, 1997~~ the date of commenced construction, modification or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996."

Response to Comment 4:

Condition D.1.10(a) was replicated from FESOP 071-11615-00038, issued on April 12, 2000. IDEM agrees that the exact language in 40 CFR 60.757(a)(1)(ii) should be included in the permit. Therefore, the following changes are made to the permit:

D.1.10 Record Keeping and Reporting Requirements [326 IAC 12] [40 CFR 60.750, Subpart WWW]

- (a) Pursuant to 40 CFR 60.757, except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee shall submit an initial design capacity report to the Office of Air Quality (OAQ) no later than 90 days after ~~October 8, 1997~~ **the date of commenced construction, modification or reconstruction for landfills that commence construction, modification or reconstruction on or after March 12, 1996**. An amended design capacity report shall be submitted to the Office of Air Quality (OAQ) providing notification of any increase in the design capacity of the landfill. The Permittee's initial design capacity report was submitted on June 13, 1996.

Comment 5:

Technical Support Document, Page 12 of 17:

The portable limestone slag screener does not crush or grind slag. In addition, 40 CFR 60.670(a)(2) exempts stand-alone screening operations without crushers or grinding mills. Therefore, we respectfully request this paragraph to be revised to reflect this exemption.

Response to Comment 5:

Pursuant to 40 CFR 60.670(a)(2), stand-alone screening operations without crushers or grinding mills are exempt from the requirements of 40 CFR 60, Subpart OOO. The source also pointed out that the slag screener does not crush or grind slag. The following changes are made to the Technical Support Document with this addendum. IDEM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the Technical Support Document that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that all comments and responses are documented and part of the records regarding this permit decision.

IDEM agrees that the TSD should have read as follows:

Federal Rule Applicability

- (d) The requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.670, Subpart OOO)* apply to stack and fugitive emissions from fixed or portable nonmetallic mineral processing facilities. Pursuant to 40 CFR 60.671, nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals. No equipment, ~~except the portable limestone slag screener,~~ at the facility crushes or grinds any nonmetallic mineral as defined in 40 CFR 60.671. Pursuant to 40 CFR 60.670~~(e)~~**(a)**(2), the limestone slag screener shall be exempt from the requirements of this rule because ~~the capacity of the screener is less than 150 tons per hour~~ **stand-alone screening operations without crushers or grinding mills are exempt from the requirements of this rule**. Therefore, the requirements of this rule are not included in the permit.

Comment 6:

Technical Support Document, Page 15 of 17:

The potential particulate matter (PM) emissions in the table should be revised based upon the mean wind speed of 9.6 mph for Indianapolis in order to be consistent with the calculations in the TSD Appendix A. The correct potential PM emissions for mixing agent loading and unloading operations, solidified waste loading and unloading and solid waste dumping operations are 2.19 pounds per hour and 0.24 pounds per hour, respectively.

Response to Comment 6:

The following changes are made to the Technical Support Document with this addendum so that the emissions table is consistent with the calculations in the TSD Appendix A. IDEM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the Technical Support Document that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that all comments and responses are documented and part of the records regarding this permit decision.

IDEM agrees that the TSD should have read as follows:

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The particulate from the facilities at this source shall be limited as specified in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission (pounds per hour)
Mixing agent loading and unloading operations	50	44.58	2.92 2.19
Solidified waste loading and unloading and solid waste dumping operations	100	51.28	0.32 0.24
Limestone slag screener	35	41.32	0.87

Comment 7:

TSD Appendix A – Emission Calculations:

- Page 1 of 21 Potential Emissions and Limited Emissions: The volatile organic compounds (VOC) emissions from passive flares should be 0.11 tons/yr, not 0 tons/yr. Also, the VOC emissions from insignificant activities did not include 0.83 tons/yr from degreasing and storage tanks. The total should be 10.6 tons/yr.
- Page 1 of 21 Potential Emissions of PM: The potential emissions for PM and PM-10 from storage piles, material handling and unpaved roadways should be 852.99 tons/yr and 226.63 tons/yr, respectively. Please refer to the 5th item below regarding the errors on Page 7 of 21.
- Page 1 of 21 Limited Emissions of PM: The limited PM emissions from storage piles, material handling and unpaved roadways did not include 3.83 tons/yr from the screening operations. The correct PM and PM-10 emissions are 226.82 tons/yr and 62.6 tons/yr, respectively.
- Page 2 of 21 Storage Piles and Roadways: The element p (number of days with precipitation greater than or equal to 0.01 inches per year) should be 125 days, not 120 days as indicated. This will provide consistency with the calculations for paved and unpaved roadway PM and PM-10 emissions on pages 4-12 of 21.

- Page 7 of 21 Total Potential and Controlled Emissions from Unpaved Roadways: Our calculations yielded total potential PM-10 and PM emissions of 203.26 tons/yr and 752.92 tons/yr, respectively. As a result, the total controlled emissions for PM-10 and PM are 50.82 tons/yr and 188.23 tons/yr, respectively. It appears that the total did not include the emissions from leachate hauler and employee/supervisor vehicles. We respectfully request IDEM, OAQ to verify these numbers.

Response to Comment 7:

- IDEM agrees that the VOC emissions from passive flares should be 0.11 tons/yr. Also, the VOC emissions from the degreasing and storage tanks are included in the total emissions from the insignificant activities. Therefore, the emission calculations are revised to reflect this change.
- The potential emissions for PM and PM-10 from storage piles, material handling and unpaved roadways are revised to reflect the changes made to the total potential and controlled emissions from unpaved roadways as explained in paragraph 5 below.
- The limited PM emissions from storage piles, material handling and unpaved roadways are revised to include the emissions from the screening operations.
- IDEM agrees that the element p (number of days with precipitation greater than or equal to 0.01 inches per year) used in the emission calculations for storage piles and roadways should be 125 days, not 120 days as indicated. The emission calculations are revised to reflect this change.
- IDEM agrees that the total potential and controlled emissions from unpaved roadways do not include the emissions from leachate hauler and employee/supervisor vehicles. Therefore, the emission calculations are revised to correct this error.

The following changes are made to the Technical Support Document with this addendum so that the emissions tables are consistent with the calculations in the TSD Appendix A. IDEM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the Technical Support Document that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that all comments and responses are documented and part of the records regarding this permit decision.

IDEM agrees that the TSD should have read as follows:

Potential to Emit of the Source

.....

Pollutant	Potential to Emit (tons/yr) ⁽¹⁾
PM	812.84 872.20 ⁽²⁾
PM-10	218.36 234.43 ⁽²⁾
SO ₂	4.09
VOC	95.5 96.44
CO	190.83
NO _x	39.15

Potential to Emit After Controls for the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

Process/facility	Potential to Emit for the Modification (tons/year)							
	PM	PM-10	SO ₂	VOC	CO	NO _x	Single HAP	Total HAPs
Storage Piles, Material Handling, Paved and Unpaved Roadways (fugitive emissions)	66.08 84.75	15.94 19.93	-	-	-	-	-	-
Sanitary Landfill	-	-	-	43.79	-	-	7.73	22.64
Insignificant activities: leachate storage basin (750,000 gal), leachate UST (2,000 gal), temporary leachate basin #1 (270,000 gal), temporary leachate basin #2 (480,000 gal) and two diesel fired water pumps (50 hp each)	0.96	0.96	0.90	1.29	2.93	13.58	Negligible	Negligible
Total Modification Emissions (non-fugitive)	0.96	0.96	0.90	45.08	2.93	13.58	7.73	22.64
PSD Significant Modification Thresholds	250	250	250	N/A	250	N/A	N/A	N/A
Emission Offset Significant Levels	N/A	N/A	N/A	100	N/A	100	N/A	N/A

Process/emission unit	Potential to Emit (PTE) After Issuance for the Source (tons/year)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Storage Piles, Material Handling, Paved and Unpaved Roadways (fugitive emissions)	212.08 230.75	59.64 63.66	0.00	0.00	0.00	0.00	0.00
Solidification Process	0.00	0.00	0.00	13.74	0.00	0.00	13.61
Sanitary Landfill	0.00	0.00	0.00	48.07	0.00	0.00	26.04
Passive Flares	0.89	0.89	0.88	0.00 0.11	39.42	2.10	0.00
Insignificant activities	2.61	2.62	3.21	9.78 10.61	151.41	37.05	0.05
Total PTE for Source after Issuance (non-fugitive)	3.5	3.52	4.09	71.60 72.53	190.83	39.15	39.70
PSD Threshold Levels	250	250	250	N/A	250	N/A	N/A
Emission Offset Significant Levels	N/A	N/A	N/A	100	N/A	100	N/A

Comment 8:

Typographical Errors:

1. Draft Title V permit condition D.1.2 (page 26 of 40): "...if the NMOC emission rate, upon recalculation in accordance with the procedures specified in condition ~~D.1.6~~ **D.1.7**, is equal to or greater than 50 megagrams per year...."
2. Draft Title V permit page 27 of 40: The regulatory citation of [326 IAC 2-7-19] for Record Keeping and Reporting Requirements should be deleted because it relates to fees, not record keeping and reporting.
3. TSD Page 7 of 17: In the table "Potential to Emit for the Modification", the insignificant activities should include "leachate storage basin", not "leachate storage bin".
4. TSD Appendix A Page 14 of 21: The last line should read "... (see Appendix A, page ~~10 of 14-15 of 21~~ for controlled landfill gas calculation)".

Response to Comment 8:

1. The condition reference in the permit condition D.1.2 is revised without replication herein.
2. 326 IAC 2-7-19 is the permitting authority to report emissions related information to IDEM, OAQ for fee calculation purposes. Therefore, no change is made to the permit as a result of this comment.
3. IDEM agrees that the TSD should have read as follows:

Potential to Emit After Controls for the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

Process/facility	Potential to Emit for the Modification (tons/year)							
	PM	PM-10	SO ₂	VOC	CO	NO _x	Single HAP	Total HAPs
Storage Piles, Material Handling, Paved and Unpaved Roadways (fugitive emissions)	84.75	19.93	-	-	-	-	-	-
Sanitary Landfill	-	-	-	43.79	-	-	7.73	22.64
Insignificant activities: leachate storage bin basin (750,000 gal), leachate UST (2,000 gal), temporary leachate basin #1 (270,000 gal), temporary leachate basin #2 (480,000 gal) and two diesel fired water pumps (50 hp each)	0.96	0.96	0.90	1.29	2.93	13.58	Negligible	Negligible

4. TSD Appendix A, Page 14 of 21, is revised to correct the typographical error.

Upon further consideration, IDEM, OAQ has decided to make changes to the permit as indicated below. The summary of the comments and corresponding responses is shown below. Changes made to the permit as a result of the comments are shown in bold and deleted permit language is shown with a line through it. Any permit changes affecting the permit's Table of Contents are also revised without replication herein.

