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

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: April 14, 2008

RE: Liquid Solutions, LLC / 181-25104-00047

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

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

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100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

Part 70 Operating Permit
OFFICE OF AIR QUALITY

Liquid Solutions, LLC
8635 East State Road 16
Monticello, Indiana 47960

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

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

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

Operation Permit No.: T181-25104-00047	
Issued by: *Original signed by Tripurari Sinha for* Matthew Stuckey, Deputy Branch Chief Permits Branch Office of Air Quality	Issuance Date: April 14, 2008 Expiration Date: April 14, 2013

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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 industrial wastewater processing facility.

Source Address:	8635 East State Road 16, Monticello, Indiana 47960
Mailing Address:	9870 Big Bend Road, Kirkwood, Missouri, 63122
General Source Phone Number:	(314) 909-9250
SIC Code:	4953
County Location:	White
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This source consists of a municipal solid waste landfill with a collocated industrial wastewater processing facility:

(a) Liberty Landfill, Inc. (Source ID # 181-00035), is located at 8653 East State Road 16, Monticello, Indiana 47960 (SIC: 4953); and

(b) Liquid Solutions, LLC, (Source ID # 181-00047), the supporting operation, is located at 8635 East State Road 16, Monticello, Indiana 47960.

IDEM has determined that Liberty Landfill, Inc. and Liquid Solutions, LLC are located on contiguous properties, have the same two-digit SIC code (Major Group 49: Electric, Gas, And Sanitary Services), and Liquid Solutions, LLC is dependent wholly upon the output (landfill gas and waste heat) of the Liberty Landfill, Inc. for its operation. Therefore, Liberty Landfill, Inc. and Liquid Solutions, LLC will be considered as one source, as defined by 326 IAC 2-7-1(22), based on this business relationship.

A.3 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) wastewater evaporation system, consisting of an evaporator and enclosed ground flare, identified as E-VAP1-FL4, constructed in 2005, approved for modification in 2008, with a maximum wastewater evaporation rate of 26,000 gallons per day, and with the wastewater evaporator (E-VAP1) having a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. Emissions from the wastewater evaporator are controlled by an enclosed ground flare (FL4) rated at 1,000 cubic feet per minute of landfill gas. This system is used to process dilute industrial wastewater. This is an affected facility under 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

(b) One (1) wastewater evaporation system, consisting of an air stripper and evaporator,

identified as AS-E-VAP2, approved for construction in 2008, with a maximum wastewater evaporation rate of 32,000 gallons per day, using waste heat as the source of heat for evaporation. Wastewater is treated in the air stripper (AS) prior to being evaporated in E-VAP2. Volatile emissions from the air stripper (AS) are be combusted in the enclosed ground flare (FL4). This system is used to process dilute industrial wastewater.

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

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

(a) The following storage tanks:

(1) Four (4) wastewater feed tanks, constructed in 2004, each with a maximum capacity of 8,000 gallons (33.3 cubic meters), venting to the atmosphere.

(2) One (1) wastewater decant tank, approved for construction in 2008, with a maximum capacity of 6,400 gallons, and venting to flare F4.

(3) Five (5) wastewater feed and product tanks, identified as T501 through T505, respectively, approved for construction in 2008, each with a maximum capacity of 25,000 gallons, and venting to flare F4.

(4) One (1) wastewater slurry tank, identified as T510, approved for construction in 2008, with a maximum capacity of 6,400 gallons, and venting to the atmosphere.

(5) One (1) oil tank, identified as T511, approved for construction in 2008, with a maximum capacity of 8,000 gallons, and venting to flare F4.

(6) One (1) product tank, identified as T512, approved for construction in 2008, with a maximum capacity of 8,000 gallons, and venting to flare F4.

(7) One (1) roll-off container, identified as T513, approved for construction in 2008, with a maximum capacity of 12,000 gallons, and venting to the atmosphere.

(8) One (1) utility tank, identified as T520, approved for construction in 2008, with a maximum capacity of 10,000 gallons, and venting to the atmosphere.

(9) One (1) process water tank, identified as T806, approved for construction in 2008, with a maximum capacity of 10,000 gallons, and venting to the atmosphere.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

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

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

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

SECTION B GENERAL CONDITIONS

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

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

B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate the air stripper and wastewater evaporation system (AS-E-VAP2) pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

(d) The Permittee may continue to operate the wastewater evaporation system and enclosed ground flare (E-VAP1-FL4) during the construction of the air stripper and wastewater evaporation system (AS-E-VAP2).

B.4 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, T181-25104-00047, 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.5 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.6 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.7 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.8 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.9 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.10 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 the "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.11 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 no later than July 1 of each year to:

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

B.12 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.13 Emergency Provisions [326 IAC 2-7-16]

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

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

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

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

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

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

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

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

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

B.14 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

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

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

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

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

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

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

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

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

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

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

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

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

B.15 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 T181-25104-00047 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

B.16 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.17 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require 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.19 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

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

Request for renewal shall be submitted to:

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

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

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

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

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

B.20 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

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

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

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

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

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

B.21 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.22 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

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

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

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

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

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

(3) Any change in emissions; and

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

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

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

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

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

B.23 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.24 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.25 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

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

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

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

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

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

B.26 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.27 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

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

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

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

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

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

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

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

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere

in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

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

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

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

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

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

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

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

C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

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

within 180 days from the date on which this source commences operation.

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

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

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

C.13 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

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

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

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

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

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

(1) monitoring results;

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

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

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

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

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

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

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

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

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

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

The statement must be submitted to:

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

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

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

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

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

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

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

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

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

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) 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.

Stratospheric Ozone Protection

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

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

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) wastewater evaporation system, consisting of an evaporator and enclosed ground flare, identified as E-VAP1-FL4, constructed in 2005, approved for modification in 2008, with a maximum wastewater evaporation rate of 26,000 gallons per day, and with the wastewater evaporator (E-VAP1) having a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. Emissions from the wastewater evaporator are controlled by an enclosed ground flare (FL4) rated at 1,000 cubic feet per minute of landfill gas. This system is used to process dilute industrial wastewater. This is an affected facility under 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

(b) One (1) wastewater evaporation system, consisting of an air stripper and evaporator, identified as AS-E-VAP2, approved for construction in 2008, with a maximum wastewater evaporation rate of 32,000 gallons per day, using waste heat as the source of heat for evaporation. Wastewater is treated in the air stripper (AS) prior to being evaporated in E-VAP2. Volatile emissions from the air stripper (AS) are be combusted in the enclosed ground flare (FL4). This system is used to process dilute industrial wastewater.

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

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

D.1.1 HAP Minor Limit

(a) The total input of toluene from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 270 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of toluene in the combustion zone shall be 98%.

(b) The total input of volatile chlorine from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 11,862 pounds per twelve consecutive month period, with compliance determined at the end of each month.

(c) The total input of any other single volatile HAP from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 395 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of any other single HAP in the combustion zone shall be 98%.

(d) The total input of any combination of volatile HAPs from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 470 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of HAPs in the combustion zone shall be 98%.

Combined with unlimited HAP emissions from Liberty Landfill, the source-wide emissions of HAPs from this collocated source will be less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of any combination of HAPs. Compliance with this limit makes this source (landfill and wastewater evaporator) a minor source under Section 112 of the Clean Air Act.

D.1.2 PSD Minor Limit [326 IAC 2-2]

(a) The input of volatile organic compounds to E-VAP1, FL4, AS, and E-VAP2 shall be less than 11,000 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of VOC in the combustion zone shall

be 99%.

(b) The input of volatile sulfur compounds to E-VAP1, FL4, AS, and E-VAP2 shall be less than 120.1 tons of sulfur per twelve consecutive month period, with compliance determined at the end of each month. This is equivalent to total emissions of 240 tons of SO_2 from E-VAP1, FL4, AS, and E-VAP2 per year.

Combined with the unlimited sulfur dioxide emissions from Liberty Landfill and the emissions of volatile organic compounds as limited by 40 CFR 60, Subpart WWW, the source-wide emissions of volatile organic compounds and sulfur dioxide from this collocated source will be less than 250 tons per year. Compliance with this limit will render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.3 Particulate Matter (PM)

Pursuant to 326 IAC 6-3-2, the PM from the wastewater evaporation system identified as E-VAP1-FL4 and the wastewater evaporation system identified as AS-E-VAP2 shall not exceed the pound per hour emission rate established as E in the following formula:

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

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.1.1, the Permittee shall perform testing on the emission units at this source as follows:

(a) The enclosed ground flare (FL4) shall be tested for destruction efficiency of a single HAP for the vapors routed from E-VAP1 and the air stripper (AS). The Permittee shall test for the HAP deemed to have the lowest destruction efficiency, as determined by IDEM, OAQ.

(b) The Permittee shall perform inlet and outlet testing on the air stripper (AS) for a single volatile HAP to determine the percent volatilization of HAP from the wastewater to the air stream. The Permittee shall test for the volatile HAP deemed to have the highest solubility in water or the lowest rate of volatilization under normal conditions when passed through the air stripper, as determined by IDEM, OAQ.

(c) The enclosed ground flare (FL4) shall be tested for VOC destruction efficiency for the vapors routed from E-VAP1 and the air stripper (AS).

(d) The Permittee shall perform inlet and outlet testing on the air stripper (AS) for VOC to determine the percent volatilization of VOC from the wastewater to the air stream. The Permittee shall test for the volatile organic compound deemed to have the highest solubility in water or the lowest rate of volatilization under normal conditions when passed through the air stripper, as determined by IDEM, OAQ.

The testing shall be done utilizing methods as approved by the Commissioner. The testing shall

be done within 180 days of issuance of this permit, or within sixty (60) days of the operations reaching maximum capacity, whichever is sooner. Testing shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.6 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall:

(a) Demonstrate the volatile organic compound content, volatile sulfur compound content, volatile chlorine compound content, volatile single HAP content and volatile total HAP content of the wastewater accepted for disposal by providing vendor analysis of wastewater accepted for disposal accompanied by a vendor certification. A vendor analysis will not be required when the waste generator determines that the composition of a waste stream is identical to that of a previous waste stream for which an analysis has been done. In that case, a vendor certification will be sufficient.

(b) In the absence of vendor analysis certifying the volatile organic compound content, volatile sulfur compound content, volatile chlorine compound content, volatile single HAP content and volatile total HAP content of the wastewater accepted for disposal, the Permittee shall test each batch of wastewater accepted for disposal for volatile organic compound content, volatile sulfur compound content, volatile chlorine compound content, volatile single HAP content and volatile total HAP content via the procedures in 40 CFR 60, Appendix A.

D.1.7 Volatile Organic Compound and Sulfur Dioxide Emissions Calculations

Compliance with the VOC and SO_2 limits in Condition D.1.2 shall be calculated using the recorded total amount of wastewater, certified test results for the percent volatile organic compound and volatile sulfur compound content, and shall be determined as follows:

The emissions of volatile organic compounds (VOC) and sulfur dioxide from E-VAP1, FL4, AS, and E-VAP2 shall be calculated using mass balance methods and assuming that all volatile sulfur that passes through the combustion zone in the enclosed ground flare (FL4) is fully converted to sulfur dioxide.

(a) VOC Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

VOC Emissions (tons) = Wastewater Amount (gal) x Total VOC Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (Percent Volatilization % / 100) x (1 - 99 % Control Efficiency)

(b) VOC Emissions from landfill gas shall be calculated as follows:

VOC Emissions (tons/yr) = Flow Rate (scfm) x 235 ppmv /1,000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of Hexane (86.2 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1 - 99 % Control Efficiency)

The volatile organic compound concentration of landfill gas shall be less than 235 ppmv.

(c) VOC Emissions from wastewater being evaporated in E-VAP2 shall be considered to be equivalent to the dissolved VOC content of that volume of wastewater and shall be calculated as follows:

VOC Emissions (tons) = Wastewater Amount (gal) x Total VOC Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x

(1 - Percent Volatilization in the Air Stripper %)

(d) SO_2 Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

SO_2 Emissions (tons) = Wastewater Amount (gal) x Volatile Sulfur Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 1 ton/2,000 lbs x 64.064 lbs SO_2/32.065 lbs Sulfur

(e) SO_2 Emissions from landfill gas shall be calculated as follows:

SO_2 Emissions (tons) = Flow Rate (scfm) x 49.6 ppmv /1,000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of SO_2 (64 lbs/lbs mole) x 60 min/hr x Number of hours of operation x 1 ton/2000 lbs

The sulfur compound concentration of landfill gas shall be less than 49.6 ppmv.

(f) SO_2 Emissions from wastewater being evaporated in E-VAP2 shall be considered to be equivalent to the dissolved SO_2 content of that volume of wastewater and shall be calculated as follows:

SO_2 Emissions (tons) = Wastewater Amount (gal) x SO_2 Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 1 ton/2,000 lbs

D.1.8 HAP Emissions Calculations

Compliance with the HAP limits in Condition D.1.1 shall be calculated using the recorded total amount of wastewater, certified test results for the percent volatile chlorine compound and volatile HAP compound content, and shall be determined as follows:

(a) HCl Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

HCl Emissions (tons) = Wastewater Amount (gal) x Average Volatile Chlorine Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 1 ton/2,000 lbs x 36.461 lbs HCL /35.453 lbs Chlorine

(b) HCl Emissions from landfill gas shall be calculated as follows:

HCl Emissions (tons) = LFG Flow Rate (scfm) x 42 ppmv /1000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of HCl (36.46 lbs/lbs mole) x 60 min/hr x Number of hours of operation x 1 ton/2000 lbs

The chlorine compound concentration of landfill gas shall be less than 42 ppmv.

(c) HCl Emissions from wastewater being evaporated in E-VAP2 shall be considered to be equivalent to the dissolved HCl content of that volume of wastewater and shall be calculated as follows:

HCl Emissions (tons) = Wastewater Amount (gal) x HCl Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 1 ton/2,000 lbs

(d) Single Volatile HAP Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

Single Volatile HAP Emissions (tons) = Wastewater Amount (gal) x Single Volatile HAP

Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (Percent Volatilization % / 100) x (1 - 98 % Control Efficiency)

(e) Single HAP Emissions from landfill gas shall be calculated as follows:

Single HAP Emissions (tons/yr) = Flow Rate (scfm) x 12.1 ppmv /1,000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of single HAP (106.16 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1 - 98% Control Efficiency)

The single HAP concentration of landfill gas shall be less than 12.1 ppmv.

(f) For wastewater being evaporated in E-VAP2, the single volatile HAP emissions shall be considered to be equivalent to the dissolved single volatile HAP content of that volume of wastewater and shall be calculated as follows:

Single Volatile HAP Emissions (tons) = Wastewater Amount (gal) x Single Volatile HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (1 - Percent Volatilization %)

(g) Total Volatile HAP Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

Total Volatile HAP Emissions (tons) = Wastewater Amount (gal) x Total Volatile HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (Percent Volatilization % / 100) x (1 - 98 % Control Efficiency)

(h) Total HAP Emissions from landfill gas shall be calculated as follows:

Total HAP Emissions (tons/yr) = Flow Rate (scfm) x 106 ppmv /1,000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of Total HAP (89.9 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1 - 98 % Control Efficiency)

The Total HAP concentration of landfill gas shall be less than 106 ppmv.

(i) For wastewater being evaporated in E-VAP2, the total volatile HAP emissions shall be considered to be equivalent to the dissolved total volatile HAP content of that volume of wastewater and shall be calculated as follows:

Total Volatile HAP Emissions (tons) = Wastewater Amount (gal) x Total Volatile HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (1 - Percent Volatilization %)

D.1.9 Enclosed Ground Flare Compliance

The Permittee shall operate the enclosed ground flare (FL4) at the temperature necessary to achieve compliance with Conditions D.1.1 and D.1.2(a).

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

D.1.10 Enclosed Ground Flare Temperature

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the enclosed ground flare (FL4) for measuring operating temperature. For purposes of this condition, continuous shall mean temperature measurement no less than once per fifteen

minutes. The output of the system shall be recorded as a three (3) hour average.

(b) The Permittee shall determine the three (3) hour average temperature from the most recent valid stack test conducted pursuant to Condition D.1.4 that demonstrates compliance with limits in Conditions D.1.1 and D.1.2(a), as approved by IDEM.