1. IDEM has determined that the Permittee is not required to keep records of all preventive maintenance. However, where the Permittee seeks to demonstrate that an emergency has occurred, the Permittee must provide, upon request, records of preventive maintenance in order to establish that the lack of proper maintenance did not cause or contribute to the deviation. Therefore, IDEM has deleted paragraph (b) of Section B – Preventive Maintenance, and has amended the Section B – Emergency Provisions condition as follows:

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 prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

~~The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

- ~~(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)(b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or **contributes to any violation.** ~~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.~~

- (c) **Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept 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.11 Emergency Provisions [326 IAC 2-7-16]

- (e) **The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.**

- 2. IDEM has decided to revise the permit to include the most recent IDEM mailing address without replication herein.
- 3. Condition B.20, Operational Flexibility, has been revised as follows to make typographical corrections:

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

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

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

- 4. The 326 IAC 6-3 revisions that became effective on June 12, 2002 were approved into the State Implementation Plan on September 23, 2005. These rules replace the previous version of 326 IAC 6-3 (Process Operations) 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 has been revised as follows to remove (a) which contained these requirements:

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 ~~[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.~~

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name:	Rumpke of Indiana, LLC – Medora Sanitary Landfill
Source Location:	546 County Road 870 West, Medora, Indiana 47260
County:	Jackson
SIC Code:	4953, 3295
Operation Permit No.:	071-21366-00038
Operation Permit Issuance Date:	November 30, 2005
Permit Reviewer:	Gaurav Shil/EVP

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from Rumpke of Indiana, LLC – Medora Sanitary Landfill relating to the operation of a municipal solid waste sanitary landfill, solidification process, and limestone slag screening operation.

This Part 70 operating permit contains provisions intended to satisfy the requirements of the construction permit rules.

History

The existing municipal solid waste landfill currently operates under FESOP no. 071-11615-00038 issued on April 12, 2000. The Permittee applied for approval for a lateral expansion of the sanitary landfill. The expansion will create approximately 13.24 million cubic yards of air space in addition to the existing landfill capacity of 2.04 million megagrams (Mg). The total landfill capacity after expansion will be 12.85 million Mg. Therefore, pursuant to 40 CFR 60.752 (c), the source shall be subject to Part 70 requirements. Hence, pursuant to 326 IAC 2-8-19, the request is being reviewed as transition from a federally enforceable state operating permit (FESOP) to a Part 70 permit.

Permitted Emission Units and Pollution Control Equipment

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

- (a) One (1) municipal solid waste sanitary landfill generating landfill gas, constructed in 1971 and modified in 2001 and 2005, with a maximum design capacity of 12,850,395 megagrams (Mg), with the landfill gas being controlled by eight (8) passive flares (ID Flare Nos. 1 through 8), constructed in 2001, each flare having a maximum landfill gas flow rate of 50 actual cubic feet per minute (acfm), and each flare exhausting through one (1) stack (ID Flare Stack Nos. 1 through 8);
- (b) One (1) non-hazardous industrial and commercial liquid waste solidification process, constructed in 2000, located in a portable steel basin for mixing liquid waste, solid waste, and mixing agents, with a maximum throughput of 1,667 gallons per hour of liquid waste, 65 tons per hour of solidified waste, and 50 tons per hour of mixing agent;
- (c) Mixing agent and solid waste material handling operations;
- (d) One (1) portable limestone slag screener, constructed in 2002, with a maximum limestone slag throughput capacity of 35 tons per hour, equipped with one (1) diesel-fired internal combustion engine, rated at 33 horsepower (HP); and

- (e) Paved and unpaved roads and parking lots with public access.

Unpermitted Emission Units and Pollution Control Equipment

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

Insignificant Activities

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

- (a) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour including:
 - (1) One (1) shop propane furnace, rated at 0.11 MMBtu per hour;
 - (2) One (1) break room propane furnace, rated at 0.09 MMBtu per hour; and
 - (3) One (1) old shop propane furnace, rated at 0.11 MMBtu per hour.
- (b) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight including:
 - (1) Two (2) kerosene-fired steam washers, each rated at 0.0231 MMBtu per hour; and
 - (2) Two (2) kerosene-fired space heaters, each rated at 0.165 MMBtu per hour.
- (c) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour including:
 - (1) Four (4) gasoline-fired water pumps, each rated at 8 horsepower (HP);
 - (2) Two (2) gasoline-fired generators, each rated at 16 HP;
 - (3) One (1) gasoline-fired pressure washer, rated at 11 HP;
 - (4) Three (3) diesel-fired water pumps, each rated at 50 HP; and
 - (5) Two (2) diesel-fired light plants, each rated at 30 HP.
- (d) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons, which includes:
 - (1) One (1) 500 gallons gasoline storage tank.
- (e) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons and dispensing less than or equal to 230,000 gallons per month, which includes:
 - (1) One (1) kerosene 250 gallons storage tank; and
 - (2) One (1) diesel on-road 10,000 gallons storage tank.
- (f) VOC and HAP storage vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids including:
 - (1) One (1) 550 gallons hydraulic oil storage tank;
 - (2) One (1) 550 gallons motor oil storage tank; and
 - (3) Two (2) 275 gallons waste motor oil storage tanks.

- (g) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment, including:
 - (1) Maintenance light welding.
- (h) Other categories with emissions below insignificant thresholds:
 - (1) Mixing agent storage piles;
 - (2) One (1) 1,000 gallons propane storage tank;
 - (3) One (1) 480,000 gallons leachate surface impoundment for leachate storage, with potential VOC emissions of 0.001 tons per year;
 - (4) One (1) 750,000 gallons leachate surface impoundment for leachate storage, with potential VOC emissions of 0.04 tons per year;
 - (5) One (1) 12,000 gallons diesel off-road storage tank, with potential VOC emissions of 0.0097 ton per year;
 - (6) Maintenance cold cleaner degreasers, with a maximum annual usage of 240 gallons of solvent, equipped with remote solvent reservoirs and having and potential VOC emissions of less than 15 pounds per day;
 - (7) Maintenance drilling;
 - (8) Two (2) 20,000 gallons leachate storage tanks, each with potential VOC emissions of 0.12 ton per year;
 - (9) Two (2) temporary leachate storage basins, having capacities of 270,000 gallons and 480,000 gallons, respectively, with total potential VOC emissions of 0.03 tons per year;
 - (10) One (1) 2,000 gallons leachate underground storage tank, with potential VOC emissions of 0.12 ton per year;
 - (11) Limestone slag storage piles;
 - (12) Roadway gravel storage piles;
 - (13) Daily cover soil storage piles;
 - (14) Alternative daily cover (shredded tires) storage piles; and
 - (15) Soil borrow pits.

Existing Approvals

The source has been operating under the previous FESOP 071-11615-00038 issued on April 12, 2000, and the following amendments and revisions:

- (a) First Minor Permit Revision No. 071-13969-00038, issued on April 24, 2001;
- (b) First Reopening to a FESOP No.: 071-13054-00038, issued on December 10, 2001; and
- (c) Second Minor Permit Revision No. 071-15445-00038, issued on April 8, 2002.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, they were not incorporated into this Part 70 permit:

- (a) FESOP no. 071-15445-00038 issued on April 8, 2002, Condition D.1.1, Municipal Solid Waste Landfill NSPS [326 IAC 12] [40 CFR 60.752, Subpart WWW]

D.1.1 Municipal Solid Waste Landfill NSPS [326 IAC 12] [40 CFR 60.752, Subpart WWW]

- (a) Pursuant to 40 CFR 60.752(a), this municipal solid waste landfill having a design capacity less than 2.5 million megagrams (Mg) by mass, was required to submit an initial design capacity report no later than June 10, 1996. The Permittee's initial design capacity report was submitted on June 13, 1996.
- (b) If the design capacity of this landfill is increased to or above 2.5 million Mg, the following shall apply:
 - (1) Pursuant to 40 CFR 60.752(a)(1), an amended design capacity report shall be submitted to the Office of Air Quality (OAQ), pursuant to 40 CFR 60.757(a)(3), providing notification of any increase in the design capacity of the landfill, within ninety (90) days of an increase in the maximum design capacity of the landfill to or above 2.5 million Mg.
 - (2) Pursuant to 40 CFR 60.752(a)(2), the landfill shall comply with the provision of 40 CFR 60.752(b).
 - (3) The source shall be subject to 326 IAC 2-7 (Part 70 Permit Program) and shall apply for a Part 70 operating permit within twelve (12) months after this source becomes subject to Title V. The source may apply for a Part 70 operating permit and revocation of its FESOP under the provisions of 326 IAC 2-8-19 (Transition from a FESOP to a Part 70 Permit).

Reason not incorporated: The municipal solid waste landfill will have a capacity greater than 2.5 million megagrams (Mg) after the landfill expansion. The total landfill capacity after landfill expansion shall be 12.85 million megagrams (Mg). 40 CFR 60, Subpart WWW requirements are included in the permit since the total landfill capacity is greater than 2.5 million megagrams (Mg). Therefore, since the landfill capacity is greater than 2.5 million megagrams (Mg) Condition D.1.1 is no longer required in the permit.

- (b) FESOP no. 071-15445-00038 issued on April 8, 2002, Condition D.2.1, Carbon Monoxide (CO) [326 IAC 2-8-4]

D.2.1 Carbon Monoxide (CO) [326 IAC 2-8-4]

- (a) The total gasoline usage in the three (3) gasoline-fired water pumps, the gasoline-fired generator, the gasoline-fired tire cutter, and the gasoline-fired pressure washer shall not exceed 11,276 gallons per twelve (12) consecutive month period, rolled on a monthly basis.
- (b) The heating value of the gasoline shall not exceed 130,000 Btu per gallons. This will limit source-wide CO emissions to less than 100 tons per year, therefore, 326 IAC 2-7 (Part 70 Permit Program) does not apply.

Reason not incorporated: The source shall be a major Part 70 source after the landfill expansion, as defined in 326 IAC 2-7-1(22) because it shall be subject to the provisions of New Source Performance Standard, 326 IAC 12, (40 CFR 60.750 through 60.759, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills). Therefore, the source shall be subject to Part 70 permit requirements. The source has unlimited potential CO emissions of greater than 100 tons per year and less than 250 tons per year. Pursuant to 326 IAC 2-8-4, Condition D.2.1 was included in the existing FESOP to restrict the source-wide CO emissions to less than 100 tons per year. Since 326 IAC 2-8 is no longer applicable to the source, Condition D.2.1 is not required in the Part 70 permit.

- (c) FESOP no. 071-15445-00038 issued on April 8, 2002, Conditions D.2.3 and D.2.4, Record Keeping and Reporting Requirements

D.2.3 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records of the throughput of gasoline, in gallons, to the three (3) gasoline-fired water pumps, the gasoline-fired generator, the gasoline-fired tire cutter, and the gasoline-fired pressure washer and the heating value of the gasoline. The records shall be taken monthly and shall be complete and sufficient to establish compliance with the CO emission limit established in Condition D.2.1.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

Reason not incorporated: Conditions D.2.3 and D.2.4 are not included in the permit because Condition D.2.1 is not included in the permit.

- (d) FESOP no. 071-15445-00038 issued on April 8, 2002, Condition D.3.1, Volatile Organic Compounds (VOCs) [326 IAC 12] [40 CFR 60.110b, Subpart Kb]

D.3.1 Volatile Organic Compounds (VOCs) [326 IAC 12] [40 CFR 60.110b, Subpart Kb]

Pursuant to 40 CFR Part 60.110b, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels), the one (1) 12,000 gallons diesel off-road storage tank, with a storage capacity less than 75 cubic meters, is subject to 40 CFR Part 60.116b, paragraphs (a) and (b), which require record keeping.

Reason not incorporated: Pursuant to 40 CFR 60.110b (a), the requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb)* apply to any volatile organic liquid (VOL) storage vessel with a capacity of 75 m³ (19,800 gallons) or greater for which construction commenced after July 23, 1984. Pursuant to 40 CFR 60.110b (b), the requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb)* do not apply to any VOL storage vessel with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m³ (19,800 gallons) but less than 151 m³ (39,890 gallons) storing a liquid with a maximum true vapor pressure less than 15 kPa. The liquid stored in each VOL storage vessel with a capacity greater than or equal to 39,890 gallons has a maximum true vapor pressure less than 3.5 kilopascals (kPa) and the liquid stored in each VOL storage vessel with a capacity greater than 19,800 gallons but less than 39,890 gallons has a maximum true vapor pressure less than 15 kPa. Therefore, pursuant to 40 CFR 60.110b (b), as amended in the October 15, 2003 Federal Register, the requirements of this rule are not included in the permit for any storage tank and Condition D.3.1 is not included in the permit.

- (e) FESOP no. 071-15445-00038 issued on April 8, 2002, Conditions D.3.4, Record Keeping Requirements

D.3.4 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1, the Permittee shall maintain permanent records at the source in accordance with (1) and (2) below:
 - (1) the dimension of the storage vessel; and
 - (2) an analysis showing the capacity of the storage vessel.

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

Reason not incorporated: Conditions D.3.4 is not included in the permit because Condition D.3.1 is not included in the permit.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on June 30, 2005. Additional information was received on July 25, 2005.

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

Emission Calculations

See Appendix A of this document for detailed emission calculations (Appendix A, pages 1 through 21)

Potential to Emit of the Source

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

Pollutant	Potential to Emit (tons/yr) ⁽¹⁾
PM	812.84 ⁽²⁾
PM-10	218.36 ⁽²⁾
SO ₂	4.09
VOC	95.5
CO	190.83
NO _x	39.15

Note: (1) For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration. Pursuant to 326 IAC 2-7-1 (22)(B), fugitive PM-10 emissions are not included in Title V applicability determination.

(2) The sourcewide non-fugitive PM and PM-10 emissions rates are each less than 100 tons per year.

HAPs	Potential to Emit (tons/yr)
Cresol & Isomers	greater than 10
MEK	greater than 10
Chlorobenzene	less than 10
Toluene	less than 10
Xylene	less than 10
Total	Greater than 25

Note: Due to the large number of HAPs emitted by this source, only the five HAPs with the highest potential emissions were shown here. For more detailed HAP emission calculations see pages 13, 16, 18 and 20 of Appendix A.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of CO are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Controls for the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

Process/facility	Potential to Emit for the Modification (tons/year)							
	PM	PM-10	SO ₂	VOC	CO	NO _x	Single HAP	Total HAPs
Storage Piles, Material Handling, Paved and Unpaved Roadways (fugitive emissions)	66.08	15.91	-	-	-	-	-	-
Sanitary Landfill	-	-	-	43.79	-	-	7.73	22.64
Insignificant activities: leachate storage bin (750,000 gal), leachate UST (2,000 gal), temporary leachate basin #1 (270,000 gal), temporary leachate basin #2 (480,000 gal) and two diesel fired water pumps (50 hp each)	0.96	0.96	0.90	1.29	2.93	13.58	Negligible	Negligible
Total Modification Emissions (non-fugitive)	0.96	0.96	0.90	45.08	2.93	13.58	7.73	22.64
PSD Significant Modification Thresholds	250	250	250	N/A	250	N/A	N/A	N/A
Emission Offset Significant Levels	N/A	N/A	N/A	100	N/A	100	N/A	N/A

Process/emission unit	Potential to Emit (PTE) After Issuance for the Source (tons/year)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Storage Piles, Material Handling, Paved and Unpaved Roadways (fugitive emissions)	212.08	59.64	0.00	0.00	0.00	0.00	0.00
Solidification Process	0.00	0.00	0.00	13.74	0.00	0.00	13.61
Sanitary Landfill	0.00	0.00	0.00	48.07	0.00	0.00	26.04
Passive Flares	0.89	0.89	0.88	0.00	39.42	2.10	0.00
Insignificant activities	2.61	2.62	3.21	9.78	151.41	37.05	0.05
Total PTE for Source after Issuance (non-fugitive)	3.5	3.52	4.09	71.60	190.83	39.15	39.70
PSD Threshold Levels	250	250	250	N/A	250	N/A	N/A
Emission Offset Significant Levels	N/A	N/A	N/A	100	N/A	100	N/A

- (a) This modification to an existing PSD minor source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. The source will remain a minor stationary source after the modification since the source wide potential non-fugitive emissions of each attainment regulated pollutant shall be less than 250 tons per year.
- (b) This modification to an existing minor stationary source is not major because the VOC and NO_x emissions increase is less than the Emissions Offset significant levels. Therefore, the Emissions Offset, 326 IAC 2-3 requirements do not apply. The source will remain a minor stationary source after the modification since the source wide potential VOC and NO_x emissions are each less than 100 tons per year.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Jackson County.

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

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Jackson County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the source section.
- (b) Jackson County has been classified as unclassifiable or attainment for PM2.5. 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 PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability for the source section.
- (c) Jackson County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

Part 70 Permit Conditions

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

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assure that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Federal Rule Applicability

- (a) The requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.750 through 60.759, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills)* are included in the permit because the landfill was modified after May 30, 1991. Prior to the approval of this permit application, the landfill had a design capacity of less than 2.5 million megagrams (Mg), therefore, it was only subject to the requirements of 40 CFR 60.752(a), and was not subject to any of the other requirements of the subpart. Pursuant to 40 CFR 60.752(a), the source was required to submit an initial design capacity report to IDEM. Rumpke of Indiana, LLC submitted a design capacity report on June 13, 1996 to IDEM as required.

Pursuant to the proposed modification, the landfill design capacity shall be increased to 12,850,395 megagrams (Mg). Pursuant to 40 CFR 60.752(a)(1) and 40 CFR 60.757(a)(3), the Permittee shall submit to the IDEM, OAQ an amended design capacity report providing notification of an increase in the design capacity of the landfill, within ninety (90) days of an increase in the maximum design capacity of the landfill to or above 2.5 million megagrams and 2.5 million cubic meters. This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in 40 CFR 60.758(f).

Pursuant to 40 CFR 60.752(b), the Permittee shall calculate an NMOC emission rate for the landfill using the procedures specified in 40 CFR 60.754. The NMOC emission rate shall be recalculated annually, except as provided in 40 CFR 60.757(b)(1)(ii). If the calculated NMOC emission rate is less than 50 megagrams per year, the Permittee shall:

- (1) Submit an annual emission report to the IDEM, OAQ, except as provided for in 40 CFR 60.757(b)(1)(ii); and
- (2) Recalculate the NMOC emission rate annually using the procedures specified in 40 CFR 60.754(a)(1) until such time as the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, or the landfill is closed.
 - (i) If the NMOC emission rate, upon recalculation, is equal to or greater than 50 megagrams per year, the owner or operator shall install a collection and control system in compliance with 40 CFR 60.752(b)(2).
 - (ii) If the landfill is permanently closed, a closure notification shall be submitted to the IDEM, OAQ as provided for in 40 CFR 60.757(d).

Pursuant to 40 CFR 60.754(a), the Permittee shall calculate the NMOC emission rate using either of the following equations. Both equations may be used if the actual year-to-year solid waste acceptance rate is known for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

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

$$M_{NMOC} = \sum_{i=1}^n 2 k L_o M_i (e^{-k t_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

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

k = methane generation rate constant, year⁻¹

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

M_i = mass of solid waste in the ith section, megagrams

t_i = age of the ith section, years

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

3.6 × 10⁻⁹ = conversion factor

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

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

$$M_{NMOC} = 2L_o R (e^{-k c} - e^{-k t}) C_{NMOC} (3.6 \times 10^{-9})$$

where:

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

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

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹
 t = age of landfill, years
 C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
 c = time since closure, years; for active landfill $c=0$ and $e^{-kc} = 1$
 3.6×10^{-9} = conversion factor

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

Pursuant to 40 CFR 60.754(a), the Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

- (1) If the NMOC emission rate is less than 50 megagrams per year, then the Permittee shall submit an emission rate report as provided in 40 CFR 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under 40 CFR 60.752(b)(1).
- (2) If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in 40 CFR 60.754(a)(3).

Pursuant to 40 CFR 60.757(b), the Permittee shall submit an NMOC emission rate report to the IDEM, OAQ initially and annually thereafter, except as provided for in 40 CFR 60.757(b)(1)(ii) or 40 CFR 60.757(b)(3). The IDEM, OAQ may request such additional information as may be necessary to verify the reported NMOC emission rate.

- (1) The NMOC emission rate report shall contain an annual or 5-year estimate of the NMOC emission rate calculated using the formula and procedures provided in 40 CFR 60.754(a).
 - (i) The initial NMOC emission rate report may be combined with the initial design capacity report required in 40 CFR 60.757(a) and shall be submitted no later than indicated as follows. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in 40 CFR 60.757 (b)(1)(ii) and (b)(3).
 - (A) Ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996.
 - (ii) If the estimated NMOC emission rate as reported in the annual report to the IDEM, OAQ is less than 50 megagrams per year in each of the next 5 consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the IDEM, OAQ. This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the IDEM, OAQ. The revised estimate shall cover the 5-year period beginning with the year in which

the actual waste acceptance rate exceeded the estimated waste acceptance rate.

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

Pursuant to 40 CFR 60.758, except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee subject to the provisions of 40 CFR 60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

- (b) The requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.110a, Subpart Ka)* are not included in the permit because the source does not have any storage vessel with storage capacity greater than 40,000 gallons that is used to store petroleum liquids for which construction is commenced after May 18, 1978.
- (c) Pursuant to 40 CFR 60.110b (a), the requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb)* apply to any volatile organic liquid (VOL) storage vessel with a capacity of 75 m³ (19,800 gallons) or greater for which construction commenced after July 23, 1984. Pursuant to 40 CFR 60.110b (b), the requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb)* do not apply to any VOL storage vessel with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m³ (19,800 gallons) but less than 151 m³ (39,890 gallons) storing a liquid with a maximum true vapor pressure less than 15 kPa. The liquid stored in each VOL storage vessel with a capacity greater than or equal to 39,890 gallons has a maximum true vapor pressure less than 3.5 kilopascals (kPa) and the liquid stored in each VOL storage vessel with a capacity greater than 19,800 gallons but less than 39,890 gallons has a maximum true vapor pressure less than 15 kPa.

Therefore, pursuant to 40 CFR 60.110b (b), as amended in the October 15, 2003 Federal Register, the requirements of this rule are not included in the permit for any storage tank.

- (d) The requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.670, Subpart OOO)* apply to stack and fugitive emissions from fixed or portable nonmetallic mineral processing facilities. Pursuant to 40 CFR 60.671, nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals. No equipment, except the portable limestone slag screener, at the facility crushes or grinds any nonmetallic mineral as defined in 40 CFR 60.671. Pursuant to 40 CFR 60.670(c)(2), the limestone slag screener shall be exempt from the requirements of this rule because the capacity of the screener is less than 150 tons per hour. Therefore, the requirements of this rule are not included in the permit.
- (e) The requirements of the *New Source Performance Standard, 326 IAC 12, (40 CFR 60.90, Subpart I)* apply to each hot mix asphalt facility. Pursuant to 40 CFR 60.91, hot mix asphalt facility means any facility used to manufacture hot mix asphalt by heating and drying aggregate and mixing with asphalt cements. No equipment at the facility meets the definition of a hot mix asphalt facility as defined in 40 CFR 60.91. Therefore, the requirements of this rule are not included in the permit.

- (f) The requirements of the *National Emission Standards for Hazardous Air Pollutants (NESHAPs)*, *Municipal Solid Waste Landfills 40 CFR Part 63, Subpart AAAA* apply to a MSW landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition and meets any one of the following criteria:
- (1) the landfill is a major source as defined in 40 CFR 63.2 of subpart A;
 - (2) the landfill is collocated with a major source as defined in 40 CFR 63.2 of subpart A;
 - (3) the landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m³) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to 40 CFR 60.754(a) of the MSW landfills new source performance standards in 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan.