(c) On and after the date of the most recently approved stack test results are available, the Permittee shall operate the enclosed ground flare (FL4) at or above the three (3) hour average temperature as observed during the compliant stack test and shall take appropriate response steps in accordance with Section C – Response to Excursions or Exceedances whenever the three (3) hour average temperature of the enclosed ground flare (FL4) is below the three (3) hour average temperature as observed during the compliant stack test. A three (3) hour average temperature that is below the three (3) hour average temperature as observed during the compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a violation of this permit.

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

D.1.11 Record Keeping Requirement

(a) To document compliance with Conditions D.1.1 and D.1.8, the Permittee shall maintain records in accordance with (1) through (5) below for each batch of wastewater received for disposal. Records maintained for (1) through (5) below shall be complete and sufficient to establish compliance with the HAP emission limits established in Condition D.1.1.

(1) The amount, in gallons or pounds, of each batch of wastewater received for disposal;

(2) The percent content of volatile HAPs of each batch of wastewater received for disposal;

(3) The date that the wastewater was accepted by the Permittee;

(4) The name of the wastewater supplier; and

(5) A statement from the wastewater supplier that certifies the volatile HAP content of the wastewater.

(b) To document compliance with Conditions D.1.1 and D.1.8, the Permittee shall maintain records in accordance with (1) through (5) below for each batch of wastewater received for disposal. Records maintained for (1) through (5) below shall be complete and sufficient to establish compliance with the HCl emission limits established in Condition D.1.1.

(1) The amount, in gallons or pounds, of each batch of wastewater received for disposal;

(2) The percent content of volatile chlorine of each batch of wastewater received for disposal;

(3) The date that the wastewater was accepted by the Permittee;

(4) The name of the wastewater supplier; and

(5) A statement from the wastewater supplier that certifies the volatile chlorine content of the wastewater.

(c) To document compliance with with Conditions D.1.2 and D.1.7, the Permittee shall maintain records in accordance with (1) through (5) below for each batch of wastewater received for disposal. Records maintained for (1) through (5) below shall be complete and sufficient to establish compliance with the volatile organic compound and sulfur dioxide emission limits established in Condition D.1.2.

(1) The amount, in gallons or pounds, of each batch of wastewater received for disposal;

(2) The percent content of volatile organic compounds and volatile sulfur compounds of each batch of wastewater received for disposal;

(3) The date that the wastewater was accepted by the Permittee;

(4) The name of the wastewater supplier; and

(5) A statement from the wastewater supplier that certifies the volatile organic compound and volatile sulfur compound content of the wastewater.

(d) In order to document compliance with Conditions D.1.1, D.1.2, D.1.8 and D.1.9, the Permittee shall maintain records of the amount of landfill gas sent to E-VAP1 and FL4 for combustion. Records shall be maintained monthly and shall be complete and sufficient to establish compliance with the HAPs limits established in Conditions D.1.1, D.1.2, D.1.8 and D.1.9.

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

D.1.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) wastewater evaporation system, consisting of an evaporator and enclosed ground flare, identified as E-VAP1-FL4, constructed in 2005, approved for modification in 2008, with a maximum wastewater evaporation rate of 26,000 gallons per day, and with the wastewater evaporator (E-VAP1) having a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. Emissions from the wastewater evaporator are controlled by an enclosed ground flare (FL4) rated at 1,000 cubic feet per minute of landfill gas. This system is used to process dilute industrial wastewater. This is an affected facility under 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

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

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

E.1.1 General Provisions Relating to New Source Performance Standards Under 40 CFR Part 60 [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1-1, apply to the enclosed ground flare (FL4) and the evaporator (E-VAP1) except when otherwise specified in 40 CFR Part 60, Subpart WWW.

(b) Pursuant to 40 CFR 60.7, the Permittee shall submit all of the required notifications and reports to:

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

E.1.2 New Source Performance Standard for Municipal Solid Waste Landfills Requirements [40 CFR Part 60, Subpart WWW] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart WWW, the Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart WWW (included as Attachment A), which are incorporated by reference as 326 IAC 12, for the enclosed ground flare (FL4) and the evaporator (E-VAP1):

40 CFR 60.751
40 CFR 60.752(b)(2)(iii)(B)(1), (2)
40 CFR 60.752(b)(2)(iv)
40 CFR 60.753(e), (f), (g)
40 CFR 60.755(e)
40 CFR 60.756(b)(1)
40 CFR 60.756(b)(2)(i), (ii)
40 CFR 60.757(e)(1)(i), (ii), (iii)
40 CFR 60.757(e)(2)
40 CFR 60.758(b)(3)
40 CFR 60.758(c)(1)(i), (ii)
40 CFR 60.758(c)(2)
40 CFR 60.758(e)
40 CFR 60.759(c)(1), (2)

E.1.3 One Time Deadlines Relating to NSPS (40 CFR 60, Subpart WWW)

Pursuant to 40 CFR 60.7, the Permittee shall submit a notification of the date of construction (or reconstruction as defined under §60.15) of an affected facility postmarked no later than 30 days after such date.

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) wastewater evaporation system, consisting of an evaporator and enclosed ground flare, identified as E-VAP1-FL4, constructed in 2005, approved for modification in 2008, with a maximum wastewater evaporation rate of 26,000 gallons per day, and with the wastewater evaporator (E-VAP1) having a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. Emissions from the wastewater evaporator are controlled by an enclosed ground flare (FL4) rated at 1,000 cubic feet per minute of landfill gas. This system is used to process dilute industrial wastewater. This is an affected facility under 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

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

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

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

(a) Pursuant to 40 CFR 63.5925, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for the enclosed ground flare (FL4) and the evaporator (E-VAP1), as specified in Table 1 of 40 CFR Part 63, Subpart AAAA.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

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

Pursuant to 40 CFR Part 63, Subpart AAAA, the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart AAAA (included as Attachment B), which are incorporated by reference as 326 IAC 20-67, for the enclosed ground flare (FL4) and the evaporator (E-VAP1):

40 CFR 63.1935(a)(3)
40 CFR 63.1940(a), (b)
40 CFR 63.1945(a), (e)
40 CFR 63.1950
40 CFR 63.1955(a)(1), (b), (c)(1)
40 CFR 63.1960
40 CFR 63.1965
40 CFR 63.1975
40 CFR 63.1980(a), (b)
40 CFR 63.1985
40 CFR 63.1990

E.2.3 One Time Deadlines Relating to NESHAP (40 CFR 63, Subpart AAAA)

(a) Pursuant to 40 CFR 60.7, the Permittee shall submit a notification of the date of construction (or reconstruction as defined under §60.15) of an affected facility

postmarked no later than 30 days after such date.

(b) Pursuant to 40 CFR 63.1645 and 40 CFR 63.1655, the Permittee shall comply with the applicable requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA upon startup.

(c) Pursuant to 40 CFR 63.10(d)(5), the Permittee shall submit semi-annual Startup, Shutdown and Malfunction reports on January 30 and July 30 of each calendar year.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Liquid Solutions, LLC
Source Address: 8635 East State Road 16, Monticello, Indiana 47960
Mailing Address: 9870 Big Bend Road, Kirkwood, Missouri, 63122
Part 70 Permit No.: T181-25104-00047

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

Please check what document is being certified:

□ Annual Compliance Certification Letter

□ Test Result (specify)

□ Report (specify)

□ Notification (specify)

□ Affidavit (specify)

□ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Liquid Solutions, LLC
Source Address: 8635 East State Road 16, Monticello, Indiana 47960
Mailing Address: 9870 Big Bend Road, Kirkwood, Missouri, 63122
Part 70 Permit No.: T181-25104-00047

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

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

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

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

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

Part 70 Quarterly Report

Source Name: Liquid Solutions, LLC
Source Address: 8635 East State Road 16, Monticello, Indiana 47960
Mailing Address: 9870 Big Bend Road, Kirkwood, Missouri, 63122
Part 70 Permit No.: T181-25104-00047
Facility: E-VAP1, FL4, AS, and E-VAP2
Parameter: Input of a Single Volatile HAP and Combination of Volatile HAPs
Limit: Toluene: less than 270 tons; chlorine compounds as chloride: less than 11,862 lbs; any other single volatile HAP: less than 395 tons; Any combination of volatile HAPs: less than 470 tons per twelve consecutive month period

QUARTER : YEAR:

Month	HAP	Column 1	Column 2	Column 1 + Column 2
		This Month	Previous 11 Months	12 Month Total
Month 1	Toluene			
	Chloride			
	Other Single Volatile HAP			
	Combination Volatile HAPs			
Month 2	Toluene			
	Chloride			
	Other Single Volatile HAP			
	Combination Volatile HAPs			
Month 3	Toluene			
	Chloride			
	Other Single Volatile HAP			
	Combination Volatile HAPs			

☐ 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 Quarterly Report

Source Name: Liquid Solutions, LLC
Source Address: 8635 East State Road 16, Monticello, Indiana 47960
Mailing Address: 9870 Big Bend Road, Kirkwood, Missouri, 63122
Part 70 Permit No.: T181-25104-00047
Facility: Entire Source
Parameter: Sulfur Dioxide Emissions
Limit: Less than 240 tons per twelve consecutive month period, with compliance determined at the end of each month.

QUARTER : YEAR:

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

☐ No deviation occurred in this 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 Quarterly Report

Source Name: Liquid Solutions, LLC
Source Address: 8635 East State Road 16, Monticello, Indiana 47960
Mailing Address: 9870 Big Bend Road, Kirkwood, Missouri, 63122
Part 70 Permit No.: T181-25104-00047
Facility: Entire Source
Parameter: Volatile Organic Compound Emissions
Limit: Less than 220 tons per twelve consecutive month period, with compliance determined at the end of each month.

QUARTER : YEAR:

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

☐ No deviation occurred in this 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: Liquid Solutions, LLC
Source Address: 8635 East State Road 16, Monticello, Indiana 47960
Mailing Address: 9870 Big Bend Road, Kirkwood, Missouri, 63122
Part 70 Permit No.: T181-25104-00047

Months: _____ to _ Year: _____

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

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Attachment A, NSPS Subpart WWW

Liquid Solutions, LLC
8635 East State Road 16
Monticello, Indiana 47960

Permit No.: **181-25104-00047**

New Source Performance Standards for Municipal Solid Waste Landfills 40 CFR 60, Subpart WWW
§ 60.751 Definitions.
As used in this subpart, all terms not defined herein shall have the meaning given them in the Act or in subpart A of this part.

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

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

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

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

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

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

Design capacity means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the State, local, or Tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, the calculation must include a site specific density, which must be recalculated annually.

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

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

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

Flare means an open combustor without enclosure or shroud.

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

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

Industrial solid waste means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act, parts 264 and 265 of this title. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related

products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(iii) Route all the collected gas to a control system that complies with the requirements in either paragraph (b)(2)(iii) (A), (B) or (C) of this section.

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

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

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

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

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

§ 60.753 Operational standards for collection and control systems.

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

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

(f) Operate the control or treatment system at all times when the collected gas is routed to the system.

(g) If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, corrective action shall be taken as specified in §60.755(a)(3) through (5) or §60.755(c) of this subpart. If corrective actions are taken as specified in §60.755, the monitored exceedance is not a violation of the operational requirements in this section.

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

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

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

§ 60.756 Monitoring of operations.
Except as provided in §60.752(b)(2)(i)(B),

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

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

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

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

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

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

§ 60.757 Reporting requirements.
Except as provided in §60.752(b)(2)(i)(B),

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

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

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

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

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

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

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

§ 60.758 Recordkeeping requirements.
(b) Except as provided in §60.752(b)(2)(i)(B), each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs

(b)(1) through (b)(4) of this section as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the control device vendor specifications shall be maintained until removal.

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

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

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

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

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

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

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

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

§ 60.759 Specifications for active collection systems.

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

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

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

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

Attachment B, NESHAP Subpart AAAA

Liquid Solutions, LLC
8635 East State Road 16
Monticello, Indiana 47960

Permit No.: **181-25104-00047**

National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills 40 CFR 63, Subpart AAAA

§ 63.1935 Am I subject to this subpart?
You are subject to this subpart if you meet the criteria in paragraph (a) or (b) of this section.

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

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

§ 63.1940 What is the affected source of this subpart?
(a) An affected source of this subpart is a MSW landfill, as defined in §63.1990, that meets the criteria in §63.1935(a) or (b). The affected source includes the entire disposal facility in a contiguous geographic space where household waste is placed in or on land, including any portion of the MSW landfill operated as a bioreactor.

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

§ 63.1945 When do I have to comply with this subpart?
(a) If your landfill is a new affected source, you must comply with this subpart by January 16, 2003 or at the time you begin operating, whichever is last.

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

§ 63.1950 When am I no longer required to comply with this subpart?
You are no longer required to comply with the requirements of this subpart when you are no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v) of subpart WWW, or the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to your landfill.

Standards

§ 63.1955 What requirements must I meet?
(a) You must fulfill one of the requirements in paragraph (a)(1) or (2) of this section, whichever is applicable:

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

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

(c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, you must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been

approved under 40 CFR part 60 subpart WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the SSM requirements in Subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every 6 months as specified in §63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3 hour monitoring block average.

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

General and Continuing Compliance Requirements

§ 63.1960 How is compliance determined?
Compliance is determined in the same way it is determined for 40 CFR Part 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, you have failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Finally, you must develop a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

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

§ 63.1965 What is a deviation?
A deviation is defined in §63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in paragraphs (a) through (c) of this section.

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

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

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

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

§ 63.1975 How do I calculate the 3-hour block average used to demonstrate compliance?
Averages are calculated in the same way as they are calculated in 40 CFR Part 60, Subpart WWW, except that the data collected during the events listed in paragraphs (a), (b), (c), and (d) of this section are not to be included in any average computed under this subpart:

(a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

(b) Startups.

(c) Shutdowns.

(d) Malfunctions.

Notifications, Records, and Reports

§ 63.1980 What records and reports must I keep and submit?
(a) Keep records and reports as specified in 40 CFR Part 60, Subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR Part 60, Subpart Cc, whichever applies to your landfill, with one exception: You must submit the annual report described in 40 CFR 60.757(f) every 6 months.

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

Other Requirements and Information

§ 63.1985 Who enforces this subpart?
(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency as well as the U.S. EPA has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

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

(c) The authorities that will not be delegated to State, local, or tribal agencies are as follows. Approval of alternatives to the standards in §63.1955. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

§ 63.1990 What definitions apply to this subpart?
Terms used in this subpart are defined in the Clean Air Act, 40 CFR part 60, subparts A, Cc, and WWW; 40 CFR part 62, subpart GGG, and subpart A of this part, and this section that follows:

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

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

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

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

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

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

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

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

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

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

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

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document
for a Significant Source Modification and Part 70 Operating Permit

Source Background and Description

Source Name:	Liquid Solutions, LLC, collocated with Liberty Landfill, Inc.
Source Location:	8635 East State Road 16, Monticello, Indiana 47960
County:	White
SIC Code:	4953
Significant Source Modification No.:	181-25252-00047
Part 70 Permit No.:	181-25104-00047
Permit Reviewer:	ERG/ST

On January 11, 2008, the Office of Air Quality (OAQ) had a notice published in the Herald Journal, Monticello, Indiana, stating that Liquid Solutions, LLC had applied for a Significant Source Modification and a Part 70 Operating Permit to operate an industrial wastewater disposal facility with control. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On February 8, 2008, Liquid Solutions, LLC submitted comments on the proposed Significant Source Modification and Part 70 Operating Permit. The summary of the comments is as follows:

Comment 1: In section A.4(a)(3), the description should read "wastewater feed and product tanks".

IDEM Response to Comment 1: The permit has been changed as follows:

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

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

(a) The following storage tanks:

. . .

(3) Five (5) wastewater feed **and product** tanks, identified as T501 through T505, respectively, approved for construction in 2008, each with a maximum capacity of 25,000 gallons, and venting to flare F4.

. . .

Comment 2: Regarding Condition B.3 - Affidavit for Construction: Liquid Solutions understands this is a general condition, but believes this condition does not apply to the emission units that are already

in operation (E-VAP1 and FL4). Please revise this condition to indicate that this condition applies only to the new construction of the air stripper (AS) and E-VAP2.

IDEM Response to Comment 2: The permit has been revised as follows:

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate **the wastewater evaporation system identified as AS-E-VAP2** pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

(d) The Permittee may continue to operate the wastewater evaporation system identified as E-VAP1-FL4 during the construction of the wastewater evaporation system identified as AS-E-VAP2.