The Permittee is a major source as defined in 40 CFR 63.2 of subpart A. However, pursuant to 40 CFR 63.1945 (d), the Permittee shall comply with the requirements in 40 CFR 63.1955(b) and 40 CFR 63.1960 through 40 CFR 63.1980 when the landfill is required to install a collection and control system in accordance with 40 CFR 60.752(b)(2) of subpart WWW. The Permittee is not required to install a collection and control system until the calculated NMOC emission rate is equal to or greater than 50 megagrams per year. Currently, the requirements of 40 CFR 63, Subpart AAAA are not included in the permit.

The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information regarding which compliance option or options will be chosen when the landfill is required to install a collection and control system in accordance with 40 CFR 60.752(b)(2) of subpart WWW.

- (a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Part 70 permit the applicable requirements of 40 CFR 63, Subpart AAAA, a description of the affected source and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.
- (b) The significant permit modification application shall be submitted within thirty (30) days of the submittal of a landfill gas collection and control system design plan to the IDEM, OAQ in accordance with 40 CFR 60.752 (b)(2).
- (c) The significant permit modification application shall be submitted to:

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

- (g) The municipal solid waste sanitary landfill is subject to the *National Emission Standards for Asbestos, 326 IAC 14, (40 CFR 61.140, Subpart M)*. The landfill is an active waste disposal site that receives asbestos-containing waste material; therefore, the requirements of this rule are included in the permit.

The municipal solid waste sanitary landfill is subject to the following portions of Subpart M. Non applicable portions of the NESHAP will not be included in the permit.

- (1) 40 CFR 61.154 (c)(1);
- (2) 40 CFR 61.154 (e);
- (3) 40 CFR 61.154 (f);
- (4) 40 CFR 61.154 (g);
- (5) 40 CFR 61.154 (h);
- (6) 40 CFR 61.154 (i); and
- (7) 40 CFR 61.154 (j).

The provisions of 40 CFR 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 61 Subpart M.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source is not a major source since potential non-fugitive emissions of all criteria pollutants is less than 250 tons per year. The sourcewide PM emissions, including fugitive emissions, are greater than 250 tons per year. Although this landfill is subject to the NSPS, 40 CFR 60.750, Subpart WWW, this NSPS was not in effect on August 7, 1980, and this source is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, therefore, fugitive emissions are not counted toward PSD applicability. All modifications including the landfill expansion to this existing minor PSD source are not subject to this rule since the sourcewide potential non-fugitive emissions of all attainment criteria pollutants remain at less than the PSD threshold of 250 tons per year even after the expansion.

326 IAC 2-3 (Emission Offset)

Jackson County has been designated as nonattainment for the 8-hour ozone standard. However, since the potential to emit of VOC and NO_x, are each less than 100 tons per year, this source is a minor source under 326 IAC 2-3, Emission Offset.

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). The source is located in Jackson county; therefore, pursuant to 326 IAC 2-6-3 (b)(3), starting in 2006 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.

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

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 6-5 (Fugitive Particulate Matter Emission Limitations)

This source is subject to 326 IAC 6-5 for fugitive particulate matter emissions. Pursuant to 326 IAC 6-5, for any new source which has not received all the necessary preconstruction approvals before December 13, 1985, a fugitive dust control plan must be submitted, reviewed and approved. The municipal solid waste landfill site fugitive dust control plan for this source includes the following:

- (a) Fugitive particulate matter emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following methods:
 - (1) Resurfacing with aggregate as needed;
 - (2) Watering on an as needed basis;
 - (3) Speed reduction.

- (b) Fugitive particulate matter emissions from storage piles shall be controlled by one or more of the following methods on an as needed basis:
 - (1) Keep mixing agent storage piles in enclosures whenever possible;
 - (2) Covering the mixing agent storage piles with tarp when piles are outdoors and not in use.

State Rule Applicability – Individual Facilities

326 IAC 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any new process or production unit, which in and of itself emits or has the potential to emit (PTE) 10 tons per year of any hazardous air pollutant (HAP) or 25 tons per year of the combination of HAPs, and is constructed or reconstructed after July 27, 1997, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT). Condition D.1.4 of the permit restricts the potential single HAP and combined HAPs emissions from the solidification process to less than 10 tons per year and 25 tons per year, respectively. This rule also does not apply to a major source of HAPs specifically regulated by Section 112(d) of the Clean Air Act. Since the sanitary landfill at this source is regulated by Section 112(d) (i.e., 40 CFR 63, Subpart AAAAA, National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills) the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) do not apply to this source.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The particulate from the facilities at this source shall be limited as specified in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission (pounds per hour)
Mixing agent loading and unloading operations	50	44.58	2.92
Solidified waste loading and unloading and solid waste dumping operations	100	51.28	0.32
Limestone slag screener	35	41.32	0.87

The allowable particulate matter (PM) emission rates from the above facilities were calculated by the following:

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

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The potential PM emissions without the use of controls for each of the above listed facilities are less than the allowable PM emission rates. Therefore, these operations are in compliance with this rule.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The combustion units at this source are not subject to the requirements of this rule because potential SO₂ emissions are less than 25 tons per year or 10 pounds per hour.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

This rule applies to facilities constructed after January 1, 1980, with potential VOC emissions greater than or equal to 25 tons per year, not regulated by other provisions of Article 8. The municipal sanitary landfill is not subject to the provisions of this rule because 326 IAC 8-8.1-1 requirements shall apply to this facility.

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

The maintenance cold cleaner degreasers are subject to the requirements of this rule because the degreasers were constructed after January 1, 1980 and are cold cleaner degreasers with remote solvent reservoirs. Pursuant to 326 IAC 8-3-2, the owner or operator of the maintenance cold cleaner degreasers shall:

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

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

The requirements of 326 IAC 8-3-5 apply to any new cold cleaner degreaser located in any county in Indiana and not equipped with remote solvent reservoirs. The maintenance cold cleaner degreasers are equipped with remote solvent reservoirs and therefore the requirements of 326 IAC 8-3-5 shall not apply.

326 IAC 8-8.1-1 (Municipal Solid Waste Landfills Not Located in Clark, Floyd, Lake, and Porter Counties)

The requirements of 326 IAC 8-8.1-1 apply to any existing municipal solid waste (MSW) landfill located in any county except the following:

- (1) Clark County.
- (2) Floyd County.
- (3) Lake County.
- (4) Porter County.

Since the MSW landfill at the source is located in Jackson County, the requirements of 326 IAC 8-8.1-1 shall apply which incorporates by reference 40 CFR 60.751, 60.752, 60.753, 60.754, 60.755, 60.756, 60.757, 60.758 and 60.759 (*40 CFR 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills*). The compliance with the provisions of *40 CFR 60.750 through 60.759, Subpart WWW*, shall ensure compliance with the provisions of this rule.

Testing Requirements

IDEM may require compliance testing at any specific time to determine if the source is in compliance with an applicable limit or standard. The Permittee has demonstrated compliance through emission rate calculations with emission limits applicable to all facilities at this source. Therefore no emissions testing is required in this Part 70 permit.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

There are no compliance monitoring requirements currently applicable to this source.

Conclusion

The operation of this municipal solid waste sanitary landfill, solidification process, and limestone slag screening operation shall be subject to the conditions of this Part 70 permit 071-21366-00038.

Appendix A: Emission Calculations Summary

Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Part 70 Permit No.: 071-21366
Plt ID: 071-00038
Reviewer: GS/EVP

Potential Emissions (tons/year)						
Emissions Generating Activity						
Pollutant	Storage Piles, Material Handling, Unpaved and Paved Roadways	Solidification Process	Sanitary Landfill	Passive Flares	Insignificant Activities (IC Engines, Boilers, Storage Tanks & Degreasing)	TOTAL
PM	868.69	0.00	0.00	0.89	2.61	872.20
PM10	230.92	0.00	0.00	0.89	2.62	234.43
SO ₂	0.00	0.00	0.00	0.88	3.21	4.09
NO _x	0.00	0.00	0.00	2.10	37.05	39.15
VOC	0.00	32.16	53.56	0.11	10.61	96.44
CO	0.00	0.00	0.00	39.42	151.41	190.83
total HAPs	0.00	31.86	28.24	0.00	0.05	60.14
worst case single HAP	0.00	12.19 (Methyl Ethyl Ketone)	9.58 (Toluene)	0.00	0.02	12.19 (Methyl Ethyl Ketone)
Total emissions based on rated capacity at 8,760 hours/year.						
Limited Emissions (tons/year)						
Emissions Generating Activity						
Pollutant	Storage Piles, Material Handling and Unpaved Roadways	Solidification Process	Sanitary Landfill	Passive Flares	Insignificant Activities (IC Engines, Boilers, Storage Tanks & Degreasing)	TOTAL
PM	230.75	0.00	0.00	0.89	2.61	234.25
PM10	63.66	0.00	0.00	0.89	2.62	67.18
SO ₂	0.00	0.00	0.00	0.88	3.21	4.09
NO _x	0.00	0.00	0.00	2.10	37.05	39.15
VOC	0.00	13.74	48.07	0.11	10.61	72.54
CO	0.00	0.00	0.00	39.42	151.41	190.83
total HAPs	0.00	13.61	26.04	0.00	0.05	39.70
worst case single HAP	0.00	5.21 (Methyl Ethyl Ketone)	8.85 (Toluene)	0.00	0.02	8.85 (Toluene)

Limited solidification process emissions based on limited liquid waste throughput of 6,240,000 gal/yr.

Roadway emissions are controlled by watering, resurfacing and speed reduction with a 75% control efficiency. Fly ash storage pile emissions are controlled by a synthetic tarp which covers the storage piles.

**Appendix A: Emission Calculations
Particulate Matter Emissions**

Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Operating Permit No.: 071-21366
Plt ID: 071-00038
Reviewer: GS/EVP

Note: The following emission calculations represent the maximum potential uncontrolled PM and PM10 emissions based on a maximum refuse acceptance rate of 100 tons per hour.

Mixing Agent Storage Piles

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42, Section 11.2.3.

Material	Silt Content (wt %)	Pile Size (acres)	PM Emissions tons/yr	P M-10 Emissions tons/yr	Controlled PM Emissions tons/yr	Controlled PM-10 Emissions tons/yr
Fly Ash	90.0	0.10	3.88	1.36	0.19	0.07
Limestone Slag	4.7	0.05	0.10	0.05	0.10	0.05
Gravel	15.0	0.06	0.39	0.14	0.39	0.14
Cover soil	80.0	0.06	2.07	0.72	2.07	0.72
Shredded Tires	0.0	0.06	0.00	0.00	0.00	0.00
Total			6.44	2.27	2.75	0.98

Note: Although several different types of mixing agents are used, fly ash represents the worst case scenario for PM emissions from wind erosion.

PM-10 emissions are assumed to be 35% of PM emissions for fly ash, gravel, and cover soil.

PM-10 emissions are assumed to be 50% of PM emissions for limestone slag.

Controlled emissions from fly ash storage piles are based on a 95% control efficiency for synthetic tarp assumed to be similar to enclosure control efficiency from RACM Document Table 2.1.2-8.