Comment 3: Please clarify the intent of Condition C.1, Emission Limitations and Standards. The permitted processes at Liquid Solutions will treat significantly more than 100 pounds of processed material per hour. Liquid Solutions requests that this condition be removed and replaced with a condition in Section D.1 that sets a limit on emissions of Particulate Matter (PM) from the equipment based on Article 326 IAC 6-3-2. Please address this in the Technical Source Document as well.

IDEM Response to Comment 3: Condition C.1 is a general condition that limits sources of particulate that have very low process weight rates. Since the Permittee may add an insignificant activity that requires regulation under this condition, the condition C.1 will remain unchanged. IDEM believes that, under normal operating conditions, the emission units at this source (E-VAP1, AS, and E-VAP2) will be emitting primarily vapors and little to no particulate matter. However, the Permittee has requested that a particulate limit under 326 IAC 6-3-2 be added to the permit for regulation of particulate emissions from the evaporative units. The permit has been changed as follows and other conditions have been re-numbered accordingly:

D.1.3 Particulate Matter (PM)

Pursuant to 326 IAC 6-3-2, the PM from the wastewater evaporation system identified as E-VAP1-FL4 and the wastewater evaporation system identified as AS-E-VAP2 shall not exceed the pound per hour emission rate established as E in the following formula:

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

$$E = 4.10\ P^{0.67}$$

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

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Comment 4: Condition D.1.4(a) - Testing Requirements requires that Liquid Solutions test the enclosed ground flare (FL4) for destruction efficiency of a single HAP deemed to have the lowest destruction efficiency, as determined by IDEM, OAQ. Liquid Solutions proposes that Benzene be selected as the HAP for demonstrating the enclosed ground flare (FL4) efficiency. Benzene has a relatively high stripping efficiency and will therefore be present at the flare inlet in sufficient concentration to ensure that destruction efficiency can be readily measured. Most importantly, Benzene is difficult to destroy as determined by EPA Hazardous Waste Incineration Guidance. Benzene is a Class 1 compound, ranked no. 3 on the Thermal Stability Index as listed in EPA Guidance on Setting Permit Conditions and Reporting Trial Burn Results, Appendix D, Table D-1 (EPA/625/6-89/019, January 1989, p. 109). Benzene is the most thermally stable HAP (hardest to destroy) on the Thermal Stability Index. Please make this change in paragraph 4 of the *Compliance Determination and Monitoring Requirements* section of the Technical Support Document as well.

Also, Condition D.1.4(b) - Testing Requirements and paragraph 6 of the *Compliance Determination and Monitoring Requirements* section of the Technical Support Document requires that Liquid Solutions test the air stripper for volatilization of a single volatile HAP. Please note that many of the HAPs that may be present in the wastewater are either not volatile or have very low volatility. The contribution of these HAPs to air emissions from the process is negligible. Thus, testing for the lowest volatile HAP and using that for air emission calculations is extremely conservative and does not reflect the air emissions appropriately. Therefore Liquid Solutions suggest a tiered method for addressing this issue as follows: The HAPs included in USEPA Method 8265 (SW 846) will be considered as volatile HAPs and testing, as well as, air emission calculations will be limited to this list of HAPs. The list is included in the table below. In this list the Henry's Constant (an indication of volatility) varies by three orders of magnitude. Liquid Solutions plans to divide this list in four categories of low-low volatile, low volatile, medium volatile, and high volatile HAPs based on volatility. One HAP in each category will then be considered as a surrogate for the entire group, and will be tested for percent volatilization in the Air Stripper (inlet and outlet). This percent volatilization will be used for all HAPs in that specific category. This approach will include all HAPs that could volatilize and estimates the air emissions appropriately. Liquid Solutions proposes that Methyl Ethyl Ketone be the surrogate for the low-low volatile group, Methyl Isobutyl Ketone be the surrogate for the low volatile group, Dichloroethane be the surrogate for the medium volatile group, and Benzene be the surrogate for the high volatile group. The table shows the proposed four categories and the proposed surrogates.

VOLATILE HAPs				
EPA METHOD 8265 Volatile Organic Compounds				
SORTED BY INCREASING HENRY'S CONSTANT				
No.	Compound name	CAS	Henry's Constant (Note 2), y/x, atm	Volatility
1	METHYL ETHYL KETONE (MEK) (See Note 1)	78-93-3	2.58E+00	Low Low
2	METHYL ISOBUTYL KETONE (MIBK) (See Note 1)	108-10-1	2.53E+01	Low
3	VINYL ACETATE	108-05-4	2.71E+01	Low
4	TETRACHLOROETHANE(1,1,2,2)	79-34-5	2.78E+01	Low
5	METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	3.26E+01	Low
6	BROMOFORM (tribromomethane)	75-25-2	3.27E+01	Low
7	TRICHLOROETHANE 1,1,2	79-00-5	5.43E+01	Low
8	DICHLOROETHANE(1,2) (See Note 1)	107-06-2	6.54E+01	Medium
9	1,3 DICHLOROPROPENE (See Note 3)	542-75-6	8.55E+01	Medium
10	ETHENYLBENZENE (styrene)	100-42-5	1.50E+02	Medium
11	METHYLENE CHLORIDE, dichloromethane	75-09-2	1.63E+02	Medium
12	DICHLOROPROPANE 1,2	78-87-5	1.98E+02	Medium
13	CHLOROBENZENE	108-90-7	2.09E+02	Medium
14	CHLOROFORM	67-66-3	2.68E+02	Medium
15	XYLENE(-o)	95-47-6	2.69E+02	Medium
16	BENZENE (See Note 1)	71-43-2	3.08E+02	High
17	DICHLOROETHANE(1,1) ethylidenedichloride	75-34-3	3.12E+02	High
18	TOLUENE	108-88-3	3.57E+02	High
19	BROMOMETHANE	74-83-9	4.08E+02	High
20	XYLENE(-m)	108-38-3	4.13E+02	High
21	XYLENE(-p)	106-42-3	4.13E+02	High
22	ETHYLBENZENE	100-41-4	4.38E+02	High
23	CHLOROMETHANE (methylchloride)	74-87-3	5.55E+02	High
24	TRICHLOROETHYLENE	79-01-6	5.62E+02	High
25	CHLOROETHANE (ethyl chloride)	75-00-3	6.24E+02	High
26	TETRACHLOROETHENE	127-18-4	7.94E+02	High
27	TRICHLOROETHANE 1,1,1 methyl chloroform	71-55-6	9.26E+02	High
28	VINYL CHLORIDE (Chloroethylene)	75-01-4	1.23E+03	High
29	1,1 DICHLOROETHENE vinylidene chloride	75-35-4	1.43E+03	High
30	CARBON TETRACHLORIDE	56-23-5	1.63E+03	High
31	CARBON DISULFIDE	75-15-0	1.68E+03	High
32	ACETONE (Non Hap)	67-64-1		Non-Hap
33	BROMODICHOROMETHANE (Non Hap)	75-27-4		Non-Hap
34	DIBROMOCHLOROMETHANE (Non Hap)	124-48-1		Non-Hap
35	cis-1,2-DICHLOROETHENE (Non Hap)	159-59-2		Non-Hap
36	trans-1,2-DICHLOROETHENE (Non Hap)	156-60-5		Non-Hap
37	2-HEXANONE (Non Hap)	591-78-6		Non-Hap

Notes:

1) Henry's Law Constants from EPA Clearinghouse for Invenories and Emission Factors (CHIEF), http://www.epa.gov/ttn/chief/software/water/index.html

2) Shading indicates surrogate compounds chosen to represent each volatility group

3) Method 8265 Lists cis and trans 1,3 Dichloropropene as separate compounds (CAS No. 10061-01-05 and 10061-02-06)

IDEM Response to Comment 4: The approach suggested by the Permittee seems reasonable. However, the testing protocols will be worked out at the time that the test plan is submitted to IDEM. No changes have been made as a result of this comment.

Comment 5: In many instances, the waste streams accepted by Liquid Solutions for disposal are identical in composition to previous batches of waste. In these cases, testing is not necessary for each batch of waste to determine the chemical composition. Liquid Solutions requests that Condition D.1.5 (a) - Testing Requirements be revised to read "A vendor analysis will be required when the generator determines that a waste stream differs from prior waste streams, otherwise, a vendor certification will be sufficient."

IDEM Response to Comment 5: IDEM deems that it is not necessary to test each individual batch of waste accepted for disposal in those cases where the source of the waste certifies that the waste composition is identical to that of a batch of waste previously sent for disposal and for which an analysis was performed. In order to reduce the cost of complying with this requirement, the permit has been changed as follows:

~~D.1.5~~ **D.1.6** Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall:

(a) Demonstrate the volatile organic compound content, volatile sulfur compound content, volatile chlorine compound content, volatile single HAP content and volatile total HAP content of the wastewater accepted for disposal by providing vendor analysis of wastewater accepted for disposal accompanied by a vendor certification. **A vendor analysis will not be required when the waste generator determines that the composition of a waste stream is identical to that of a previous waste stream for which an analysis has been done. In that case, a vendor certification will be sufficient.**

Comment 6: Liquid Solutions requests that the calculations shown in Condition D.1.6(c) - Volatile Organic and Sulfur Dioxide Emission Calculations and Condition D.1.7(f) and (i) - HAP Emissions Calculations be revised to reflect the volatilization of the air stripper. Therefore, in the formula, "(1-percent volatilization %)" should be changed to read "(1-percent volatilization in the air stripper)". This more accurately reflects the actual calculation and will eliminate potential errors in future reporting. Please make this change in the *Compliance Determination and Monitoring Requirements* section of the Technical Support Document as well. Also, A portion of the HAPs in the wastewater received for disposal will not be volatile. Please correct all references to single HAP or total HAP to read single volatile HAP or total volatile HAP wherever it appears throughout the Part 70 Permit. Also, please correct the spelling of the word "volatilization" throughout the permit.

IDEM Response to Comment 6: The formula has been changed as requested to read "(1-percent volatilization in the air stripper)". The liquid or solid non-volatile HAPs that remain in the wastewater or sludge after treatment and disposal in the emission units at Liquid Solutions is not in the purview of this air quality permit. IDEM presumes that the Permittee will dispose of these residues in accordance with the applicable statutes and requirements. The permit has been changed as follows:

D.1.1 HAP Minor Limit

. . .

(c) The total input of any other single **volatile** HAP from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 395 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of any other single HAP in the combustion zone shall be 98%.

(d) The total input of any combination of **volatile** HAPs from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 470 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of HAPs in the combustion zone shall be 98%.

~~D.1.4~~ **D.1.5** Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

. . .

(a) The enclosed ground flare (FL4) shall be tested for destruction efficiency of a single **volatile** HAP for the vapors routed from E-VAP1 and the air stripper (AS). The Permittee shall test for the **volatile** HAP deemed to have the lowest destruction efficiency, as determined by IDEM, OAQ.

(b) The Permittee shall perform inlet and outlet testing on the air stripper (AS) for a single **volatile** HAP to determine the percent ~~volatization~~ **volatilization** of HAP from the wastewater to the air stream. The Permittee shall test for the **volatile** HAP deemed to have the highest solubility in water or the lowest rate of ~~volatization~~ **volatilization** under normal conditions when passed through the air stripper, as determined by IDEM, OAQ.

. . .

(d) The Permittee shall perform inlet and outlet testing on the air stripper (AS) for VOC to determine the percent ~~volatization~~ **volatilization** of VOC from the wastewater to the air stream. The Permittee shall test for the volatile organic compound deemed to have the highest solubility in water or the lowest rate of ~~volatization~~ **volatilization** under normal conditions when passed through the air stripper, as determined by IDEM, OAQ.

~~D.1.6~~ **D.1.7** Volatile Organic Compound and Sulfur Dioxide Emissions Calculations

. . .

(a) VOC Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

VOC Emissions (tons) = Wastewater Amount (gal) x Total VOC Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (Percent ~~Volatization~~ **Volatilization** % / 100) x (1 - 99 % Control Efficiency)

. . .

(c) VOC Emissions from wastewater being evaporated in E-VAP2 shall be considered to be equivalent to the dissolved VOC content of that volume of wastewater and shall be calculated as follows:

VOC Emissions (tons) = Wastewater Amount (gal) x Total VOC Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (1 - Percent ~~Volatization~~ **Volatilization in the Air Stripper** %)

~~D.1.7~~ **D.1.8** HAP Emissions Calculations

. . .

(d) Single **Volatile** HAP Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

Single **Volatile** HAP Emissions (tons) = Wastewater Amount (gal) x Single **Volatile** HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x

1 ton/2,000 lbs x (Percent ~~Volatization~~ **Volatilization** % / 100) x (1 - 98 % Control Efficiency)

. . .

(f) For wastewater being evaporated in E-VAP2, the single **volatile** HAP emissions shall be considered to be equivalent to the dissolved single **volatile** HAP content of that volume of wastewater and shall be calculated as follows:

Single **Volatile** HAP Emissions (tons) = Wastewater Amount (gal) x Single **Volatile** HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (1 - Percent ~~Volatization~~ **Volatilization in the Air Stripper** %)

(g) Total **Volatile** HAP Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

Total **Volatile** HAP Emissions (tons) = Wastewater Amount (gal) x Total **Volatile** HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (Percent ~~Volatization~~ **Volatilization** % / 100) x (1 - 98 % Control Efficiency)

. . .

(i) For wastewater being evaporated in E-VAP2, the total HAP emissions shall be considered to be equivalent to the dissolved total **volatile** HAP content of that volume of wastewater and shall be calculated as follows:

Total **Volatile** HAP Emissions (tons) = Wastewater Amount (gal) x Total **Volatile** HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (1 - Percent ~~Volatization~~ **Volatilization in the Air Stripper** %)

~~D.1.10~~ **D.1.11** Record Keeping Requirement

(a) To document compliance with Conditions D.1.1 and ~~D.1.7~~ **D.1.8**, the Permittee shall maintain records in accordance with (1) through (5) below for each batch of wastewater received for disposal. Records maintained for (1) through (5) below shall be complete and sufficient to establish compliance with the HAP emission limits established in Condition D.1.1.

(1) The amount, in gallons or pounds, of each batch of wastewater received for disposal;

(2) The percent content of **volatile** HAPs of each batch of wastewater received for disposal;

(3) The date that the wastewater was **accepted** ~~disposed of (evaporated)~~ by the Permittee;

(4) The name of the wastewater supplier; and

(5) A statement from the wastewater supplier that certifies the **volatile** HAP content of the wastewater.

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

Part 70 Quarterly Report

Source Name: Liquid Solutions, LLC
Source Address: 8635 East State Road 16, Monticello, Indiana 47960
Mailing Address: 9870 Big Bend Road, Kirkwood, Missouri, 63122
Part 70 Permit No.: T181-25104-00047
Facility: E-VAP1, FL4, AS, and E-VAP2
Parameter: Input of a Single **Volatile** HAP and Combination of **Volatile** HAPs
Limit: Toluene: less than ~~540~~ **270** tons; chlorine compounds as chloride: less than 11,862 lbs; any other single **volatile** HAP: less than 395 tons; Any combination of **volatile** HAPs: less than 470 tons per twelve consecutive month period

QUARTER : YEAR:

Month	HAP	Column 1	Column 2	Column 1 + Column 2
		This Month	Previous 11 Months	12 Month Total
Month 1	Toluene			
	Chloride			
	Other Single **Volatile** HAP			
	Combination **Volatile** HAPs			
Month 2	Toluene			
	Chloride			
	Other Single **Volatile** HAP			
	Combination **Volatile** HAPs			
Month 3	Toluene			
	Chloride			
	Other Single **Volatile** HAP			
	Combination **Volatile** HAPs			

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Comment 7: Conditions D.1.6(b) and (e) - Volatile Organic and Sulfur Dioxide Emission Calculations and Conditions D.1.7(b), (e), and (h) - HAP Emission Calculations require that Liquid Solutions use the AP-42 emission factors in this calculation. For clarity, Liquid Solutions requests that the statements "...shall be less than ___ ppmv" be changed to read "…used in the calculation shall be ___ppmv". Please make this change in the *Compliance Determination and Monitoring Requirements* section of the Technical Support Document as well.

IDEM Response to Comment 7: IDEM assumes that the concentration values for sulfur compounds, VOC and HAPs taken from AP 42, Chapter 2.4, tables 2.4-1 and 2.4-2 are representative of the concentration of sulfur compounds, VOC and HAPs expected in the landfill gas burned by Liquid

Solutions. Therefore, these values are specified to be used in the calculations for sulfur dioxide, VOC, and HAP emissions. The Permittee is not required to test the landfill gas to determine that the actual concentrations of sulfur compounds, VOC and HAPs are less than the specified values. No changes have been made as a result of this comment.