METHODOLOGY

$$E_f = 1.7 \cdot (s/1.5)^{0.365} / 235 \cdot (f/15)$$

$$= 212.68 \text{ lb/acre/day}$$

where s = 90 % silt

p = 120 days of rain greater than or equal to 0.01 inches

f = 30 % of wind greater than or equal to 12 mph

Mixing Agent Loading and Unloading

The following calculations determine the amount of emissions created by mixing agent loading and unloading, based on 8,760 hours of use and AP-42, Section 13.2.4, Equation 1. The emission factor for calculating PM emissions is calculated as follows:

PM-10 Emissions:

$$E = k \cdot (0.0032)^{0.4} \cdot ((U/5)^{1.3}) / ((M/2)^{1.4})$$

$$= 6.90E-03 \text{ lb PM-10/ton}$$

$$1.46E-02 \text{ lb PM/ton}$$

where k = 0.35 (particle size multiplier for <10um)

0.74 (particle size multiplier for <30um)

U = 9.6 mph mean wind speed

M = 1.0 minimum material moisture content (%)

Mixing Agent: $\frac{438,000 \text{ ton/yr}}{2,000 \text{ lb/ton}} \cdot \text{No. of material handling activities} \cdot E_f \text{ (lb/ton of material)} = \text{(ton/yr)}$

* No. of Mixing Agent Handling Activities: 3

* Mixing agent handling activities include storage pile load-in, storage pile load-out, and loading into solidification basin.

Total PM 10 Emissions: 4.53 tons/yr
Total PM Emissions: 9.59 tons/yr

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Solidified Waste Loading and Unloading

The following calculations determine the amount of emissions created by solidified waste loading and unloading, based on 8,760 hours of use and AP-42, Section 13.2.4, Equation 1. The emission factor for calculating PM emissions is calculated as follows:

PM-10 Emissions:

$$E = k \cdot (0.0032)^2 \cdot \left(\frac{U}{5} \right)^{1.3} \cdot \left(\frac{M}{2} \right)^{1.4}$$

= 4.98E-04 lb PM-10/ton
1.05E-03 lb PM/ton

where k = 0.35 (particle size multiplier for <10um)
0.74 (particle size multiplier for <30um)

U = 9.6 mph mean wind speed
M = 6.5 minimum material moisture content (%)

Solidified Waste: $\frac{876,000 \text{ ton/yr}}{2,000 \text{ lb/ton}} \cdot \text{No. of material handling activities} \cdot \text{Ef (lb/ton of material)} = (\text{ton/yr})$

* No. of Solidified Waste Handling Activities: 2

Total PM 10 Emissions: 0.44 tons/yr
Total PM Emissions: 0.92 tons/yr

Solid Waste Dumping Operations

The following calculations determine the amount of emissions created by solid waste dumping, based on 8,760 hours of use and AP-42, Section 13.2.4, Equation 1. The emission factor for calculating PM emissions is calculated as follows:

PM-10 Emissions:

$$E = k \cdot (0.0032)^2 \cdot \left(\frac{U}{5} \right)^{1.3} \cdot \left(\frac{M}{2} \right)^{1.4}$$

= 1.56E-04 lb PM-10/ton
3.29E-04 lb PM/ton

where k = 0.35 (particle size multiplier for <10um)
0.74 (particle size multiplier for <30um)

U = 9.6 mph mean wind speed
M = 15.0 average material moisture content (%)

Refuse Acceptance: $\frac{876,000 \text{ ton/yr}}{2,000 \text{ lb/ton}} \cdot \text{No. of material handling activities} \cdot \text{Ef (lb/ton of material)} = (\text{ton/yr})$

* No. of Solidified Waste Handling Activities: 1

* Solidified waste handling activities include unloading from solidification basin and loading into dump truck.

Total PM 10 Emissions: 0.07 tons/yr
Total PM Emissions: 0.14 tons/yr

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Material Handling Operations

The following calculations determine the amount of emissions created by limestone slag handling, based on 8,760 hours of use and AP-42, Section 13.2.4, Equation 1. The emission factor for calculating PM and PM10 emissions is calculated as follows:

PM-10 Emissions:

$$E = k \cdot (0.0032)^k \cdot \left(\frac{U}{5} \right)^{1.3} \cdot \left(\frac{M}{2} \right)^{1.4}$$

= 2.15E-03 lb PM-10/ton
4.55E-03 lb PM/ton

where k = 0.35 (particle size multiplier for <10um)
0.74 (particle size multiplier for <30um)

U = 9.6 mph mean wind speed
M = 2.3 minimum material moisture content (%)

Limestone Slag: $\frac{306,600 \text{ ton/yr}}{2,000 \text{ lb/ton}} \cdot \text{No. of material handling activities} \cdot \text{Ef (lb/ton of material)} = (\text{ton/yr})$

* No. of Limestone Slag Handling Activities: 3

* Material handling activities include load-in to screener, transfer of screened slag to stock pile, and screened slag load-out from stock pile.

Total PM 10 Emissions: 0.99 tons/yr
Total PM Emissions: 2.09 tons/yr

Screening Operations

PM Uncontrolled Emission Factor for Screening (lb/ton): 0.025 (based on USEPA's AP-42, Section 11.19.2, Table 11.19.2-2)
PM10 Uncontrolled Emission Factor for Screening (lb/ton): 0.0087 (based on USEPA's AP-42, Section 11.19.2, Table 11.19.2-2)

Limestone Slag: $\frac{306,600 \text{ ton/yr}}{2,000 \text{ lb/ton}} \cdot \text{Ef (lb/ton of material)} = (\text{ton/yr})$

Total PM 10 Emissions: 1.33 tons/yr
Total PM Emissions: 3.83 tons/yr

Unpaved Roadways

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 13.2.2.2.

I. Liquid Waste Tankers

0.27 trip/hr x
0.133 mile/trip x
2 (round trip) x
8760 hr/yr = 629.1432 miles per year

$$Ef = k \cdot \left[\frac{s}{12} \right]^a \cdot \left[\frac{W}{3} \right]^b \cdot \left[\frac{365-p}{365} \right]$$

= 1.83 lb PM-10/mile
= 6.80 lb PM/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)
s = 6.4 mean % silt content of unpaved roads
a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)
b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)
W = 40 tons average vehicle weight
p = 120.0 number of days with at least 0.01 in. of precipitation per year

PM-10: $\frac{1.83 \text{ lb/mi} \times 629.1432 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{0.58 \text{ tons/yr}}$

PM: $\frac{6.80 \text{ lb/mi} \times 629.1432 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{2.14 \text{ tons/yr}}$

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Unpaved Roadways (cont'd)

II. Dump Trucks

2.53 trip/hr x
0.133 mile/trip x
2 (round trip) x
8760 hr/yr = 5895.3048 miles per year

$$E_f = k \left[\frac{s}{12} \right]^a \left[\frac{W}{3} \right]^b \left[\frac{365-p}{365} \right]$$

= 1.51 lb PM-10/mile
= 5.60 lb PM/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)
s = 6.4 mean % silt content of unpaved roads
a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)
b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)
W = 26 tons average vehicle weight
p = 120.0 number of days with at least 0.01 in. of precipitation per year

PM-10: $\frac{1.51 \text{ lb/mi} \times 5895.3048 \text{ mi/yr}}{2000 \text{ lb/ton}} = 4.45 \text{ tons/yr}$

PM: $\frac{5.60 \text{ lb/mi} \times 5895.3048 \text{ mi/yr}}{2000 \text{ lb/ton}} = 16.50 \text{ tons/yr}$

III. Front End Loaders

21 trip/hr x
0.057 mile/trip x
2 (round trip) x
8760 hr/yr = 20971.44 miles per year

$$E_f = k \left[\frac{s}{12} \right]^a \left[\frac{W}{3} \right]^b \left[\frac{365-p}{365} \right]$$

= 0.98 lb PM-10/mile
= 3.64 lb PM/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)
s = 6.4 mean % silt content of unpaved roads
a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)
b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)
W = 10 tons average vehicle weight
p = 120.0 number of days with at least 0.01 in. of precipitation per year

PM-10: $\frac{0.98 \text{ lb/mi} \times 20971.44 \text{ mi/yr}}{2000 \text{ lb/ton}} = 10.31 \text{ tons/yr}$

PM: $\frac{3.64 \text{ lb/mi} \times 20971.44 \text{ mi/yr}}{2000 \text{ lb/ton}} = 38.18 \text{ tons/yr}$

IV. Public Hauler

0.35 trip/hr x
1.12 mile/trip x
2 (round trip) x
8760 hr/yr = 6867.84 miles per year

$$E_f = k \left[\frac{s}{12} \right]^a \left[\frac{W}{3} \right]^b \left[\frac{365-p}{365} \right]$$

= 0.48 lb PM-10/mile
= 1.76 lb PM/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)
s = 6.4 mean % silt content of unpaved roads
a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)
b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)
W = 2 tons average vehicle weight
p = 120.0 number of days with at least 0.01 in. of precipitation per year

PM-10: $\frac{0.48 \text{ lb/mi} \times 6867.84 \text{ mi/yr}}{2000 \text{ lb/ton}} = 1.64 \text{ tons/yr}$

PM: $\frac{1.76 \text{ lb/mi} \times 6867.84 \text{ mi/yr}}{2000 \text{ lb/ton}} = 6.06 \text{ tons/yr}$

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Unpaved Roadways (cont'd)

V. Landfill Owned/Industrial Haulers

9.91 trip/hr x
1.12 mile/trip x
2 (round trip) x
8760 hr/yr = 194457.984 miles per year

$$E_f = k \left[\frac{s}{12} \right]^a \left[\frac{W}{3} \right]^b \left[\frac{365-p}{365} \right]$$

= 1.51 lb PM-10/mile
= 5.60 lb PM/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)
s = 6.4 mean % silt content of unpaved roads
a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)
b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)
W = 26 tons average vehicle weight
p = 120.0 number of days with at least 0.01 in. of precipitation per year

PM-10: $\frac{1.51 \text{ lb/mi} \times 194457.984 \text{ mi/yr}}{2000 \text{ lb/ton}} = 146.92 \text{ tons/yr}$

PM: $\frac{5.60 \text{ lb/mi} \times 194457.984 \text{ mi/yr}}{2000 \text{ lb/ton}} = 544.25 \text{ tons/yr}$

VI. Municipal Haulers

1.12 trip/hr x
1.12 mile/trip x
2 (round trip) x
8760 hr/yr = 21977.088 miles per year

$$E_f = k \left[\frac{s}{12} \right]^a \left[\frac{W}{3} \right]^b \left[\frac{365-p}{365} \right]$$

= 0.98 lb PM-10/mile
= 3.64 lb PM/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)
s = 6.4 mean % silt content of unpaved roads
a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)
b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)
W = 10 tons average vehicle weight
p = 120.0 number of days with at least 0.01 in. of precipitation per year

PM-10: $\frac{0.98 \text{ lb/mi} \times 21977.088 \text{ mi/yr}}{2000 \text{ lb/ton}} = 10.80 \text{ tons/yr}$

PM: $\frac{3.64 \text{ lb/mi} \times 21977.088 \text{ mi/yr}}{2000 \text{ lb/ton}} = 40.01 \text{ tons/yr}$

VII. Commercial Haulers

1.4 trip/hr x
1.12 mile/trip x
2 (round trip) x
8760 hr/yr = 27471.36 miles per year

$$E_f = k \left[\frac{s}{12} \right]^a \left[\frac{W}{3} \right]^b \left[\frac{365-p}{365} \right]$$

= 1.51 lb PM-10/mile
= 5.60 lb PM/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)
s = 6.4 mean % silt content of unpaved roads
a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)
b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)
W = 26 tons average vehicle weight
p = 120.0 number of days with at least 0.01 in. of precipitation per year

PM-10: $\frac{1.51 \text{ lb/mi} \times 27471.36 \text{ mi/yr}}{2000 \text{ lb/ton}} = 20.76 \text{ tons/yr}$

PM: $\frac{5.60 \text{ lb/mi} \times 27471.36 \text{ mi/yr}}{2000 \text{ lb/ton}} = 76.89 \text{ tons/yr}$