Comment 8: Condition D.1.9(c) - Enclosed Ground Flare Temperature contains a requirement that is contrary to the New Source Performance Standard (NSPS) for Landfills (Subpart WWW). Under NSPS citation 40 CFR 60.758(c)(1)(i) US EPA allows flexibility in flare operation by permitting deviations from the most recent stack temperature determined to meet 98% destruction efficiency. This deviation is permitted for 3 hours, as long as, that deviation is less than 28 degrees Celsius during that 3-hour period. This deviation, if greater than 3 hours, is then reportable for that semi-annual reporting period. Liquid Solutions requests that this condition be modified to reflect the NSPS requirement.

IDEM Response to Comment 8: The NSPS requirement for flare operation is designed to insure compliance with the requirement that 98% of the NMOC in a stream of landfill gas be destroyed. However, the requirements in Condition D.1.10(c) (formerly D.1.9(c)) are placed in the permit to insure compliance with a PSD minor limit. The Permittee must take response steps when the three hour average temperature falls below the below the three (3) hour average temperature as observed during the compliant stack test. No changes will be made as a result of this comment.

Comment 9: Liquid Solutions requests that Condition D.1.10(a)(3), (b)(3), and (c)(3) - Record Keeping Requirement be revised to accommodate the waste disposal practices at this source. This source does not segregate the feed tanks in the process stream by the batch of waste received. In practice, one tank can hold 5 different truckloads of waste. Therefore, it would not be practical for Liquid Solutions to say what load of waste would be evaporated on a specific day. Therefore Liquid Solutions requests the citation read: "The date of wastewater acceptance by Liquid Solutions."

IDEM Response to Comment 9: Liquid Solutions normally disposes of wastewater within a week of acceptance. IDEM believes that the difference between the date of acceptance and the date of disposal will not have any appreciable effect on complying with the 12-month rolling average limits in the permit. The permit has been changed as follows:

~~D.1.10~~ **D.1.11** Record Keeping Requirement

(a) To document compliance with Conditions D.1.1 and ~~D.1.7~~ **D.1.8**, the Permittee shall maintain records in accordance with (1) through (5) below for each batch of wastewater received for disposal. Records maintained for (1) through (5) below shall be complete and sufficient to establish compliance with the HAP emission limits established in Condition D.1.1.

. . .

(3) The date that the wastewater was **accepted** ~~disposed of (evaporated)~~ by the Permittee;

. . .

(b) To document compliance with Conditions D.1.1 and ~~D.1.7~~ **D.1.8**, the Permittee shall maintain records in accordance with (1) through (5) below for each batch of wastewater received for disposal. Records maintained for (1) through (5) below shall be complete and sufficient to establish compliance with the HCl emission limits established in Condition D.1.1.

. . .

(3) The date that the wastewater was **accepted** ~~disposed of (evaporated)~~ by the Permittee;

. . .

(c) To document compliance with with Conditions D.1.2 and ~~D.1.6~~ **D.1.7**, the Permittee shall maintain records in accordance with (1) through (5) below for each batch of wastewater received for disposal. Records maintained for (1) through (5) below shall be complete and sufficient to establish compliance with the volatile organic compound and sulfur dioxide emission limits established in Condition D.1.2.

. . .

(3) The date that the wastewater was **accepted** ~~disposed of (evaporated)~~ by the Permittee;

. . .

. . .

Comment 10: Please remove Condition E.1.3, One Time Deadline Relating to NSPS. Liquid Solutions understands this is a general condition for NSPS sources, but believes this condition does not apply to this source (specifically to E-VAP1 and FL4) with respect to the Part 70 Permit or the Significant Source Modification Permit, because Liberty Landfill would have already met this reporting requirement.

IDEM Response to Comment 10: Liquid Solutions is subject to sending a notification of reconstruction of an affected facility, in the event that it ever reconstructs E-VAP1 or FL4. However, as this source has already started operations and has submitted the notification of initial startup, it is not necessary to include this requirement.

E.1.3 One Time Deadlines Relating to NSPS (40 CFR 60, Subpart WWW)

~~(a)~~ Pursuant to 40 CFR 60.7, the Permittee shall submit a notification of the date of construction (or reconstruction as defined under §60.15) of an affected facility postmarked no later than 30 days after such date.

~~(b) Pursuant to 40 CFR 60.7, the Permittee shall submit a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.~~

Comment 11: Please remove Condition E.2.3(a) and (b) - One Time Deadline Relating to NESHAP. Liquid Solutions understands this is a general condition for NESHAP sources, but believes this condition does not apply in full to this source with respect to the Part 70 Permit or the Significant Source Modification Permit, because Liberty Landfill would have already met this reporting requirement.

IDEM Response to Comment 11: Liquid Solutions is subject to the requirement in Condition E.2.3(a) for sending a notification of reconstruction of an affected facility, in the event that it ever reconstructs E-VAP1-FL4. However, as this source has already started operations and has submitted the notification of initial startup, it is not necessary to include the requirement in Condition E.2.3(b). The permit has been changed as follows:

E.2.3 One Time Deadlines Relating to NESHAP (40 CFR 63, Subpart AAAA)

(a) Pursuant to 40 CFR 60.7, the Permittee shall submit a notification of the date of construction (or reconstruction as defined under §60.15) of an affected facility postmarked no later than 30 days after such date.

~~(b) Pursuant to 40 CFR 60.7, the Permittee shall submit a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.~~

~~(c)~~**(b)** Pursuant to 40 CFR 63.1645 and 40 CFR 63.1655, the Permittee shall comply with the applicable requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA upon startup.

~~(d)~~**(c)** Pursuant to 40 CFR 63.10(d)(5), the Permittee shall submit semi-annual Startup, Shutdown and Malfunction reports on January 30 and July 30 of each calendar year.

Comment 12: Please revise the Part 70 Quarterly Report Forms. Liquid Solutions requests that the limits on the forms be shown as limits based on production input in volumes of water treated. The governing production data for this process is throughput not final emission limits. Please edit accordingly to reflect production limits not emission limits.

IDEM Response to Comment 12: The amounts to be reported on the Part 70 Quarterly report forms represent the inputs of HAPs, VOC and volatile sulfur compounds in the wastewater accepted for treatment. These amounts are to be derived by multiplying the amount of wastewater received by the concentration of regulated pollutant contained in that batch of wastewater. Reporting just the volumes of wastewater treated would not provide sufficient data for IDEM to determine that the source was in compliance with their limits. No changes have been made as a result of this comment.

Comment 13: On the Part 70 Quarterly Report Form for HAPs, please correct the limit for toluene from 540 tons to read 270 tons.

IDEM Response to Comment 13: Toluene inputs are limited to 270 tons, with a required destruction efficiency of 98%. This is equivalent to 5.4 tons of toluene emissions per year. Combined with toluene emissions from Liberty landfill, total toluene emissions from this collocated source are less than 10 tons per year. The permit has been changed as follows:

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

Part 70 Quarterly Report

Source Name:	Liquid Solutions, LLC
Source Address:	8635 East State Road 16, Monticello, Indiana 47960
Mailing Address:	9870 Big Bend Road, Kirkwood, Missouri, 63122
Part 70 Permit No.:	T181-25104-00047
Facility:	E-VAP1, FL4, AS, and E-VAP2
Parameter:	Input of a Single **Volatile** HAP and Combination of **Volatile** HAPs
Limit:	Toluene: less than ~~540~~ **270** tons; chlorine compounds as chloride: less than 11,862 lbs; any other single **volatile** HAP: less than 395 tons; Any combination of **volatile** HAPs: less than 470 tons per twelve consecutive month period

Comment 14: The control efficiency of 99% identified within the permit should be the NSPS required limit of 98%. Please modify accordingly anywhere it appears within the permit. Please make this change in paragraph (3.) of the *Compliance Determination and Monitoring Requirements* section of the Technical Support Document as well.

IDEM Response to Comment 14: Condition D.1.2(a) requires that the destruction efficiency of VOC in the combustion zone shall be 99%. This destruction requirement is an essential part of the PSD

minor limit for this source. Although the NSPS requires only 98% destruction efficiency, a 98% reduction in VOC will not assure compliance with the PSD Minor limit as it is currently written. AP 42, Chapter 2.4, Table 2.4-3 indicates that typical destruction efficiencies for VOC in enclosed flares exceeds 99%. Since the actual VOC input limit will be based on the VOC destruction efficiency as revealed by a stack test, IDEM believes that changing the VOC limit parameters is unnecessary at this time. No changes have been made as a result of this comment.

Comment 15: Liquid Solutions disagrees with the determination by IDEM in the Technical Support Document that the flare FL4 is not an integral part of the evaporation and waste disposal process (E-VAP1). In the summation of this determination IDEM states: "IDEM has determined that the 1,000 CFM enclosed ground flare (FL4) will not be considered an integral part of the E-VAP1". Liquid Solutions does not agree with this statement, since E-VAP1 cannot operate without the flare in operation. Operationally, FL4 and E-VAP1 operate together such that FL4 can continue to operate while burning landfill gas without a gas stream coming from E-VAP1, but E-VAP1 cannot operate without the flare FL4 in operation. Due to the nature of the process (primarily a treatment system for wastewater not associated with the landfill), E-VAP1 will experience frequent periods of shutdowns for any period of time ranging from minutes to days, depending on a schedule defined by available material to be processed. It is imperative that the TSD and permit identify that E-VAP1 does not operate as a stand alone unit and cannot have emissions that do not directly vent to the flare, therefore a shutdown of the unit is not a potential source of uncontrolled emissions and should not require reporting for shutdowns, except for periods that would require notification that the source is not operational as defined by IDEM regulation.

Liquid Solutions requests the following statements be incorporated into the TSD and permit to clearly identify the operations of the source: "FL4 and E-VAP1 for the purposes of this document, although not integral to each other, shall be considered a wastewater treatment system. There are no emissions between E-VAP1 and the FL4. Considering that emissions cannot occur between E-VAP1 and FL4, although not integral to each other, only startups, shutdowns, and malfunctions of the flare will require recordkeeping and reporting with respect to startup, shutdown, and malfunction regulations"

IDEM Response to Comment 15: For the reasons stated in the *Integral Part of the Process Determination* section of the Technical Support Document, IDEM finds that the flare is not integral to the process for the purpose of determining the permit level. IDEM recognizes that the E-VAP1 cannot operate when the flare (FL4) is not in operation and that it would increase clarity to define these processes (both E-VAP1-Fl4 and AS-E-VAP2) as wastewater treatment systems. The following changes have been made as a result of this comment:

A.3 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) wastewater evaporation system**, consisting of an evaporator** and enclosed ground flare, identified as E-VAP1-FL4, constructed in 2005, approved for modification in 2008, with a maximum wastewater evaporation rate of 26,000 gallons per day, and with the wastewater evaporator (E-VAP1) having a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. Emissions from the wastewater **evaporator** ~~evaporation system~~ are controlled by an enclosed ground flare (FL4) rated at 1,000 cubic feet per minute of landfill gas. This system is used to process dilute industrial wastewater. This is an affected facility under 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

(b) One (1) ~~air stripper and~~ wastewater evaporation system, **consisting of an air stripper and evaporator,** identified as AS-E-VAP2, approved for construction in 2008, with a maximum wastewater evaporation rate of 32,000 gallons per day, using waste heat as the source of heat for evaporation. Wastewater ~~will be~~ **is** treated in the air stripper (AS) prior to being evaporated in E-VAP2. Volatile emissions from the air stripper (AS) ~~will be~~

are combusted in the enclosed ground flare (FL4). This system is used to process dilute industrial wastewater.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) wastewater evaporation system**, consisting of an evaporator** and enclosed ground flare, identified as E-VAP1-FL4, constructed in 2005, approved for modification in 2008, with a maximum wastewater evaporation rate of 26,000 gallons per day, and with the wastewater evaporator (E-VAP1) having a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. Emissions from the wastewater **evaporator** ~~evaporation system~~ are controlled by an enclosed ground flare (FL4) rated at 1,000 cubic feet per minute of landfill gas. This system is used to process dilute industrial wastewater. This is an affected facility under 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

(b) One (1) ~~air stripper and~~ wastewater evaporation system, **consisting of an air stripper and evaporator,** identified as AS-E-VAP2, approved for construction in 2008, with a maximum wastewater evaporation rate of 32,000 gallons per day, using waste heat as the source of heat for evaporation. Wastewater ~~will be~~ **is** treated in the air stripper (AS) prior to being evaporated in E-VAP2. Volatile emissions from the air stripper (AS) ~~will be~~ **is** combusted in the enclosed ground flare (FL4). This system is used to process dilute industrial wastewater.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) wastewater evaporation system**, consisting of an evaporator** and enclosed ground flare, identified as E-VAP1-FL4, constructed in 2005, approved for modification in 2008, with a maximum wastewater evaporation rate of 26,000 gallons per day, and with the wastewater evaporator (E-VAP1) having a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. Emissions from the wastewater **evaporator** ~~evaporation system~~ are controlled by an enclosed ground flare (FL4) rated at 1,000 cubic feet per minute of landfill gas. This system is used to process dilute industrial wastewater. This is an affected facility under 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) wastewater evaporation system**, consisting of an evaporator** and enclosed ground flare, identified as E-VAP1-FL4, constructed in 2005, approved for modification in 2008, with a maximum wastewater evaporation rate of 26,000 gallons per day, and with the wastewater evaporator (E-VAP1) having a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. Emissions from the wastewater **evaporator** ~~evaporation system~~ are controlled by an enclosed ground flare (FL4) rated at 1,000 cubic feet per minute of landfill gas. This system is used to process dilute industrial wastewater. This is an affected facility under 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

Comment 16: In paragraph (b) of the *Permit Level Determination – PSD* section in the Technical Support Document, please delete "…and all vapors are combusted in the enclosed ground flare." from the last sentence of this summary. Some vapors are not removed in the air stripper (AS) and

are released to the atmosphere after evaporation of wastewater in E-VAP2, which does not vent to FL4.

IDEM Response to Comment 16: The portion of the wastewater accepted by Liquid Solutions for disposal and treated with the AS-E-VAP2 wastewater evaporation system does not have all of the volatile constituents removed in the air stripper (AS) prior to evaporation in the evaporator (E-VAP2). In this case, the source estimates that approximately 90% of the volatile components in any batch of wastewater are removed in the air stripper and routed to the enclosed flare (FL4) for destruction. The remaining volatile components are evaporated in the evaporator E-VAP2. The conditions in the permit already take into account the uncontrolled emissions of volatile components from E-VAP2. Condition D.1.5 requires that the Permittee test for percent volatilization for the air stripper for VOC and a single volatile HAP in order to determine the efficiency of the air stripper at removing volatile components from wastewater. The compliance determination formulas in Conditions D.1.7 and D.1.8 account for emissions from E-VAP2. It should be noted that the HAP Minor Limits and PSD Minor Limits in conditions D.1.1 and D.1.2 are established at the maximum input levels for the various pollutants and are written as though all wastewater passes through E-VAP1 and all volatile components are combusted in the enclosed flare (FL4). In actual practice, the permit conditions allow the Permittee the flexibility to dispose of wastewater in whichever disposal system (E-VAP1-FL4 or AS-E-VAP2) they deem best. The Permittee is required to perform monthly calculations according to the formulas in Conditions D.1.7 and D.1.8, using the percent volatilization and percent destruction efficiency results from the stack tests to determine the amount of emissions from E-VAP1-FL4 and AS-E-VAP2. These data, compiled on a rolling 12 month average are used to determine if the Permittee is in compliance with the PSD minor limits and HAP minor limits contained in the permit. No changes were made as a result of this comment.

Comment 17: In the *Federal Rule Applicability Determination* section of the Technical Support Document, Liquid Solutions does not agree that Compliance Assurance Monitoring (CAM) requirements apply to evaporation unit one (E-VAP1). This source, in conjunction with the flare, act as a wastewater treatment system as discussed previously. This system is already governed by NSPS regulations, and therefore, has NSPS monitoring requirements. Liquid Solutions does agree that CAM should apply to the air stripper. The control device for the AS will be FL4. During the Title V renewal a CAM Plan will be provided.