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Unpaved Roadways (cont'd)

VIII. Leachate Haulers

0.31 trip/hr x
1.19 mile/trip x
2 (round trip) x
8760 hr/yr = 6463.128 miles per year

$$E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b] \cdot [(365-p)/365]$$

= 1.51 lb PM-10/mile
= 5.60 lb PM/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)
s = 6.4 mean % silt content of unpaved roads
a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)
b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)
W = 26 tons average vehicle weight
p = 120.0 number of days with at least 0.01 in. of precipitation per year

PM-10: $\frac{1.51 \text{ lb/mi} \times 6463.128 \text{ mi/yr}}{2000 \text{ lb/ton}} = 4.88 \text{ tons/yr}$

PM: $\frac{5.60 \text{ lb/mi} \times 6463.128 \text{ mi/yr}}{2000 \text{ lb/ton}} = 18.09 \text{ tons/yr}$

IX. Employees/Supervisors

1.53 trip/hr x
1.12 mile/trip x
2 (round trip) x
8760 hr/yr = 30022.272 miles per year

$$E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b] \cdot [(365-p)/365]$$

= 0.48 lb PM-10/mile
= 1.76 lb PM/mile

where k = 1.5 (particle size multiplier for PM-10) (k=4.9 for PM-30 or TSP)
s = 6.4 mean % silt content of unpaved roads
a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)
b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)
W = 2 tons average vehicle weight
p = 120.0 number of days with at least 0.01 in. of precipitation per year

PM-10: $\frac{0.48 \text{ lb/mi} \times 30022.272 \text{ mi/yr}}{2000 \text{ lb/ton}} = 7.15 \text{ tons/yr}$

PM: $\frac{1.76 \text{ lb/mi} \times 30022.272 \text{ mi/yr}}{2000 \text{ lb/ton}} = 26.49 \text{ tons/yr}$

Total Potential Emissions from Unpaved Roadways:

PM-10:	207.49 tons/yr
PM:	768.61 tons/yr

Total Controlled Emissions from Unpaved Roadways:

PM-10:	51.87 tons/yr
PM:	192.15 tons/yr

Note: Controlled Unpaved Roadway emissions include a 75% PM control efficiency from watering of roadways, resurfacing and speed reduction.

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Paved Roadways (cont'd)

The following calculations determine the amount of emissions created by vehicle traffic on paved roads, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 13.2.1.2.

I. Solidification Liquid Tankers

$$\begin{aligned}
 &0.27 \text{ trip/hr} \times \\
 &0.12 \text{ mile/trip} \times \\
 &2 \text{ (round trip) } \times \\
 &8760 \text{ hr/yr} = \qquad \qquad \qquad 567.65 \text{ miles per year}
 \end{aligned}$$

$$\begin{aligned}
 Ef &= [k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot C]^{1-P/4} \cdot N \\
 &= 1.67 \text{ lb PM-10/mile} \\
 &= 9.34 \text{ lb PM/mile} \\
 \text{where } k &= 0.016 \text{ (particle size multiplier for PM-10)} \\
 k &= 0.082 \text{ (particle size multiplier for PM)} \\
 sL &= 7.4 \text{ road surface silt loading (grams per square meter)} \\
 W &= 40 \text{ tons average vehicle weight} \\
 C &= 0.00047 \text{ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.} \\
 P &= 120 \text{ no. of days with at least 0.01 inch of precipitation} \\
 N &= 365 \text{ no. of days in averaging period}
 \end{aligned}$$

$$\text{PM-10: } \frac{1.67 \text{ lb/mi} \times 567.65 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{0.47 \text{ tons/yr}}$$

$$\text{PM: } \frac{9.34 \text{ lb/mi} \times 567.65 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{2.65 \text{ tons/yr}}$$

II. Solidification Dump Trucks

$$\begin{aligned}
 &2.53 \text{ trip/hr} \times \\
 &0.12 \text{ mile/trip} \times \\
 &2 \text{ (round trip) } \times \\
 &8760 \text{ hr/yr} = \qquad \qquad \qquad 5,319.07 \text{ miles per year}
 \end{aligned}$$

$$\begin{aligned}
 Ef &= [k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot C]^{1-P/4} \cdot N \\
 &= 0.88 \text{ lb PM-10/mile} \\
 &= 4.90 \text{ lb PM/mile} \\
 \text{where } k &= 0.016 \text{ (particle size multiplier for PM-10)} \\
 k &= 0.082 \text{ (particle size multiplier for PM)} \\
 sL &= 7.4 \text{ road surface silt loading (grams per square meter)} \\
 W &= 26 \text{ tons average vehicle weight} \\
 C &= 0.00047 \text{ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.} \\
 P &= 120 \text{ no. of days with at least 0.01 inch of precipitation} \\
 N &= 365 \text{ no. of days in averaging period}
 \end{aligned}$$

$$\text{PM-10: } \frac{0.88 \text{ lb/mi} \times 5,319.07 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{2.33 \text{ tons/yr}}$$

$$\text{PM: } \frac{4.90 \text{ lb/mi} \times 5,319.07 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{13.02 \text{ tons/yr}}$$

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Paved Roadways (cont'd)

III. Solidification front-end loaders

Solidification front-end loaders do not travel on paved roadways

IV. Public Haulers

$$\begin{aligned}
 &0.35 \text{ trip/hr} \times \\
 &0.12 \text{ mile/trip} \times \\
 &2 \text{ (round trip) } \times \\
 &8760 \text{ hr/yr} = \qquad \qquad \qquad 735.84 \text{ miles per year}
 \end{aligned}$$

$$\begin{aligned}
 Ef &= [k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot C]^{1-P/4 \cdot N} \\
 &= 0.02 \text{ lb PM-10/mile} \\
 &= 0.10 \text{ lb PM/mile}
 \end{aligned}$$

where k = 0.016 (particle size multiplier for PM-10)
k = 0.082 (particle size multiplier for PM)
sL = 7.4 road surface silt loading (grams per square meter)
W = 2 tons average vehicle weight
C = 0.00047 emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.
P = 120 no. of days with at least 0.01 inch of precipitation
N = 365 no. of days in averaging period

$$\text{PM-10: } \frac{0.02 \text{ lb/mi} \times 735.84 \text{ mi/yr}}{2000 \text{ lb/ton}} = 0.01 \text{ tons/yr}$$

$$\text{PM: } \frac{0.10 \text{ lb/mi} \times 735.84 \text{ mi/yr}}{2000 \text{ lb/ton}} = 0.04 \text{ tons/yr}$$

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Paved Roadways (cont'd)

V. Landfill Owned/Industrial Haulers

$$\begin{aligned}
 &9.91 \text{ trip/hr} \times \\
 &0.12 \text{ mile/trip} \times \\
 &2 \text{ (round trip)} \times \\
 &8760 \text{ hr/yr} = \qquad\qquad\qquad 20,834.78 \text{ miles per year}
 \end{aligned}$$

$$\begin{aligned}
 E_f &= [k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot C] \cdot [1 - P/4 \cdot N] \\
 &= 0.88 \text{ lb PM-10/mile} \\
 &= 4.90 \text{ lb PM/mile} \\
 \text{where } k &= 0.016 \text{ (particle size multiplier for PM-10)} \\
 k &= 0.082 \text{ (particle size multiplier for PM)} \\
 sL &= 7.4 \text{ road surface silt loading (grams per square meter)} \\
 W &= 26 \text{ tons average vehicle weight} \\
 C &= 0.00047 \text{ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.} \\
 P &= 120 \text{ no. of days with at least 0.01 inch of precipitation} \\
 N &= 365 \text{ no. of days in averaging period}
 \end{aligned}$$

$$\text{PM-10: } \frac{0.88 \text{ lb/mi} \times 20,834.78 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{9.13 \text{ tons/yr}}$$

$$\text{PM: } \frac{4.90 \text{ lb/mi} \times 20,834.78 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{51.01 \text{ tons/yr}}$$

VI. Municipal Haulers

$$\begin{aligned}
 &1.12 \text{ trip/hr} \times \\
 &0.12 \text{ mile/trip} \times \\
 &2 \text{ (round trip)} \times \\
 &8760 \text{ hr/yr} = \qquad\qquad\qquad 2,354.69 \text{ miles per year}
 \end{aligned}$$

$$\begin{aligned}
 E_f &= [k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot C] \cdot [1 - P/4 \cdot N] \\
 &= 0.21 \text{ lb PM-10/mile} \\
 &= 1.17 \text{ lb PM/mile} \\
 \text{where } k &= 0.016 \text{ (particle size multiplier for PM-10)} \\
 k &= 0.082 \text{ (particle size multiplier for PM)} \\
 sL &= 7.4 \text{ road surface silt loading (grams per square meter)} \\
 W &= 10 \text{ tons average vehicle weight} \\
 C &= 0.00047 \text{ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.} \\
 P &= 120 \text{ no. of days with at least 0.01 inch of precipitation} \\
 N &= 365 \text{ no. of days in averaging period}
 \end{aligned}$$

$$\text{PM-10: } \frac{0.21 \text{ lb/mi} \times 2,354.69 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{0.25 \text{ tons/yr}}$$

$$\text{PM: } \frac{1.17 \text{ lb/mi} \times 2,354.69 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{1.37 \text{ tons/yr}}$$

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Paved Roadways (cont'd)

VII. Commercial Haulers

$$\begin{aligned}
 & 1.4 \text{ trip/hr} \times \\
 & 0.12 \text{ mile/trip} \times \\
 & 2 \text{ (round trip)} \times \\
 8760 \text{ hr/yr} & = 2,943.36 \text{ miles per year}
 \end{aligned}$$

$$\begin{aligned}
 Ef &= [k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot C] \cdot [1 - P/4 \cdot N] \\
 &= 0.88 \text{ lb PM-10/mile} \\
 &= 4.90 \text{ lb PM/mile} \\
 \text{where } k &= 0.016 \text{ (particle size multiplier for PM-10)} \\
 k &= 0.082 \text{ (particle size multiplier for PM)} \\
 sL &= 7.4 \text{ road surface silt loading (grams per square meter)} \\
 W &= 26 \text{ tons average vehicle weight} \\
 C &= 0.00047 \text{ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.} \\
 P &= 120 \text{ no. of days with at least 0.01 inch of precipitation} \\
 N &= 365 \text{ no. of days in averaging period}
 \end{aligned}$$

$$\text{PM-10: } \frac{0.88 \text{ lb/mi} \times 2,943.36 \text{ mi/yr}}{2000 \text{ lb/ton}} = 1.29 \text{ tons/yr}$$

$$\text{PM: } \frac{4.90 \text{ lb/mi} \times 2,943.36 \text{ mi/yr}}{2000 \text{ lb/ton}} = 7.21 \text{ tons/yr}$$

VIII. Leachate Haulers

$$\begin{aligned}
 & 0.31 \text{ trip/hr} \times \\
 & 0.12 \text{ mile/trip} \times \\
 & 2 \text{ (round trip)} \times \\
 8760 \text{ hr/yr} & = 651.74 \text{ miles per year}
 \end{aligned}$$

$$\begin{aligned}
 Ef &= [k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot C] \cdot [1 - P/4 \cdot N] \\
 &= 0.88 \text{ lb PM-10/mile} \\
 &= 4.90 \text{ lb PM/mile} \\
 \text{where } k &= 0.016 \text{ (particle size multiplier for PM-10)} \\
 k &= 0.082 \text{ (particle size multiplier for PM)} \\
 sL &= 7.4 \text{ road surface silt loading (grams per square meter)} \\
 W &= 26 \text{ tons average vehicle weight} \\
 C &= 0.00047 \text{ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.} \\
 P &= 120 \text{ no. of days with at least 0.01 inch of precipitation} \\
 N &= 365 \text{ no. of days in averaging period}
 \end{aligned}$$

$$\text{PM-10: } \frac{0.88 \text{ lb/mi} \times 651.74 \text{ mi/yr}}{2000 \text{ lb/ton}} = 0.29 \text{ tons/yr}$$

$$\text{PM: } \frac{4.90 \text{ lb/mi} \times 651.74 \text{ mi/yr}}{2000 \text{ lb/ton}} = 1.60 \text{ tons/yr}$$