IDEM Response to Comment 17: The requirements of CAM do not apply to the wastewater treatment system identified as E-VAP1-FL4. The evaporator (E-VAP1) cannot operate independently of the flare (FL4). This system (E-VAP1-FL4) is exempt from CAM because it is regulated by an NSPS that was promulgated after November 15, 1990. The requirements of CAM do apply to the air stripper, for the reasons stated in the *Federal Rule Applicability* section of the Technical Support Document. The table in the *Federal Rule Applicability* section of the Technical Support Document should read as follows:

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
~~E-VAP1 (SO_2)~~	~~No~~	~~Yes~~	~~Less than 100~~	~~92.5~~	~~100~~	~~No~~	~~No~~
~~E-VAP1 (VOC)~~	~~Yes~~	~~Yes~~	~~Greater than 100~~	~~15.8~~	~~100~~	~~Yes~~	~~No~~
~~E-VAP1 (Hydrogen Chloride)~~	~~No~~	~~Yes~~	~~0.0~~	~~1.63~~	~~10~~	~~No~~	~~No~~
~~E-VAP1 (Other Single HAP)~~	~~Yes~~	~~Yes~~	~~Greater than 10~~	~~0.75~~	~~10~~	~~Yes~~	~~No~~
~~E-VAP1 (Total HAPs)~~	~~Yes~~	~~Yes~~	~~Greater than 25~~	~~2.38~~	~~25~~	~~Yes~~	~~No~~

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
AS (SO_2)	No	Yes	~~Less than 100~~ **0.0**	102*****	100	No	NA
AS (VOC)	Yes	Yes	Greater than 100	3.83	100	Yes	No
AS (Hydrogen Chloride)	No	Yes	0.0	1.80	10	No	No
AS (Other Single HAP)	Yes	Yes	Greater than 10	0.44	10	Yes	No
AS (Total HAPs)	Yes	Yes	Greater than 25	2.64	25	Yes	No
E-VAP2 (SO_2)	No	Yes	NA	NA	100	No	No
E-VAP2 (VOC)	No	Yes	21.4	21.4	100	No	No
E-VAP2 (Hydrogen Chloride)	No	Yes	0.0	0.0	10	No	No
E-VAP2 (Other Single HAP)	No	Yes	2.44	2.44	110	No	No
E-VAP2 (Total HAPs)	No	Yes	4.63	4.63	25	No	No

~~Volatile compounds (VOC and HAP) from E-VAP1 and the air stripper (AS) are routed to the enclosed combustor (FL4) and combusted.~~

*** Note that the PTE of SO2 from the Air Stripper is greater after controls than before controls. This is because SO2 is created when the sulfur-containing gases from the air stripper are burned in the flare.**

E-VAP1-FL4 is subject to 40 CFR 60, Subpart WWW, which was promulgated after November 30, 1990. Therefore, this wastewater treatment system is not subject to the requirements of CAM.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to ~~E-VAP1 and~~ the air stripper (AS) for VOC and HAPs upon issuance of the Title V Renewal. A CAM plan **for the air stripper (AS)** must be submitted as part of the **Part 70** Renewal application.

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Comment 18: Liquid Solutions requests the first sentence in paragraph (c) of the Federal Rule Applicability Determination section in the Technical Support Document read: "The enclosed ground flare (FL4) and evaporator (E-VAP1) acting as a wastewater treatment system…". By adding: "acting as a wastewater treatment system" the operational description of the process is more accurately presented.

IDEM Response to Comment 18: IDEM acknowledges that the evaporator (E-VAP1) and the enclosed flare (FL4) operate together as a wastewater treatment system. Since both the flare and the evaporator burn landfill gas, they are subject to the requirements of 40 CFR 60, Subpart WWW. Paragraph (c) of the *Federal Rule Applicability Determination* section in the Technical Support Document should read as follows:

(c) The **wastewater treatment system, identified as E-VAP1-FL4, consisting of an** enclosed ground flare (FL4) and evaporator (E-VAP1)**,** ~~are~~ **is** subject to the New Source

Performance Standard for Municipal Solid Waste Landfills (326 IAC 12) (40 CFR 60, Subpart WWW) because ~~these~~ **this** emission unit~~s~~ combust**s** landfill gas obtained from a source (Liberty Landfill) that is subject to 40 CFR 60, Subpart WWW. Pursuant to 40 CFR 60.752(b)(2)(iii), the Permittee of the landfill (Liberty Landfill, Inc.) is required to route all collected landfill gas to a control system that complies with the requirements in either paragraph (b)(2)(iii)(A), (B), or (C) of 40 CFR 60.752.

Therefore, the portion of the untreated landfill gas that is sent to another entity for control or treatment shall be controlled pursuant to the requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA. Nonapplicable portions of the NSPS will not be included in the permit. The enclosed ground flare (FL4) and evaporator (E-VAP1) are subject to the following portions of Subpart WWW:

(d) The **wastewater treatment system, identified as E-VAP1-FL4, consisting of an** enclosed ground flare (FL4) and evaporator (E-VAP1) ~~are~~ **is** subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills (40 CFR 63, Subpart AAAA, 326 IAC 20-67) because this facility is collocated with a municipal solid waste landfill subject to 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA, combusts untreated landfill gas, and the requirements of 40 CFR 60, Subpart WWW apply to this facility. The portion of the untreated landfill gas from Liberty Landfill, Inc. that is sent to Liquid Solutions, LLC shall be controlled pursuant to the requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA, as explained in paragraph (c) above. Therefore, the enclosed ground flare (FL4) and evaporator (E-VAP1) are subject to the following portions of 40 CFR 63, Subpart AAAA. Non applicable portions of the NESHAP will not be included in the permit.

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Comment 19: Liquid Solutions has noted differences in the emission values in the various public comment documents, but understands that the limits in Section D of the Part 70 Operating Permit are those that are the applicable permit limits for Liquid Solutions.

IDEM Response to Comment 19: The limits for emissions of VOC, SO_2, and HAPs in the Liquid Solutions Part 70 permit 181-25104-00047 and the Liberty Landfill Significant Permit Modification 181-23367-00035 together limit the emissions from this collocated source to minor source levels under PSD and Section 112 of the Clean Air Act. It is not stated which differences Liquid Solutions is referring to, but note that fugitive emissions of VOC are not considered in determining the PSD minor limits for this collocated source, while fugitive HAP emissions are considered in determining the HAP minor source limits for this collocated source. No changes have been made as a result of this comment.

Comment 20: In the table in paragraph (a) of the *Federal Rule Applicability Determination* section in the Technical Support Document, Liquid Solutions notes that the distribution of sulfur wastes and therefore sulfur bearing wastewater are unbalanced with more emissions from the AS than from E-VAP1. Liquid Solutions will treat more sulfur bearing wastewater in E-VAP1. Therefore, it is believed that the corresponding numbers in the table should be modified. It is Liquid Solutions understanding that this does not affect the overall permit status relative to significant permit thresholds or additional source permitting requirements.

IDEM Response to Comment 20: The values for sulfur dioxide emissions in this table are based on estimates provided by the Permittee, and using IDEM's judgment about how much wastewater would be disposed in each unit. These estimates are used for determining rule applicability and

may not match the actual emissions for these units once they are in operation. As has been explained in previous comments, the actual emissions for sulfur dioxide from the two wastewater treatment systems (E-VAP1-FL4 and AS-E-VAP2) shall be calculated according to the formulas in the permit. No changes have been made as a result of this comment.

Comment 21: In paragraph 3 of the Compliance Determination and Monitoring Requirements section of the Technical Support Document, please add that the testing of the enclosed ground flare will be performed as per 40 CFR Part 60.752.

IDEM Response to Comment 21: The Permittee is required to test the flare for destruction of non-methane organic compounds (NMOC) pursuant to 40 CFR 60.752(b)(2)(iii)(B) within 180 days after the initial startup using the test methods specified in 40 CFR 60.754(d). The NSPS requires that the control device achieve 98% control of the NMOC. The test methods specified in 40 CFR 60.754(d) are applicable to the test for VOC destruction efficiency. However, this test and the methods specified in 40 CFR 60.754(d) does not cover the other pollutants that the Permittee is required to test for. IDEM believes that the test methods chosen for testing the flare and air stripper should be left to the judgment of the technical staff who approve the testing protocol. No changes have been made as a result of this comment

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table of Contents has been modified, if applicable, to reflect these changes.

1. Liberty Landfill (source ID 181-00035) is collocated with Liquid Solutions (source ID 181-00047). These two sources have requested that their emissions be limited such that the collocated source is a minor source of HAPs and a minor source of VOC and SO_2 under PSD. During the Public Notice period for the Liberty Landfill permit modification (SPM 181-23367-00035), Liberty Landfill requested that IDEM remove the HAP minor limits and PSD minor limits from its permit. The unlimited PTE of Liberty Landfill for VOC, SO_2 and HAPs is now to be considered equivalent to the potential to emit for these pollutants at closure of the landfill. Combined with the limited PTE of VOC, SO_2 and HAPs from Liquid Solutions, this collocated source will remain a minor source of HAPs and a minor source of VOC and SO_2 under PSD. The permit has been changed as follows:

D.1.1 HAP Minor Limit

. . .

Combined with ~~limited~~ **unlimited** HAP emissions from Liberty Landfill, the source-wide emissions of HAPs from this collocated source will be less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of any combination of HAPs. Compliance with this limit makes this source (landfill and wastewater evaporator) a minor source under Section 112 of the Clean Air Act.

D.1.2 PSD Minor Limit [326 IAC 2-2]

. . .

Combined with **the unlimited** sulfur dioxide emissions from Liberty Landfill **and the emissions of volatile organic compounds as limited by 40 CFR 60, Subpart WWW**, the source-wide emissions of volatile organic compounds and sulfur dioxide from this collocated source will be less than 250 tons per year. Compliance with this limit will render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	Liquid Solutions, LLC, collocated with Liberty Landfill, Inc.
Source Location:	8635 East State Road 16, Monticello, Indiana 47960
County:	White
SIC Code:	4953
Significant Source Modification No.:	181-25252-00047
Part 70 Permit No.:	181-25104-00047
Permit Reviewer:	ERG/ST

Source Definition

In Title V Operating Permit T181-18254-00035, issued on February 20, 2006, the source was defined as a landfill site with an on-site contractor. Liberty Landfill, Inc., the primary operation, owns and operates a municipal solid waste landfill, while Liquid Solutions, LLC, a separate entity on-site, operates an enclosed ground flare and industrial wastewater evaporator system. Liberty Landfill, Inc. and Liquid Solutions, LLC submitted an application on June 26, 2007 requesting that IDEM issue separate Title V permits to each entity. IDEM has re-evaluated the Source Definition for these two entities as follows:

This source consists of a municipal solid waste landfill with a collocated industrial wastewater processing facility:

(a) Liberty Landfill, Inc. (Source ID # 181-00035), the primary operation, is located at 8635 East State Road 16, Monticello, Indiana 47960, and

(b) Liquid Solutions, LLC, (Source ID # 181-00047), a separate entity, is located at 8635 East State Road 16, Monticello, Indiana 47960.

IDEM has determined that Liberty Landfill, Inc. and Liquid Solutions, LLC are located on the same property, have the same two-digit SIC code (Major Group 49: Electric, Gas, And Sanitary Services), and Liquid Solutions, LLC is dependent wholly upon the output (landfill gas and waste heat) of the Liberty Landfill, Inc. for its operation. Therefore, Liberty Landfill, Inc. and Liquid Solutions, LLC will be considered as one source, as defined by 326 IAC 2-7-1(22), based on this business relationship.

History

IDEM, OAQ has reviewed a permit application from Liquid Solutions, LLC, submitted on June 26, 2006, relating to the construction and operation of a new industrial wastewater evaporation system (AS and E-VAP2) and the modification and transfer of operational control of an existing enclosed ground flare and wastewater evaporation system (FL4 and E-VAP1) from Liberty Landfill, Inc. to Liquid Solutions, LLC. The modification of the existing enclosed ground flare and wastewater evaporation system (FL4 and E-VAP1) consists of increasing the rate of throughput (disposal) of industrial wastewater. The fuel for the evaporation systems will be provided by landfill gas and waste heat obtained from Liberty Landfill's LFG engines.

Note: The industrial wastewater treatment facilities will be collocated with the Liberty Landfill, Inc. as described in the source definition section above. Liberty Landfill, Inc. received Part 70 Renewal permit T181-18254-00035 on February 20, 2006. The scope of this project will not affect the capacity or throughput of any other operations at Liberty Landfill.

In lieu of a Significant Permit Modification, and for administrative purposes, a separate Part 70 Operating Permit will be issued to Liquid Solutions, LLC., which is collocated with Liberty Landfill, Inc.

Existing Approvals

There have been no previous approvals issued solely to Liquid Solutions, LLC. However, Part 70 renewal permit T181-18254-00035 was issued to Liberty Landfill, Inc. on February 20, 2006.

County Attainment Status

The source is located in White County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO_2	Attainment
NO_2	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

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

(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 emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone. White County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(b) White County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 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 a surrogate for PM2.5 emissions.

(c) White County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions
Since this type of operation is not in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Source Status

The table below summarizes the potential to emit of the entire source (Liberty Landfill and Liquid Solutions), prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/year)
PM	12.9
PM10	12.9
SO_2	8.0
VOC	36.0
CO	145
NO_x	63.3
Single HAP (hydrogen chloride)	3.0
Combination HAPs	10.5

Note: these figures are taken from the TSD and Appendix A to the TSD for Part 70 Operating Permit T181-18254-00035, issued on February 20, 2006. These totals include fugitive VOC, CO and HAPs from the landfill.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

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

Actual Emissions

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

Pollutant	Actual Emissions (tons/year)
PM	Not reported
PM2.5	3
PM10	7
SO_2	2
VOC	2
CO	14
NO_x	8
HAP	Not reported

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by Liquid Solutions, LLC on June 26, 2006, relating to the construction and operation of a new industrial wastewater evaporation system (E-VAP2) and the modification and transfer of operational control of an existing enclosed ground flare and wastewater evaporation system (FL4 and E-VAP1) from Liberty Landfill, Inc. to Liquid Solutions, LLC. The modification of the existing enclosed ground flare and wastewater evaporation system (FL4 and E-VAP1) consists of increasing the rate of throughput (disposal) of industrial wastewater. The fuel/heat source for FL4 and E-VAP1 will be provided by combusting landfill gas obtained from Liberty Landfill. The heat for E-VAP2 will be

provided by waste heat obtained from the generator engines at Liberty Landfill. The following is a list of the existing and proposed emission units and pollution control devices:

(a) One (1) wastewater evaporation system and enclosed ground flare, identified as E-VAP1-FL4, constructed in 2005, approved for modification in 2008, with a maximum wastewater evaporation rate of 26,000 gallons per day, and with the wastewater evaporator (E-VAP1) having a maximum heat input rate of 6.6 MMBtu/hr, using landfill gas as fuel. Emissions from the wastewater evaporation system are controlled by an enclosed ground flare (FL4) rated at 1,000 cubic feet per minute of landfill gas. This system is used to process dilute industrial wastewater. This is an affected facility under 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

(b) One (1) air stripper and wastewater evaporation system, identified as AS-E-VAP2, approved for construction in 2008, with a maximum wastewater evaporation rate of 32,000 gallons per day, using waste heat as the source of heat for evaporation. Wastewater will be treated in the air stripper (AS) prior to being evaporated in E-VAP2. Volatile emissions from the air stripper (AS) will be combusted in the enclosed ground flare (FL4). This system is used to process dilute industrial wastewater.

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

(a) The following storage tanks:

(1) Four (4) wastewater feed tanks, constructed in 2004, each with a maximum capacity of 8,000 gallons (33.3 cubic meters), venting to the atmosphere.

(2) One (1) wastewater decant tank, approved for construction in 2008, with a maximum capacity of 6,400 gallons, and venting to flare F4.

(3) Five (5) wastewater feed tanks, identified as T501 through T505, respectively, approved for construction in 2008, each with a maximum capacity of 25,000 gallons, and venting to flare F4.

(4) One (1) wastewater slurry tank, identified as T510, approved for construction in 2008, with a maximum capacity of 6,400 gallons, and venting to the atmosphere.

(5) One (1) oil tank, identified as T511, approved for construction in 2008, with a maximum capacity of 8,000 gallons, and venting to flare F4.

(6) One (1) product tank, identified as T512, approved for construction in 2008, with a maximum capacity of 8,000 gallons, and venting to flare F4.

(7) One (1) roll-off container, identified as T513, approved for construction in 2008, with a maximum capacity of 12,000 gallons, and venting to the atmosphere.

(8) One (1) utility tank, identified as T520, approved for construction in 2008, with a maximum capacity of 10,000 gallons, and venting to the atmosphere.

(9) One (1) process water tank, identified as T806, approved for construction in 2008, with a maximum capacity of 10,000 gallons, and venting to the atmosphere.

"Integral Part of the Process" Determination

In the application for Minor Source Modification 181-18276-00035, issued on March 15, 2004, Liberty Landfill submitted the following justification requesting that the existing enclosed 1,000

scfm flare be considered as an integral part of the wastewater evaporation process (E-VAP1-FL4). In applying for this Title V permit, Liquid Solutions has requested that the flare (FL4) be determined an integral part of the wastewater evaporation process.

(a) A programmable logic controller (PLC) continuously monitors and controls the operating conditions for the E-VAP1. When the 1,000 scfm enclosed ground flare (FL4) shuts down for any reason, the PLC shuts down the E-VAP1 immediately. Therefore, the E-VAP1 cannot operate when the enclosed ground flare (FL4) is not in operation.

(b) The 1,000 scfm enclosed ground flare is considered a thermal oxidation zone for the E-VAP1 process and is part of the original E-VAP1 system design. It is necessary to operate the 1,000 scfm enclosed ground flare (FL4) to control the VOC and HAP emissions from the E-VAP1 for environmental and safety purposes.

IDEM, OAQ has reconsidered whether the flare is an integral part of the process. Although the process (wastewater evaporation in E-VAP1) cannot operate safely without the control equipment (FL4), the enclosed ground flare's primary purpose is pollution control and there is no positive net economic effect associated with oxidizing the pollutants rather than emitting them to the atmosphere. Therefore, IDEM has determined that the 1,000 scfm enclosed ground flare (FL4) will not be considered an integral part of the E-VAP1. Therefore, the permitting level for the E-VAP1-FL4 will be determined using the potential to emit before the enclosed ground flare control.

Enforcement Issues

There are no pending enforcement actions related to this proposed modification.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 4).

Permit Level Determination – Part 70

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

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

	Liberty Landfill	Liquid Solutions	Entire Source
Pollutant	**Potential To Emit of the Flare and Engines (tons/year)**	**Potential To Emit of the Enclosed Ground Flare and Wastewater Evaporators (tons/year)**	**Total Potential To Emit (tons/year)**
PM	10.8	2.77	35.9
PM10	10.8	2.77	19.4
SO_2	5.54	209 [b]	214 [b]
VOC	2.57	230 [b]	246 [b]
CO	136	54.8	193
NO_x	51.3	10.0	61.3
Single HAP (toluene)	0.44	0.01	
Single HAP (HCl)	2.75	9.89 (HCl) [a, b]	12.6 (HCl) [b]
Other Single HAP	0.16	24.4 [b]	Greater than 10 [b]
Total HAPs	3.78	63.3 [b]	Greater than 25 [b]

[a] The identity of the single HAP with greatest potential to emit will vary depending upon HAP content in the industrial wastewater accepted for evaporation. HCl is likely the single worst case HAP.
[b] The total potential to emit of volatile organic compounds, sulfur dioxide, a single HAP and total HAPs will vary depending upon the VOC content, volatile sulfur content, volatile chlorine content and volatile HAP content of the wastewaters accepted for disposal. The figures in the table above are based on average wastewater, not worst case.

This source modification is subject to 326 IAC 2-7-10.5(f) (Significant Source Modification) because this modification has a potential to emit greater than or equal to twenty-five (25) tons per year of sulfur dioxide, greater than or equal to twenty-five (25) tons per year of volatile organic compounds, greater than ten (10) tons per year for a single HAP, and greater than twenty-five (25) tons per year for a combination of HAPs. (See figures in table above for Liquid Solutions)

The total potential to emit of HAPs of this entire source (Liberty Landfill and Liquid Solutions) after this modification is greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Liquid Solutions is accepting limits on emissions of HAPs in this permit in order to keep total emissions of HAPs from this collocated source to less than the major source thresholds. A detailed discussion of the limits taken by Liberty Landfill to keep the combined potential emissions from this collocated source to less than the major source thresholds for HAPs can be found in Significant Permit Modification 181-23327-00035.

Liquid Solutions has accepted the following limits on the emissions of HAPs:

(a) The total input of toluene from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 270 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of toluene in the combustion zone shall be 98%. This is equivalent to total emissions of 5.4 tons of toluene from E-VAP1, FL4, AS, and E-VAP2 per year. This limit assumes that all wastewater is evaporated, all vapors are combusted in the enclosed ground flare, and the default concentration of toluene in landfill gas is 39.3 ppmv.
Note: the default concentration of toluene in landfill gas is from AP 42, Table 2.4-2.

(b) The total input of volatile chlorine from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 11,862 pounds per twelve consecutive month period, with compliance determined at the end of each month. This is equivalent to total emissions of 6.1 tons of hydrogen chloride from E-VAP1, FL4, AS, and E-VAP2 per year.

This limit assumes that all wastewater is evaporated, all vapors are combusted in the enclosed ground flare, the default concentration of volatile chlorine compounds in landfill gas is 42 ppmv as chloride, and all chlorine is converted to hydrogen chloride in the combustion zone.
Note: the default concentration of chlorine compounds in landfill gas is from AP 42, Chapter 2.4.4.2.

(c) The total input of any other single HAP from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 395 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of any other single HAP in the combustion zone shall be 98%. This is equivalent to total emissions of 7.9 tons of any other single HAP from E-VAP1, FL4, AS, and E-VAP2 per year. This limit assumes that all wastewater is evaporated, all vapors are combusted in the enclosed ground flare, and the default concentration of any other single HAP in landfill gas is 12.1 ppmv.
Note: the default concentration of any other single HAP is from A 42, Table 2.4-1.

(d) The total input of any combination of HAPs from landfill gas and industrial wastewater to E-VAP1, FL4, AS, and E-VAP2 shall be less than 470 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of HAPs in the combustion zone shall be 98%. This is equivalent to total emissions of 9.4 tons of any combination of HAPs from E-VAP1, FL4, AS, and E-VAP2 per year. This limit assumes that all wastewater is evaporated, all vapors are combusted in the enclosed ground flare, the default concentration of total HAPs in landfill gas is 106 ppmv.
Note: the default concentration of total HAPs is from AP 42, Table 2.4-1.

Combined with limited HAP emissions from Liberty Landfill, the source-wide emissions of HAPs from this collocated source will be less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of any combination of HAPs).

The following table summarizes the potential to emit and emission limitations taken by Liberty Landfill in SPM 181-23367-00035 and by Liquid Solutions in Significant Source Modification 181-23275-00047 and Title V Operating Permit 181-25104-00047.

	Liberty Landfill	**Liquid Solutions**	**Entire Source**
Pollutant	**Potential To Emit of the Landfill, Flare and Engines (tons/year)**	**Potential To Emit of the Enclosed Ground Flare and Wastewater Evaporators (tons/year)**	**Limited Potential To Emit (tons/year)**
PM	10.8	2.77	13.6
PM10	10.8	2.77	13.6
SO_2	5.54	240 *	246
VOC	2.57	220 *	236
CO	136	54.8	193
NO_x	51.3	10.0	61.3
Toluene	4.48 *	5.4 *	9.88
Hydrogen Chloride	3.80 *	6.1 *	9.9
Any Other Single HAP	2.0 *	7.9 *	9.9
Total HAPs	15.5 *	9.4 *	24.9

* Emissions of these pollutants are limited by conditions in the respective permits.

This existing collocated source remains an area source under Section 112 of the Clean air Act after this modification because the limited potential to emit of a single HAP is less than ten (10)

tons per year and the limited potential to emit of a combination of HAPs is less than twenty-five (25) tons per year.

In lieu of a Significant Permit Modification, and for administrative purposes, a separate Part 70 Operating Permit will be issued to Liquid Solutions, LLC, which is collocated with the Liberty Landfill, Inc.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units at this collocated source. Any control equipment is considered federally enforceable only after issuance of this Part 70 Operating Permit, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. The figures for Liberty Landfill represents emissions from the open flare and engines at Liberty Landfill after the effect of the controls required by the NSPS and NESHAP. These figures do not include fugitive emissions of PM, PM10, CO and VOC from the landfill because this source is not in one of the twenty-eight (28) listed source categories under 326 IAC 2-2. The figures for Liquid Solutions represents emissions from the enclosed ground flare (FL4), air stripper (AS), and wastewater evaporators (E-VAP1 and E-VAP2) at Liquid Solutions after this modification.

	Liberty Landfill	Liquid Solutions	Entire Source	PSD Major Source Threshold (tons/year)
Pollutant	**Potential To Emit of the Landfill, Flare and Engines (tons/year) ***	**Potential To Emit of the Enclosed Ground Flare and Wastewater Evaporators (tons/year)**	**Limited Potential To Emit (tons/year)**	
PM	10.8	2.77	13.6	250
PM10	10.8	2.77	13.6	250
SO_2	5.54	240	246	250
VOC	2.57	220	236	250
CO	136	54.8	193	250
NO_x	51.3	10.0	61.3	250

Note: The open flare and gas treatment system at Liberty Landfill and the enclosed ground flare at Liquid Solutions are subject to 40 CFR 60, Subpart WWW, New Source Performance Standard for Municipal Solid Waste Landfills. The NSPS requires that the landfill collect the landfill gas and either combust it (in the open flare and enclosed ground flare) or treat it and use it (in the gas treatment system and engine generators).
Note: Fugitive emissions of CO and VOC are not considered in determination of PSD applicability because this source is not in one of the 28 source categories.
* The Limited Potential to Emit of the Entire Source includes combustion emissions from both the flares and the engines. Under normal operations, landfill gas will be combusted in either the flare or the engines, not both. Therefore, the figures for Potential to Emit of the landfill, flare, and engines are an over-estimate.

(a) This modification to an existing minor stationary source is not major because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. This collocated source remains a minor source under PSD after this modification.

(b) The potential to emit of VOC of the modification could exceed 250 tons per year before controls and after controls, depending upon the concentration of volatile organic compounds in the wastewater accepted for disposal. Therefore, in order to make the modification minor for PSD, the source has accepted the following limit:

The input of volatile organic compounds to E-VAP1, FL4, AS, and E-VAP2 shall be less than 11,000 tons per twelve consecutive month period, with compliance determined at the end of each month. The destruction efficiency of VOC in the combustion zone shall be

99%. This is equivalent to total emissions of 220 tons of VOC from E-VAP1, FL4, AS, and E-VAP2 per year. This limit assumes that all wastewater is evaporated and all vapors are combusted in the enclosed ground flare.

(c) The potential to emit of sulfur dioxide of the modification could exceed 250 tons per year, depending upon the concentration of volatile sulfur compounds in the wastewater accepted for disposal. Therefore, in order to make the modification minor for PSD, the source has accepted the following limit:

The input of volatile sulfur compounds to E-VAP1, FL4, AS, and E-VAP2 shall be less than 120.1 tons of sulfur per twelve consecutive month period, with compliance determined at the end of each month. This is equivalent to total emissions of 240 tons of SO_2 from E-VAP1, FL4, AS, and E-VAP2 per year. This limit assumes that all wastewater is evaporated and all vapors are combusted in the enclosed ground flare.

Combined with VOC emissions and sulfur dioxide emissions from Liberty Landfill and burning landfill gas in the enclosed flare (FL4), the source-wide emissions of volatile organic compounds and sulfur dioxide from this collocated source will be less than 250 tons per year. Compliance with this limit will render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

The calculations and formulas for determining the VOC and SO_2 limits are shown in the *Compliance Determination and Monitoring Requirements* section of this Technical Support Document.

Federal Rule Applicability Determination

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

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to existing emission units that involve a pollutant-specific emission unit and meet the following criteria:

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

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

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

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
E-VAP1 (SO_2)	No	Yes	Less than 100	92.5	100	No	No
E-VAP1 (VOC)	Yes	Yes	Greater than 100	15.8	100	Yes	No
E-VAP1 (Hydrogen Chloride)	No	Yes	0.0	1.63	10	No	No
E-VAP1 (Other Single HAP)	Yes	Yes	Greater than 10	0.75	10	Yes	No
E-VAP1 (Total HAPs)	Yes	Yes	Greater than 25	2.38	25	Yes	No
AS (SO_2)	No	Yes	Less than 100	102	100	No	NA
AS (VOC)	Yes	Yes	Greater than 100	3.83	100	Yes	No
AS (Hydrogen Chloride)	No	Yes	0.0	1.80	10	No	No
AS (Other Single HAP)	Yes	Yes	Greater than 10	0.44	10	Yes	No
AS (Total HAPs)	Yes	Yes	Greater than 25	2.64	25	Yes	No
E-VAP2 (SO_2)	No	Yes	NA	NA	100	No	No
E-VAP2 (VOC)	No	Yes	21.4	21.4	100	No	No
E-VAP2 (Hydrogen Chloride)	No	Yes	0.0	0.0	10	No	No
E-VAP2 (Other Single HAP)	No	Yes	2.44	2.44	110	No	No
E-VAP2 (Total HAPs)	No	Yes	4.63	4.63	25	No	No

Volatile compounds (VOC and HAP) from E-VAP1 and the air stripper (AS) are routed to the enclosed combustor (FL4) and combusted.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to E-VAP1 and the air stripper (AS) for VOC and HAPs upon issuance of the Title V Renewal. A CAM plan must be submitted as part of the Renewal application.

(b) The requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA, are not included in this permit for the air stripper (AS) and wastewater evaporation system, identified as E-VAP2 because this emission unit does not use untreated landfill gas as fuel. Rather this emission unit uses the waste heat (exhaust) from landfill gas-fueled engine/generators EG1 through EG4 owned and operated by Liberty Landfill, Inc. 40 CFR 60, Subpart WWW and, by extension, 40 CFR 63, Subpart AAAA, do not regulate devices that use waste heat from the combustion of landfill gas.

(c) The enclosed ground flare (FL4) and evaporator (E-VAP1) are subject to the New Source Performance Standard for Municipal Solid Waste Landfills (326 IAC 12) (40 CFR 60, Subpart WWW) because these emission units combust landfill gas obtained from a source (Liberty Landfill) that is subject to 40 CFR 60, Subpart WWW. Pursuant to 40 CFR 60.752(b)(2)(iii), the Permittee of the landfill (Liberty Landfill, Inc.) is required to route all collected landfill gas to a control system that complies with the requirements in either paragraph (b)(2)(iii)(A), (B), or (C) of 40 CFR 60.752.

Therefore, the portion of the untreated landfill gas that is sent to another entity for control

or treatment shall be controlled pursuant to the requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA. Nonapplicable portions of the NSPS will not be included in the permit. The enclosed ground flare (FL4) and evaporator (E-VAP1) are subject to the following portions of Subpart WWW:

40 CFR 60.751
40 CFR 60.752(b)(2)(iii)(B)(1), (2)
40 CFR 60.752(b)(2)(iv)
40 CFR 60.753(e), (f), (g)
40 CFR 60.755(e)
40 CFR 60.756(b)(1)
40 CFR 60.756(b)(2)(i), (ii)
40 CFR 60.757(e)(1)(i), (ii), (iii)
40 CFR 60.757(e)(2)
40 CFR 60.758(b)(3)
40 CFR 60.758(c)(1)(i), (ii)
40 CFR 60.758(c)(2)
40 CFR 60.758(e)
40 CFR 60.759(c)(1), (2)

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60, Subpart WWW.

(d) The enclosed ground flare (FL4) and evaporator (E-VAP1) are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills (40 CFR 63, Subpart AAAA, 326 IAC 20-67) because this facility is collocated with a municipal solid waste landfill subject to 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA, combusts untreated landfill gas, and the requirements of 40 CFR 60, Subpart WWW apply to this facility. The portion of the untreated landfill gas from Liberty Landfill, Inc. that is sent to Liquid Solutions, LLC shall be controlled pursuant to the requirements of 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA, as explained in paragraph (c) above. Therefore, the enclosed ground flare (FL4) and evaporator (E-VAP1) are subject to the following portions of 40 CFR 63, Subpart AAAA. Non applicable portions of the NESHAP will not be included in the permit.

40 CFR 63.1935(a)(3)
40 CFR 63.1940(a), (b)
40 CFR 63.1945(a), (e)
40 CFR 63.1950
40 CFR 63.1955(a)(1), (b), (c)(1)
40 CFR 63.1960
40 CFR 63.1965
40 CFR 63.1975
40 CFR 63.1980(a), (b)
40 CFR 63.1985
40 CFR 63.1990

The provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-67-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart AAAA.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors, 40 CFR 63, Subpart EEE, are not included in this permit for the enclosed ground flare (FL4), evaporator (E-VAP1), and the air stripper (AS) and wastewater evaporation system (E-VAP2) because these facilities do not meet the

definition of a hazardous waste combustor, as that term is defined in 40 CFR 63.1201

(f) The requirements of National Emission Standards for Hazardous Air Pollutants for Benzene Waste Operations, 40 CFR 63, Subpart FF, are not included in this permit for the enclosed ground flare (FL4), evaporator (E-VAP1), air stripper (AS), and wastewater evaporation system (E-VAP2) because these facilities do not meet the definition of a hazardous waste treatment, storage, and disposal facility that treats, stores, or disposes of hazardous waste containing benzene generated by any facility listed in 40 CFR 61.340(a).

State Rule Applicability Determination - Entire Source

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

326 IAC 2-2 and 2-3 (PSD)

This source is not in 1 of the 28 source categories under 326 IAC 2-2-1(gg), therefore, fugitive emissions are not counted towards applicability of PSD. This source (Liquid Solutions) is collocated with Liberty Landfill. Therefore, the PTE of the collocated source is considered for PSD and Emission Offset.

This source was constructed in 1982. In 1993, the maximum design capacity of the landfill was increased to 10,140,000 megagrams. During the period of 1982 to 1996, the source was a minor source under PSD.

In 1996, a landfill gas collection system and a 1,500 scfm open flare were added. The potential to emit of carbon monoxide from the 1,500 scfm open flare was 148 tons per year. The potential to emit for PM, PM10, SO_2, NO_X and VOC from the 1,500 scfm open flare were all less than eight (8) tons per year. Subsequent to the addition of the 1,500 scfm open flare, the source remained a minor source under PSD.

In 1998, a 2,500 scfm enclosed flare and a leachate evaporation system were added. If it were to be operated at maximum capacity, the potential to emit of carbon monoxide from the 2,500 scfm enclosed flare would be 110 tons per year and the potential to emit for PM, PM10, SO_2, NO_X and VOC would be all less than 21 tons per year. Subsequent to the addition of the 2,500 scfm open flare, the source remained a minor source under PSD. This is because the estimated actual emissions of CO from the 1,500 scfm open flare and the 2,500 scfm enclosed flare are 168 tons of CO per year and this is assuming that all landfill gas generated is burned (100% capture efficiency) in the flares. Therefore, the actual emissions of CO from the flares have not exceeded 250 tons per year.

In 2003, the source modified the leachate evaporation system and removed the existing 1,500 scfm open flare. This modification did not result in an increase in emissions, as the leachate evaporation system utilized the heat from the 2,500 scfm enclosed flare. The source remained a minor source under PSD after this modification.

In 2004, the source was permitted to add four (4) 8.9 MMBtu/hr landfill gas engine/generators, and a 1,362 scfm open flare. This modification did not trigger PSD review because the increase in PTE for PM, PM10, CO, SO_2, NO_x and VOC due to this modification was less than 250 tons per year. Prior to the operation of the new equipment, the source submitted manufacturer's guaranteed emission factors for the new and existing equipment (FL1, FL2, E-Vap, EG1 – EG4) and indicated its intention to leave the existing emission control equipment (FL1 and E-Vap) in operation at the source. Calculations for source-wide PTE for the entire source subsequent to this modification show that the PTE for PM, PM10, SO_2, NO_x, CO and VOC for the entire source are less than 250 tons per year. Subsequent to this modification, the source remained a minor source under PSD, as the potential to emit of all criteria pollutants from the source are less than 250 tons per year.

In 2005, during the Title V renewal process, the source removed the existing 2,500 scfm enclosed flare (FL1) and replaced it with a 1,000 scfm enclosed flare (FL4). This modification did not trigger PSD review because the PTE for PM, PM10, SO_2, NO_x, CO and VOC decreased as a result of this modification. The source remained a minor source under PSD.

In 2006, Liberty Landfill and Liquid Solutions submitted an application to IDEM to modify the existing source. The applicability of PSD and Emission Offset to this modification is discussed under the *Permit Level Determination - PSD* section of this Technical Support Document.

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

The operation of the enclosed ground flare (FL4), evaporator (E-VAP1), air stripper (AS), and wastewater evaporation system (E-VAP2) each have the potential to emit greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs, depending upon the concentration of HAPs in the wastewater accepted for disposal. However, the Permittee has accepted limits on the amount of a single HAP and combination of HAPs emitted from these units such that this collocated source remains an area source of HAPs. These limits are discussed above in the *Permit Level Detrmination - Part 70* section of this TSD. Therefore, the requirements of 326 IAC 2-4.1 will not apply.

326 IAC 2-6 (Emission Reporting)

Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted triennially. The first report is due no later than July 1, 2010, and subsequent reports are due every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4. The provisions of 326 IAC 2-6 shall be included in the pending Part 70 Permit No.: T181-25104-00047.

326 IAC 5-1 (Opacity Limitations)

This source is located in White County. 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 source is subject to 326 IAC 6-4 (Fugitive Dust Emissions) because the source maintains paved and unpaved roads and parking lots with public access. Pursuant to 326 IAC 6-4, the Permittee shall not generate fugitive dust to the extent that some portion of the material escapes beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

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

The source is located in White County. This source is located in the area listed in 326 IAC 6-5-1(a)(2)(A). However, the fugitive particulate emissions from the paved and unpaved roads and parking lots are negligible. Pursuant to 326 IAC 6-5-7(d), this source is not subject to the requirements of 326 IAC 6-5.

State Rule Applicability – Enclosed Ground Flare (FL4), Evaporator (E-VAP1), Air Stripper (AS) and Wastewater Evaporation System (E-VAP2)

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

The operation of the evaporator (E-VAP1), and the air stripper (AS) and wastewater evaporation system (E-VAP2) have potential particulate emissions less than 0.551 pounds per hour. Pursuant to 326 IAC 6-3-1(b)(14), these facilities are not subject to the requirements of 326 IAC 6-3-2.

326 IAC 7-1.1 (Sulfur Dioxide Limitations)

(a) The enclosed ground flare (FL4) and evaporator (E-VAP1) has a potential to emit greater than twenty-five (25) tons per year of sulfur dioxide. However, the potential to emit of sulfur dioxide due to combustion of fuels is less than twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide. The enclosed ground flare (FL4) and evaporator (E-VAP1) are located in White County and are not subject to requirements under 326 IAC 7-4 or 326 IAC 7-4.1. Therefore, the requirements of 326 IAC 7-1.1 do not apply to the enclosed ground flare (FL4) and evaporator (E-VAP1).

(b) The air stripper (AS) and wastewater evaporation system (E-VAP2) has a potential to emit greater than twenty-five (25) tons per year of sulfur dioxide. However, the potential to emit of sulfur dioxide due to combustion of fuels is less than twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide. The air stripper (AS) and wastewater evaporation system (E-VAP2) are located in White County and are not subject to requirements under 326 IAC 7-4 or 326 IAC 7-4.1. Therefore, the requirements of 326 IAC 7-1.1 do not apply to the air stripper (AS) and wastewater evaporation system (E-VAP2).

326 IAC 8-1-6 (BACT)

(a) The enclosed ground flare (FL4) and evaporator (E-VAP1) was constructed after January 1, 1980 and has a potential to emit VOC less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

(b) The air stripper (AS) and wastewater evaporation system (E-VAP2) was constructed after January 1, 1980 and has a potential to emit VOC less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

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

This source is not among the listed source categories in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1-2 are not applicable to the enclosed ground flare (FL4), evaporator (E-VAP1), air stripper (AS), and wastewater evaporation system (E-VAP2).

Compliance Determination and Monitoring Requirements

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

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

arise through a source=s failure to take the appropriate corrective actions within a specific time period.

The Testing Requirements applicable to this modification are as follows:

1. The Permittee shall demonstrate the volatile organic compound content, volatile sulfur compound content, volatile chlorine compound content, volatile single HAP content and volatile total HAP content of the wastewater accepted for disposal by providing vendor analysis of wastewater accepted for disposal accompanied by a vendor certification. In the absence of vendor analysis certifying the volatile organic compound content, volatile sulfur compound content, volatile chlorine compound content, volatile single HAP content and volatile total HAP content of the wastewater accepted for disposal, the Permittee shall test each batch of wastewater accepted for disposal for volatile organic compound content, volatile sulfur compound content, volatile chlorine compound content, volatile single HAP content and volatile total HAP content via the procedures in 40 CFR 60, Appendix A.

2. The enclosed ground flare (FL4) and evaporator (E-VAP1) and the air stripper (AS) and wastewater evaporation system (E-VAP2) do not have a testing requirement for sulfur dioxide (SO_2). Emissions of sulfur dioxide will be calculated based on the amount and concentration of the volatile sulfur compounds in the landfill gas burned and the wastewater accepted by Liquid Solutions for disposal. SO_2 emissions will be calculated using mass balance calculations assuming all volatile sulfur that passes through the enclosed ground flare FL4 is converted to SO_2.

   SO_2 Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

   SO_2 Emissions (tons) = Wastewater Amount (gal) x Volatile Sulfur Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 1 ton/2,000 lbs x 64.064 lbs SO_2/32.065 lbs Sulfur

   SO_2 Emissions from landfill gas shall be calculated as follows:

   SO_2 Emissions (tons) = Flow Rate (scfm) x 49.6 ppmv /1000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of SO_2 (64 lbs/lbs mole) x 60 min/hr x Number of hours of operation x 1 ton/2000 lbs

   The sulfur compound concentration of landfill gas shall be less than 49.6 ppmv.

   SO_2 Emissions from wastewater being evaporated in E-VAP2 shall be considered to be equivalent to the dissolved SO_2 content of that volume of wastewater and shall be calculated as follows:

   SO_2 Emissions (tons) = Wastewater Amount (gal) x SO_2 Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 1 ton/2,000 lbs

3. The enclosed ground flare (FL4) and evaporator (E-VAP1) and the air stripper (AS) and wastewater evaporation system (E-VAP2) have a testing requirement for volatile organic compounds (VOC). The enclosed ground flare (FL4) shall be tested for VOC destruction efficiency for the vapors routed from E-VAP1 and the air stripper (AS).

   Emissions of VOC will be calculated based on the amount and concentration of the volatile organic compounds in the wastewater accepted by Liquid Solutions for disposal. VOC emissions will be calculated using mass balance calculations assuming that the volatile organic compounds that pass through the combustion zone in the enclosed

ground flare (FL4) have a destruction efficiency of 99% and the volatile organic compounds that are evaporated in E-VAP2 are released uncontrolled to the atmosphere. Percent volatization of VOC from wastewater to the air stream in the air stripper (AS) shall be as determined during the required stack test.

VOC Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

VOC Emissions (tons) = Wastewater Amount (gal) x Total VOC Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (Percent Volatization % / 100) x (1 - 99 % Control Efficiency)

VOC Emissions from landfill gas shall be calculated as follows:

VOC Emissions (tons/yr) = Flow Rate (scfm) x 235 ppmv /1,000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of Hexane (86.2 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1 - 99 % Control Efficiency)

The volatile organic compound concentration of landfill gas shall be less than 235 ppmv.

VOC Emissions from wastewater being evaporated in E-VAP2 shall be considered to be equivalent to the dissolved VOC content of that volume of wastewater and shall be calculated as follows:

VOC Emissions (tons) = Wastewater Amount (gal) x Total VOC Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (1 - Percent Volatization %)

4. The enclosed ground flare (FL4) and evaporator (E-VAP1) and the air stripper (AS) and wastewater evaporation system (E-VAP2) do not have a testing requirement for hydrogen chloride (HCl). Emissions of hydrogen chloride will be calculated based on the amount and concentration of the volatile chlorine compounds in the landfill gas burned and the wastewater accepted by Liquid Solutions for disposal. HCl emissions will be calculated using mass balance methods and assuming that the volatile chlorine compounds that pass through the combustion zone in the enclosed ground flare (FL4) are completely converted to hydrogen chloride.

   HCl Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

   HCl Emissions (tons) = Wastewater Amount (gal) x Average Volatile Chlorine Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 1 ton/2,000 lbs x 36.461 lbs HCL /35.453 lbs Chlorine

   HCl Emissions from landfill gas shall be calculated as follows:

   HCl Emissions (tons) = LFG Flow Rate (scfm) x 42 ppmv /1000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of HCl (36.46 lbs/lbs mole) x 60 min/hr x Number of hours of operation x 1 ton/2000 lbs

   The chlorine compound concentration of landfill gas shall be less than 42 ppmv.

   HCl Emissions from wastewater being evaporated in E-VAP2 shall be considered to be equivalent to the dissolved HCl content of that volume of wastewater and shall be calculated as follows:

HCl Emissions (tons) = Wastewater Amount (gal) x HCl Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 1 ton/2,000 lbs

5. E-VAP1 evaporates certain batches of wastewater and the vapors are routed to the enclosed ground flare (FL4). Other batches of wastewater are passed through an air stripper (AS), yielding both volatile vapors, which are routed to enclosed ground flare (FL4), and the remaining wastewater. The VOC and volatile HAP emissions from the evaporator (E-VAP1) and the volatile vapors removed in the air stripper (AS) are controlled by the enclosed ground flare (FL4). These emission units (E-VAP1 and the air stripper (AS)) have a testing requirement for a single HAP. The enclosed ground flare (FL4) shall be tested for destruction efficiency of a single HAP for the vapors routed from E-VAP1 and the air stripper (AS). The Permittee shall test for the HAP deemed to have the lowest destruction efficiency, as determined by IDEM. Percent volatization of HAP from wastewater to the air stream in the air stripper (AS) shall be as determined during the required stack test (see 5. below).

   Single HAP Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

   Single HAP Emissions (tons) = Wastewater Amount (gal) x Single HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (Percent Volatization % / 100) x (1 - 98% Control Efficiency)

   Single HAP Emissions from landfill gas shall be calculated as follows:

   Single HAP Emissions (tons/yr) = Flow Rate (scfm) x 12.1 ppmv /1,000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of single HAP (106.16 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1 - 98% Control Efficiency)

   The single HAP concentration of landfill gas shall be less than 12.1 ppmv.

   For wastewater being evaporated in E-VAP2, the single HAP emissions shall be considered to be equivalent to the dissolved single HAP content of that volume of wastewater and shall be calculated as follows:

   Single HAP Emissions (tons) = Wastewater Amount (gal) x Single HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (1 - Percent Volatization %)

   Total HAP Emissions from wastewater passing through the combustion zone in the enclosed ground flare (FL4) shall be calculated as follows:

   Total HAP Emissions (tons) = Wastewater Amount (gal) x Total HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (Percent Volatization % / 100) x (1 - 98% Control Efficiency)

   Total HAP Emissions from landfill gas shall be calculated as follows:

   Total HAP Emissions (tons/yr) = Flow Rate (scfm) x 106 ppmv /1,000,000 x 1 atm / 0.7302 atm-cf/lb mole-R / Temp (60F+ 460) x Mole weight of Total HAP (89.9 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1 - 98% Control Efficiency)

   The Total HAP concentration of landfill gas shall be less than 106 ppmv.

For wastewater being evaporated in E-VAP2, the total HAP emissions shall be considered to be equivalent to the dissolved total HAP content of that volume of wastewater and shall be calculated as follows:

Total HAP Emissions (tons) = Wastewater Amount (gal) x Total HAP Concentration in Wastewater (ppm)/1,000,000 x Density of wastewater (lb/gal) x 1 ton/2,000 lbs x (1 - Percent Volatization %)

6. E-VAP2 evaporates wastewater after it has passed through the air stripper (AS). The VOC and volatile HAP emissions from this evaporator (E-VAP2) are uncontrolled. In order to determine the potential to emit of a single HAP and a combination of HAPs from E-VAP2, the Permittee shall perform inlet and outlet testing on the air stripper (AS) for a single HAP to determine the percent volatization of HAP from the wastewater to the air stream. The Permittee shall test for the HAP deemed to have the highest solubility in water or the lowest rate of volatization under normal conditions when passed through the air stripper (AS), as determined by IDEM.

Testing is necessary because this source has taken limits on emissions of VOC, a single HAP, and a combination of HAPs, and these units must be tested to demonstrate compliance with the HAP emission limits. Testing shall be required as shown in the following table:

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
E-VAP1	FL4	Within 180 days of startup or within 60 days of reaching maximum capacity	VOC and Single HAP	Every five (5) years	VOC: less than 220 tpy Single HAP: varies Combination of HAPs: less than 9.4 tpy
Air Stripper	FL4				
Air Stripper	NA		percent volatization of VOC and a single HAP	Every five (5) years	

The enclosed ground flare (FL4) has applicable Compliance Determination Requirements and Compliance Monitoring Requirements. Those requirements are specified in paragraphs (c) and (d) of the *Federal Rule Applicability* section of this Technical Support Document.

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 181-25252-00047 and proposed Part 70 Operating Permit 181-25104-00047. The staff recommend to the Commissioner that this Part 70 Significant Source Modification and Part 70 Operating Permit be approved.

Appendix A: Emission Calculations
HAPs Emissions from the Landfill Gas Combusted in the Wastewater Evaporator and Enclosed Flare

Company Name: Liquid Solutions, LLC
Address: 8635 East State Road 16, Monticello, Indiana 47960
TV: 181-25104-00047
Reviewer: ERG/ST
Date: January 4, 2008

1. Landfill Gas (LFG) Production Rate:	114,700,000	m3/yr (= CH4 + CO2 production rate: LandGEM2.01)
2. Collection Efficiency:	0.8	(AP 42, Chapter 2.4)
3. Landfill Gas Available for Combustion:	6,165	scfm
4. Landfill Gas Combusted at Liberty Landfill:	2,590	scfm
5. Landfill Gas Available for Combustion at Liquid Solutions:	3,575	scfm
6. Max. LFG Flow Rate (Evaporator and Flare)	1,242	scfm

The LFG Production Rate is the amount of landfill gas available for combustion at the emission units at Liberty Landfill and Liquid Solutions. Since the potential to emit of this collocated source is dependent in part on the total amount of landfill gas available for combustion, combustion emissions from the Wastewater Evaporator (E-VAP1) and Enclosed Flare (FL4) at Liquid Solutions are limited by the amount of landfill gas available minus the amount of landfill gas consumed by the engine/generators (EG1-EG4) and opern flare (FL2) at Liberty Landfill. Potential to Emit of HAPs from combustion of landfill gas at the evaporator and enclosed flare at Liquid Solutions is based upon the maximum flow rates of these emission units.

LFG Compound	HAP	VOC	CAS	Molecular Weight (lb/lb-mol)	Default Conc. (ppmv)	Destruction Efficiency * (%)	Controlled HAPs Emissions (ton/yr)
1,1,1-Trichloroethane (methyl chloroform)	x	-	71-55-6	133.41	0.480	98.0	0.001
1,1,2,2-Tetrachloroethane	x	x	79-34-5	167.85	1.110	98.0	0.003
1,1,2 - Trichloroethane (1,1,2 TCA)	x	x	79-00-5	133.41	0.100	98.0	0.000
1,1-Dichloroethane (ethylidene dichloride)	x	x	75-34-3	98.97	2.350	98.0	0.004
1,1-Dichloroethene (vinylidene chloride)	x	x	75-35-4	96.94	0.200	98.0	0.000
1,2-Dichloroethane (ethylene dichloride)	x	x	107-06-2	98.96	0.410	98.0	0.001
1,2-Dichloropropane (propylene dichloride)	x	x	78-87-5	112.99	0.180	98.0	0.000
2-Propanol (isopropyl alcohol)	-	y	67-63-0	60.11	50.100	99.7	0.000
Acetone (2-propanone)	-	-	67-64-1	58.08	7.010	99.7	0.000
Acrylonitrile (Propenenitrile)	x	x	107-13-1	53.06	6.330	99.7	0.001
Benzene	x	x	71-43-2	78.12	1.910	99.7	0.000
Bromodichloromethane	-	y	75-27-4	163.83	3.130	98.0	0.000
Butane	-	y	106-97-8	58.12	5.030	99.7	0.000
Carbon disulfide	x	x	75-15-0	76.13	0.580	99.7	0.000
Carbon tetrachloride	x	x	56-23-5	153.84	0.004	98.0	0.000
Carbonyl sulfide	x	x	463-58-1	60.07	0.490	99.7	0.000
Chlorobenzene (monochlorobenzene)	x	x	108-90-7	112.56	0.250	98.0	0.000
Chlorodifuoromethane (CFC-22, freon-22)	-	-	75-45-6	86.47	1.300	98.0	0.000
Chloroethane (ethyl chloride)	x	x	75-00-3	64.52	1.250	98.0	0.001
Chloroform (trichloromethane)	x	x	67-66-3	119.39	0.030	98.0	0.000
Chloromethane (methyl chloride)	x	x	74-87-3	50.49	1.250	98.0	0.001
1,4 Dichlorobenzene (p-dichlorobenzene)	x	x	106-46-7	147	0.210	98.0	0.001
Dichlorodifluoromethane (CFC-12, freon-12)	-	-	75-71-8	120.91	15.700	98.0	0.000
Dichlorofuoromethane (freon-21)	-	-	75-43-4	102.92	2.620	98.0	0.000
Dichloromethane (methylene chloride)	x	-	75-09-2	84.94	14.300	98.0	0.021
Dimethyl Sulfide (methyl sulfide)	-	y	75-18-3	62.13	7.820	99.7	0.000
Ethane	-	-	74-84-0	30.07	889.000	99.7	0.000
Ethanol (ethyl alcohol)	-	y	64-17-5	46.08	27.2	99.7	0.000
Ethylbenzene	x	x	100-41-4	106.17	4.610	99.7	0.001
Ethyl Mercaptan (ethanethiol)	-	y	75-08-1	62.13	1.250	99.7	0.000
Ethylene dibromide (1,2 dibromoethane)	x	x	106-93-4	187.88	0.001	98.0	0.000
Fluorotrichloromethane (CFC-11, freon-11)	-	-	75-69-4	137.38	0.760	98.0	0.000
Hexane	x	x	110-54-3	86.18	6.570	99.7	0.001
Hydrogen Sulfide	-	-	7783-06-4	34.08	35.500	97.0	0.000
Mercury	x	-	7439-97-6	200.61	0.0003	0.0	0.000
Methyl ethyl ketone (2-butanone)	-	x	78-93-3	72.11	7.09	99.7	0.000
Methyl isobutyl ketone (hexone)	x	x	107-10-1	100.16	1.87	99.7	0.000
Methyl Mercaptan	-	y	74-93-1	48.11	2.49	99.7	0.000
Pentane	-	y	109-66-0	72.15	3.29	99.7	0.000
Perchloroethylene	-	-	127-18-4	165.83	3.73	98.0	0.000
Propane	-	y	74-98-6	44.09	11.1	99.7	0.000
Toluene (methylbenzene)	x	x	108-88-3	92.1	39.3	99.7	0.009
Trichloroethylene (trichloroethene)	x	x	79-01-6	131.4	2.82	98.0	0.006
t - 1,2 - Dichloroethene (1,2 dichloroethylene	-	-	156-60-5	96.94	2.84	98.0	0.000
Vinyl Chloride (chloroethylene, VCM)	x	x	75-01-4	62.5	7.34	98.0	0.008
Xylenes (m,o,p)	x	x	1330-20-7	106.16	12.1	99.7	0.003
Hydrogen Chloride (Hydrochloric acid)	x	-	7647-01-0	36.5	42	**	1.318
Total HAP							**1.383**

Note: Default concentrations are taken from AP-42 Table 2.4-1. Destruction efficiencies are taken from Table 2.4-3 for flares.
Key to HAP and VOC list: "x" denotes a HAP only or a HAP and VOC; "y" denotes a VOC only
** HCl concentration is from AP-42, Chapter 2.4, Section 2.4.4.2. HCl only occurs in the combustion process of the control device.

Methodology

Controlled HAPs Emissions = Max. LFG Flow Rate (scfm) x Concentration (ppmv) /1000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of HAPs (lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x (1 - Destruction Efficiency (%))
HCl Emissions (tons/yr) = Max. LFG Flow Rate to control devices (scfm) x Chlorinated Compound Concentrations (ppmv) /1000,000 x 1 atm / Gas Constant (0.7302 atm-cf/lb mole-R) / Temp (60F+ 460) x Mole weight of HCl (lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs

Appendix A: Emission Calculations
Combustion Emissions from the Wastewater Evaporator and Enclosed Flare

Company Name: Liquid Solutions, LLC
Address: 8635 East State Road 16, Monticello, Indiana 47960
TV: 181-25104-00047
Reviewer: ERG/ST
Date: January 4, 2008

Fuel Input MMBtu/hr	NMOC ppmv	Flow Rate scfm	Facility Description:	Emissions Unit ID #
27.3	235	1,000	Enclosed Flare with a maximum capacity of 1,000 scfm	FL4
6.6	235	242	Wastewater Evaporator with a maximum capacity of 6.6 MMBtu	E-VAP1

Pollutant Emission Factors

	PM[a]	PM10[a]	SO_2[b]	NOx[d]	CO[d]	VOC[c]
	17	17	49.6	61.5	336	235
	(lb/10^6 dscf methane)	(lb/10^6 dscf methane)	(ppmv)	(lb/10^6 dscf methane)	(lb/10^6 dscf methane)	(ppmv)

Potential To Emit (tons/year)

Emission Unit	PM	PM10	SO_2	NOx	CO	VOC
FL4	2.23	2.23	2.20	8.1	44.2	0.28
E-VAP1	0.54	0.54	0.53	2.0	10.7	0.07
PTE Total	**2.77**	**2.77**	**2.73**	**10.0**	**54.8**	**0.35**

[a] Emission Factors are from AP-42, Chapter 2.4 - Municipal Solid Waste Landfills, Table 2.4-4 (AP-42, 11/98).
Assume PM emissions equal to PM10 emissions.
[b] The total inlet concentration of Sulfur content compounds in AP-42, Chapter 2.4 - Municipal Solid Waste Landfills - Table 2.4-1 (AP-42, 11/98).
[c] The VOC concentration is from AP 42, Chapter 2.4, Table 2.4-2, footnote c.
[d] The emission factors for NOx and CO for the flares are guaranteed emission factors provided by the manufacturer.
Note: FL1 will be removed before FL2 and EG1 - EG6 are installed.

Methodology

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

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

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

Appendix A: Emission Calculations
SO_2, VOC, and HAPs Emissions from the Wastewater Evaporator and Enclosed Flare

Company Name: Liquid Solutions, LLC
Address: 8635 East State Road 16, Monticello, Indiana 47960
TV: 181-25104-00047
Reviewer: ERG/ST
Date: January 4, 2008

Emission Unit	Maximum Daily Feed Rate (gal/day)	Average VOC Concentration in Wastewater (ppm)	Average Volatile Sulfur Concentration in Wastewater (ppm)	Average Volatile Chlorine Concentration in Wastewater (ppm)	Average Single HAP Concentration in Wastewater (ppm)	Average Total HAPs Concentration in Wastewater (ppm)	Volatile Removal Efficiency in Air Stripper (%)	VOC/HAP Destruction Efficiency in Enclosed Flare FL4 (%)
E-VAP1	26,000	20,000	1,170	40	950	950	N/A	98.0%
AS-E-VAP2	32,000	4,400	1,170	40	500	950	90.0%	98.0%

Wastewater Treatment Process: E-VAP1: Waste water is evaporated in E-VAP1 and the exhaust gas is routed to the enclosed flare FL4 where it is combusted.
Wastewater Treatment Process: AS-E-VAP2: Waste water is routed to an air stripper (AS), where 90% of the VOC and HAP is volatized and removed. These emissions are routed to the enclosed flare FL4 where they are combusted. The remaining water is evaporated in E-VAP2 and the exhaust gas is emitted to the atmosphere with no control.

Emission Unit	Control Device	PTE of VOC Before Control (tons/yr)	PTE of Single HAP Before Control (tons/yr)	PTE of Total HAPs Before Control (tons/yr)	VOC/HAP Control Efficiency (%)	PTE of VOC After Control (tons/yr)	PTE of SO_2 * (tons/yr)	PTE of HCl * (tons/yr)	PTE of Other Single HAP After Control (tons/yr)	PTE of Total HAPs After Control (tons/yr)
E-VAP1	Flare FL4 *	NA	NA	NA	NA	15.8	92.5	1.63	0.75	2.38
E-VAP2	No Control (10%)	21.4	2.44	4.63	0.0%	21.4	NA	0.00	2.44	4.63
AS	Flare FL4 (90%)	193	21.9	41.6	98.0%	3.86	102	1.80	0.44	2.64
	Totals	**214**	**24.4**	**46.3**		**41.1**	**195**	**3.43**	**3.63**	**9.64**

* Control is deemed integral to process.
The density of wastewater is assumed to be 8.34 pounds per gallon.
Assume complete conversion of volatile sulfur to sulfur dioxide in flare FL4. The operating temperatures in E-VAP2 are too low to convert volatile sulfur compounds to sulfur dioxide.
Sulfur dioxide is formed during combustion from the sulfur in volatile sulfur compounds. Hydrogen chloride is formed during combustion from the chlorine in chlorine compounds.

Methodology:

PTE of VOC/HAP (E-VAP1) (tons/yr) = Maximum Daily Feed Rate (gal/day) x Average VOC/HAP Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 365 day/yr x 1 ton/2,000 lbs
PTE of VOC/HAP (E-VAP2 No Control) (tons/yr) = Maximum Daily Feed Rate (gal/day) x Average VOC/HAP Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 365 day/yr x 1 ton/2,000 lbs x (1 - Volatile Removal Efficiency in Air Stripper %) x (1- Destruction Efficiency %)
PTE of VOC/HAP (E-VAP2 Controlled) (tons/yr) = Maximum Daily Feed Rate (gal/day) x Average VOC/HAP Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 365 day/yr x 1 ton/2,000 lbs x Volatile Removal Efficiency in Air Stripper (%) x (1- Destruction Efficiency %)

PTE of SO_2 (tons/yr) = Maximum Daily Feed Rate (gal/day) x Average Volatile Sulfur Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 365 day/yr x 1 ton/2,000 lbs x 64.064 lbs SO_2/32.065 lbs Sulfur

PTE of HCl (tons/yr) = Maximum Daily Feed Rate (gal/day) x Average Volatile Chlorine Concentration in Wastewater (ppm)/1,000,000 x Density (lb/gal) x 365 day/yr x 1 ton/2,000 lbs x 36.461 lbs HCL /35.453 lbs Chlorine x Destruction Efficiency %

Appendix A: Emission Calculations
Summary

Company Name: Liquid Solutions, LLC
Address: 8635 East State Road 16, Monticello, Indiana 47960
TV: 181-25104-00047
Reviewer: ERG/ST
Date: January 4, 2008

Potential To Emit Before Control (tons/year)									
Emission Unit	PM	PM10	SO_2	NOx	CO	VOC	HCl *	Other Single HAP	Total HAPs
FL4 - Landfill Gas Combustion	2.23	2.23	2.20	8.08	44.15	0.28	1.06	1.32	1.38
E-VAP1 - Landfill Gas Combustion	0.54	0.54	0.53	1.95	10.67	0.07	0.26		
E-VAP1 - Wastewater Combustion	0	0	92.5	0	0	15.8	1.63	0.75	2.38
E-VAP2 - No Control	0	0	NA	0	0	21.4	0	2.44	4.63
Air Stripper - Wastewater Combustion	0	0	102	0	0	193	0	21.9	41.6
Totals	**2.77**	**2.77**	**198**	**10.0**	**54.8**	**230**	**2.94**	**25.1**	**50.0**

Potential To Emit After Control (tons/year)									
Emission Unit	PM	PM10	SO_2	NOx	CO	VOC	HCl *	Other Single HAP	Total HAPs
FL4 - Landfill Gas Combustion	2.23	2.23	2.20	8.08	44.2	0.28	1.06	1.32	1.38
E-VAP1 - Landfill Gas Combustion	0.54	0.54	0.53	1.95	10.7	0.07	0.26		
E-VAP1 - Wastewater Combustion	0	0	92.5	0	0	15.8	1.63	0.75	2.38
E-VAP2 - No Control	0	0	NA	0	0	21.4	0	2.44	4.63
Air Stripper - Wastewater Combustion	0	0	102	0	0	3.86	1.80	0.44	2.64
Totals	**2.77**	**2.77**	**198**	**10.0**	**54.8**	**41.5**	**4.75**	**3.63**	**11.0**

* Hydrogen Chloride (HCl) is a HAP formed during combustion.