**Appendix A: Emission Calculations
Particulate Matter Emissions (cont'd)**

Paved Roadways (cont'd)

IX. Employees/Supervisors

$$\begin{aligned}
 & 1.53 \text{ trip/hr} \times \\
 & 0.12 \text{ mile/trip} \times \\
 & 2 \text{ (round trip)} \times \\
 & 8760 \text{ hr/yr} = \qquad \qquad \qquad 3,216.67 \text{ miles per year}
 \end{aligned}$$

$$\begin{aligned}
 E_f &= [k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot C] \cdot [1 - P/4 \cdot N] \\
 &= 0.02 \text{ lb PM-10/mile} \\
 &= 0.10 \text{ lb PM/mile} \\
 \text{where } k &= 0.016 \text{ (particle size multiplier for PM-10)} \\
 k &= 0.082 \text{ (particle size multiplier for PM)} \\
 sL &= 7.4 \text{ road surface silt loading (grams per square meter)} \\
 W &= 2 \text{ tons average vehicle weight} \\
 C &= 0.00047 \text{ emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.} \\
 P &= 120 \text{ no. of days with at least 0.01 inch of precipitation} \\
 N &= 365 \text{ no. of days in averaging period}
 \end{aligned}$$

$$\text{PM-10: } \frac{0.02 \text{ lb/mi} \times 3,216.67 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{0.03 \text{ tons/yr}}$$

$$\text{PM: } \frac{0.10 \text{ lb/mi} \times 3,216.67 \text{ mi/yr}}{2000 \text{ lb/ton}} = \mathbf{0.17 \text{ tons/yr}}$$

Total Potential Emissions from Unpaved Roadways: PM-10: 13.79 tons/yr

PM: 77.06 tons/yr

Total Controlled Emissions from Unpaved Roadways: PM-10: 3.45 tons/yr

PM: 19.27 tons/yr

Note: Controlled Paved Roadway emissions include a 75% PM control efficiency from watering of roadways, resurfacing and speed reduction.

**Appendix A: Emission Calculations
VOC and HAP Emissions**

Company Name: Rumpke of Indiana, LLC
 Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
 Operating Permit No.: 071-21366
 Pit ID: 071-00038
 Reviewer: GS/EVP

Solidification Process

Maximum Annual Throughput of Liquid Waste: 14,602,920 gal/yr = 1667 gal/hr
 Limited Annual Throughput of Liquid Waste: 6,240,000 gal/yr = 1667 gal/hr

Chemical	Concentration (mg/l)*	Potential VOC Emissions***		Potential HAP Emissions		Limited VOC Emissions		Limited HAP Emissions	
		(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
Arsenic**	5	N/A	N/A	4.90E-08	2.15E-07	N/A	N/A	4.90E-08	9.18E-08
Barium**	100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	0.5	6.96E-03	3.05E-02	6.96E-03	3.05E-02	6.96E-03	1.30E-02	6.96E-03	1.30E-02
Cadmium**	1	N/A	N/A	9.81E-09	4.30E-08	N/A	N/A	9.81E-09	1.84E-08
Carbon Tetrachloride	0.5	6.96E-03	3.05E-02	6.96E-03	3.05E-02	6.96E-03	1.30E-02	6.96E-03	1.30E-02
Chlordane	0.03	4.17E-04	1.83E-03	4.17E-04	1.83E-03	4.17E-04	7.81E-04	4.17E-04	7.81E-04
Chlorobenzene	100	1.39	6.09	1.39	6.09	1.39	2.60	1.39	2.60
Chloroform	6	8.35E-02	0.37	8.35E-02	0.37	8.35E-02	0.16	8.35E-02	0.16
Chromium**	5	N/A	N/A	4.90E-08	2.15E-07	N/A	N/A	4.90E-08	9.18E-08
Cresol & Isomers	200	2.78	12.19	2.78	12.19	2.78	5.21	2.78	5.21
2,4-D**	10	N/A	N/A	9.81E-08	4.30E-07	N/A	N/A	9.81E-08	1.84E-07
1,4-Dichlorobenzene	7.5	0.10	0.46	0.10	0.46	0.10	0.20	0.10	0.20
1,2-Dichloroethane	0.5	6.96E-03	3.05E-02	6.96E-03	3.05E-02	6.96E-03	1.30E-02	6.96E-03	1.30E-02
1,1-Dichloroethylene	0.7	9.74E-03	4.27E-02	9.74E-03	4.27E-02	9.74E-03	1.82E-02	9.74E-03	1.82E-02
2,4-Dinitrotoluene**	0.13	N/A	N/A	1.28E-09	5.58E-09	N/A	N/A	1.28E-09	2.39E-09
Endrin**	0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor**	0.008	N/A	N/A	7.85E-11	3.44E-10	N/A	N/A	7.85E-11	1.47E-10
Hexachlorobenzene	0.13	1.81E-03	7.92E-03	1.81E-03	7.92E-03	1.81E-03	3.39E-03	1.81E-03	3.39E-03
Hexachlorobutadiene	0.5	6.96E-03	3.05E-02	6.96E-03	3.05E-02	6.96E-03	1.30E-02	6.96E-03	1.30E-02
Hexachloroethane	3	4.17E-02	0.18	4.17E-02	0.18	4.17E-02	7.81E-02	4.17E-02	7.81E-02
Lead**	5	N/A	N/A	4.90E-08	2.15E-07	N/A	N/A	4.90E-08	9.18E-08
Lindane**	0.4	N/A	N/A	3.92E-09	1.72E-08	N/A	N/A	3.92E-09	7.34E-09
Mercury**	0.2	N/A	N/A	1.96E-09	8.59E-09	N/A	N/A	1.96E-09	3.67E-09
Methoxychlor**	10	N/A	N/A	9.81E-08	4.30E-07	N/A	N/A	9.81E-08	1.84E-07
Methyl Ethyl Ketone	200	2.78	12.19	2.78	12.19	2.78	5.21	2.78	5.21
Nitrobenzene	2	2.78E-02	0.12	2.78E-02	0.12	2.78E-02	5.21E-02	2.78E-02	5.21E-02
Pentachlorophenol**	100	N/A	N/A	9.81E-07	4.30E-06	N/A	N/A	9.81E-07	1.84E-06
Pyridine	5	6.96E-02	0.30	N/A	N/A	6.96E-02	0.13	N/A	N/A
Selenium**	1	N/A	N/A	9.81E-09	4.30E-08	N/A	N/A	9.81E-09	1.84E-08
Silver**	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloroethylene	0.7	9.74E-03	4.27E-02	9.74E-03	4.27E-02	9.74E-03	1.82E-02	9.74E-03	1.82E-02
Toxaphene**	0.5	N/A	N/A	4.90E-09	2.15E-08	N/A	N/A	4.90E-09	9.18E-09
Trichloroethylene	0.5	6.96E-03	3.05E-02	6.96E-03	3.05E-02	6.96E-03	1.30E-02	6.96E-03	1.30E-02
2,4,5-Trichlorophenol**	400	N/A	N/A	3.92E-06	1.72E-05	N/A	N/A	3.92E-06	7.34E-06
2,4,6-Trichlorophenol**	2	N/A	N/A	1.96E-08	8.59E-08	N/A	N/A	1.96E-08	3.67E-08
2,4,5-TP (Silvex)**	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	0.2	2.78E-03	1.22E-02	2.78E-03	1.22E-02	2.78E-03	5.21E-03	2.78E-03	5.21E-03
Maximum Emissions		7.34	32.16	7.27	31.86	7.34	13.74	7.27	13.61
Total VOC Concentration (mg/l)	527.76								

Methodology:

* Concentration of each chemical was set at the regulatory level for toxicity as outlined in 40 CFR 60.261.24. This was done in order to obtain the worst-case emissions, since the landfill could not accept any waste with concentrations exceeding these values.

** For chemicals that are solid at standard conditions, and thus not VOC, the emissions were based on the PM emission factor for material handling of the solidified waste. See page 3 of App. A for emission factor.

*** For chemicals which are VOC, emissions were calculated as follows:
 VOC/HAP emissions (lb/hr) = Gal/hr of liquid waste * 3.785 liters/gal * Conc. (mg/l) * 2.205E-06 lbs/mg
 Potential VOC/HAP emissions (tons/yr) = VOC/HAP emissions (lb/hr) * 8760 hrs/yr * 1/2000 lbs/ton
 Limited VOC/HAP emissions (tons/yr) = Limited gal/yr of liquid waste * 3.785 liters/gal * Conc. (mg/l) * 2.205E-06 lbs/mg * 1/2000 lbs/ton

Appendix A: Emission Calculations VOC Emissions

Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Permit Revision No.: 071-21366
Plt ID: 071-00038
Reviewer: GS/EVP

Municipal Sanitary Landfill*

Landfill Capacity: 12,850,395 Mg (from Design Capacity Report)
 2001 Refuse Acceptance Rate: 209,594 tons/yr (Provided by Rumpke)
 2002 Refuse Acceptance Rate: 124,430 tons/yr (Provided by Rumpke)
 2003 Refuse Acceptance Rate: 104,014 tons/yr (Provided by Rumpke)
 2004 Refuse Acceptance Rate: 99,303 tons/yr (Provided by Rumpke)

Lo: 100.0 m³/Mg
 k: 0.04 /yr
 NMOC: 600.0 ppmv
 Methane: 50% by volume

Pollutant	Potential Emissions*	
	(Mg/yr)	(Tons/yr)
Methane	19390.00	21373.40
NMOC	124.00	136.68
OC (Methane + NMOC)	19514.00	21510.09
Non-VOC Pollutants		
1,1,1-Trichloroethane	0.15	0.17
Acetone	0.98	1.08
Dichloromethane	2.88	3.17
Ethane	64.71	71.33
Methane	19390.00	21373.40
Perchloroethylene	1.48	1.64
Dichlorodifluoromethane	4.68	5.16
Chlorodifluoromethane	0.27	0.30
Fluorotrichloromethane	0.25	0.28
Total Non-VOC	19465.41	21456.52
Total VOC	48.59	53.56

Methodology:

* Maximum values based on USEPA Landfill Gas Emissions Model (version 3.02), AP-42 defaults for Lo, k, NMOC concentration for landfill sites with no co-disposal of industrial waste, and individual compound concentrations.

Maximum Potential Landfill Gas Fugitive Emissions Summary

Pollutant	Potential Emissions** (tons/yr)
Methane	21157.91
NMOC	122.67
VOC	48.07

*Pursuant to Section 2.4.4.1, AP 42, Fifth Edition, Volume I Chapter 2: Solid Waste Disposal, the Landfill Air Emission Estimation model includes recommended AP-42 default values for L and k. The source may use the AP-42 default values for L and k to estimate potential emissions. Therefore, AP-42 default values are used to calculate potential emissions.

** These emissions represent fugitive emissions calculated as (potential uncontrolled landfill gas emissions - portion of landfill gas controlled by passive flares (see Appendix A, page 15 of 21 for controlled landfill gas calculation))

Appendix A: Emission Calculations

Emissions from Landfill with Passive Flares as Control

Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Operating Permit No.: 071-21366
Plt ID: 071-00038
Reviewer: GS/EVP

Total Number of Flares:	8	
Maximum Flare Design Flow (scfm):	50	Data provided by LFG Specialties, Inc. (vendor).
		Data provided by LFG Specialties, Inc. (vendor).
Minimum LFG Temperature (degrees F):	30	Minimum temperature used to obtain worst-case SO ₂ emissions.
Maximum Total Landfill Gas Processed Through 8 Flares (scf/yr):	210,240,000	Based on 8760 hours/yr of operation
Total Landfill Gas Methane Content (%):	50.00%	NSPS Subpart WWW default value
Total Methane Gas Flared (scf/yr):	105,120,000	Based on 8760 hours/yr of operation
Portion of Total Landfill Gas Flared (%):	10.25%	Calculated value
Flare Destruction Efficiency (%):	98.00%	Provided by LFG Specialties, Inc.

Emissions Calculations

Uncontrolled Methane Emissions (tons/yr)	2102.40	Calculated using a density of 0.04 lb/cubic foot; calculated from US EPA Landfill Model.
Controlled Methane Emissions (tons/yr)	42.05	Based on flare destruction efficiency of 98%.
Uncontrolled VOC Emissions (tons/yr)	5.49	Calculated based on portion of total landfill gas flared * potential VOC emissions from landfill
Controlled VOC Emissions (tons/yr)	0.11	Based on flare destruction efficiency of 98%.
Uncontrolled NMOC Emissions (tons/yr)	14.01	Calculated based on portion of total landfill gas flared * potential NMOC emissions from landfill
Controlled NMOC Emissions (tons/yr)	0.28	Based on flare destruction efficiency of 98%.
Molecular Weight of SO ₂ (expressed as sulfur) (g)	32.06	
Default conc. of Total Reduced Sulfur Compounds as Sulfur (ppmv)	46.9	Reference: AP-42, p. 2.4-8 (default value since no site specific value is available).
Emission Rate of Reduced Sulfur Compounds as Sulfur from Landfill (cu.m/yr)	279.43	Reference: AP-42, Sect. 2.4, Equation 3, p. 2.4-5 (11/98).
Uncontrolled Mass Emission Rate of Reduced Sulfur Compounds as Sulfur (tons/yr)	0.44	Reference: AP-42, Sect. 2.4, Equation 4, p. 2.4-5 (11/98).
Uncontrolled SO ₂ Emission Rate (tons/yr)	0.88	Based on ratio of molecular weight of SO ₂ to the molecular weight of Sulfur of 2:1.
NO _x Emission Factor (lb/mm dscf Methane)	40	Reference: AP-42, Table 2.4-5 (11/98), p. 2.4-15.
CO Emission Factor (lb/mm dscf Methane)	750	Reference: AP-42, Table 2.4-5 (11/98), p. 2.4-15.
PM-10 Emission Factor (lb/mm dscf Methane)	17	Reference: AP-42, Table 2.4-5 (11/98), p. 2.4-15.
Potential NO_x Emissions (tons/yr)	2.10	
Potential CO Emissions (tons/yr)	39.42	
Potential PM-10 Emissions (tons/yr)	0.89	

Appendix A: Emission Calculations
HAP Emissions from Landfill

Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Operating Permit No.: 071-21366
Pit ID: 071-00038
Reviewer: GS/EVP

Sanitary Landfill*

Landfill Capacity: 12,850,395 Mg (from Design Capacity Report)
2001 Refuse Acceptance Rate: 209,594 tons/yr (Provided by Rumpke)
2002 Refuse Acceptance Rate: 124,430 tons/yr (Provided by Rumpke)
2003 Refuse Acceptance Rate: 104,014 tons/yr (Provided by Rumpke)
2004 Refuse Acceptance Rate: 99,303 tons/yr (Provided by Rumpke)

Lo: 100.0 m³/Mg
k: 0.04 /yr
NMOC: 600.0 ppmv
Methane: 50% by volume

Pollutant	Potential Uncontrolled Emissions		Maximum Potential Fugitive Emissions (tons/yr)	Maximum Potential Controlled Emissions (tons/yr)
	(Mg/yr)	(Tons/yr)		
1,1,1-Trichloroethane	0.16	0.18	0.16	3.3E-04
1,1,1,2-Tetrachloroethane	0.45	0.50	0.45	9.2E-04
1,1-Dichloroethane	0.57	0.63	0.57	1.3E-03
1,1-Dichloroethene	0.05	0.06	0.05	1.0E-04
1,2-Dichloroethane	0.10	0.11	0.10	2.0E-04
1,2-Dichloropropane	0.05	0.06	0.05	1.0E-04
Acrylonitrile	0.81	0.89	0.82	1.5E-03
Benzene	0.36	0.40	0.36	7.4E-04
Carbon Disulfide	0.11	0.12	0.11	2.3E-04
Carbon Tetrachloride	1.5E-03	1.7E-03	0.00	3.3E-05
Carbonyl Sulfide	0.07	0.08	0.07	1.7E-04
Chlorobenzene	0.07	0.07	0.07	1.0E-04
Chloroethane	0.20	0.22	0.20	4.8E-04
Chloroform	8.7E-03	9.5E-03	0.00	1.9E-04
Chloromethane	1.5E-01	1.7E-01	0.15	3.1E-04
Dichlorobenzene	0.07	0.08	0.08	4.5E-05
Dichloromethane	2.88	3.17	2.96	4.2E-03
Ethylbenzene	1.18	1.30	1.19	2.2E-03
Ethylene Dibromide	4.5E-04	5.0E-04	0.00	1.0E-05
Hexane	1.38	1.52	1.38	2.7E-03
Mercury	1.41E-04	1.55E-04	1.43E-04	2.4E-07
Methyl Ethyl Ketone	1.24	1.36	1.25	2.3E-03
Methyl Isobutyl Ketone	0.46	0.51	0.46	9.5E-04
Perchloroethylene	1.48	1.64	1.51	2.5E-03
Toluene	8.69	9.58	8.84	1.5E-02
Trichloroethene	0.89	0.98	0.90	1.6E-03
Vinyl Chloride	1.10	1.22	1.12	1.9E-03
Xylene	3.08	3.40	3.14	5.1E-03
Total HAP	25.62	28.24	25.99	0.04

Methodology:

* Maximum values based on USEPA Landfill Gas Emissions Model (version 3.02), AP-42 defaults for Lo, k, NMOC concentration for landfill sites with no co-disposal of industrial waste, and individual compound concentrations. Pursuant to Section 2.4.4.1, AP 42, Fifth Edition, Volume I Chapter 2: Solid Waste Disposal, the Landfill Air Emission Estimation model includes recommended AP-42 default values for L and k. The source may use the AP-42 default values for L and k to estimate potential emissions. Therefore, AP-42 default values are used to calculate potential emissions.

**Appendix A: Emission Calculations
Internal Combustion Engines
Insignificant Activities**

**Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Operating Permit No.: 071-21366
Pit ID: 071-00038
Reviewer: GS/EVP**

A. Emissions calculated based on output rating (hp) for units firing diesel fuel

Power Output Capacity Potential Throughput
Horsepower (hp) hp-hr/yr

243.0 **2128680.0**

Power Output Capacity includes: three (3) 50 hp diesel-fired water pumps, two (2) 30 hp diesel-fired light plants, and one (1) 33 hp diesel-fired engine for the limestone slag screener.

Emission Factor in lb/hp-hr	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emissions in tons/yr	2.34	2.34	2.18	32.99	2.68	7.11

B. Emissions calculated based on output rating (hp) for units firing gasoline

Power Output Capacity Potential Throughput
Horsepower (hp) hp-hr/yr

75.0 **657000.0**

Power Output Capacity includes: four (4) 8 hp gasoline-fired water pumps, two (2) 16 hp gasoline-fired generators, and one (1) 11 hp gasoline-fired pressure washer.

Emission Factor in lb/hp-hr	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.0007	0.0007	0.0006	0.0110	0.0216	0.4390
Potential Emissions in tons/yr	0.24	0.24	0.19	3.61	7.09	144.21

Methodology

Potential Throughput (hp-hr/yr) = hp * 8760 hr/yr

Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-1

Potential Emissions (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

*PM emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

**Appendix A: HAP Emission Calculations
Internal Combustion Engines - Diesel Fuel
Reciprocating**

**Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Operating Permit No.: 071-21366
Plt ID: 071-00038
Reviewer: GS/EVP**

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity

MM Btu/hr

1.701

Heat Input Capacity includes: three (3) 50 hp diesel-fired water pumps, two (2) 30 hp diesel-fired light plants, and one (1) 33 hp diesel-fired engine for the limestone slag screener.

Emission Factor in lb/MMBtu	Pollutant										
	Benzene	Toluene	Xylenes	Propylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Naphthalene	Total PAH	Total HAPs
Potential Emission in tons/yr	9.33E-04	4.09E-04	2.85E-04	2.58E-03	3.91E-05	1.18E-03	7.67E-04	9.25E-05	8.48E-05	1.68E-04	4.87E-02

Methodology

Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-2

An average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from hp to MMBtu/hr.

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#1 and #2 Fuel Oil

Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Operating Permit No.: 071-21366
Plt ID: 071-00038
Reviewer: GS/EVP

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur 0.5
0.3762	23.53937143	

Heat input capacity includes two (2) kerosene-fired space heaters each rated at 0.165 MMBtu/hr and two (2) kerosene-fired steam washers, each rated at 0.0231 MMBtu/hr.

	Pollutant					
Emission Factor in lb/kgal	PM*	PM10*	SO2 71 (142.0S)	NOx 20.0	VOC 0.34	CO 5.0
Potential Emission in tons/yr	0.02	0.04	0.84	0.24	0.00	0.06

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.

**PM10 is filterable plus condensable PM.

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

See next page for HAPs emission calculations.

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#1 and #2 Fuel Oil
HAPs Emissions

Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Operating Permit No.: 071-21366
Plt ID: 071-00038
Reviewer: GS/EVP

HAPs - Metals					
Emission Factor in lb/mmBtu	Arsenic 4.0E-06	Beryllium 3.0E-06	Cadmium 3.0E-06	Chromium 3.0E-06	Lead 9.0E-06
Potential Emission in tons/yr	6.59E-06	4.94E-06	4.94E-06	4.94E-06	1.48E-05

HAPs - Metals (continued)					
Emission Factor in lb/mmBtu	Mercury 3.0E-06	Manganese 6.0E-06	Nickel 3.0E-06	Selenium 1.5E-05	Total
Potential Emission in tons/yr	4.94E-06	9.89E-06	4.94E-06	2.47E-05	8.1E-05

Methodology

No data was available in AP-42 for organic HAPs.

Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

Appendix A: Emission Calculations
Propane - Commercial Boilers
(Heat input capacity: > 0.3 MMBtu/hr and < 10 MMBtu/hr)

Company Name: Rumpke of Indiana, LLC
Address City IN Zip: 546 County Road 870 West, Medora, Indiana 47260
Operating Permit No.: 071-21366
Pit ID: 071-00038
Reviewer: GS/EVP

Heat Input Capacity Potential Throughput SO2 Emission factor = 0.10 x S
MMBtu/hr kgals/year S = Sulfur Content = 0.18 grains/100ft³

0.31 29.68

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2 (0.10S)	NOx	VOC **TOC value	CO
Potential Emission in tons/yr	0.4	0.4	0.02	14.0	0.5	1.9
	0.01	0.01	0.00	0.21	0.01	0.03

*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

**The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

Methodology

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)
(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu
Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton