CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT
DIVISION OF AIR POLLUTION CONTROL
and
IDEM NORTHWEST INDIANA OFFICE

Gary Sanitary Landfill
1900 Burr Street
Gary, Indiana, 46406

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: CP089-10679-00143	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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Malfunction Report

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM), the Division of Air Pollution Control and the IDEM Northwest Indiana Office. 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 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary closed landfill utilizing twenty-five (25) individual methane gas flares as control.

Authorized Individual:	George Kolettis
Source Address:	1900 Burr Street, Gary, Indiana 46406
Mailing Address:	504 North Broadway, Gary, Indiana 46042
Phone Number:	219-882-3000
SIC Code:	4953
County Location:	Lake
County Status:	Nonattainment for Ozone; Nonattainment area for PM-10, SO_2, and CO; Attainment area for all other criteria pollutants
Source Status:	Minor Source Operating Permit; Minor Source, under Emission Offset Rules

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) twenty five (25) individual passive gas vent flares (flares constructed in March, 1999) identified as GW-1 through GW-25, each with a maximum gas flow rate of 60 scfm of landfill gas.

A.3 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 CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

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, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 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.5 Modification to Permit [326 IAC 2]

Notwithstanding Condition B.7, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 First Time Operation Permit [326 IAC 2-1-4]

That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees)

(e) Pursuant to 326 IAC 2-7-4, the Permittee shall apply for a Title V operating permit. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

B.7 NSPS Reporting Requirement

That pursuant to the New Source Performance Standards (NSPS), 60.750 - 60.759, Subpart WWW, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

(a) Commencement of construction date (no later than 30 days after such date);

(b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

(c) Actual start-up date (within 15 days after such date); and

(d) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

and

Division of Air Pollution Control
George Kolettis, Chief
Suite 1012
504 North Broadway
Gary, Indiana 46402

and

IDEM Northwest Indiana Office
Gainer Bank Building
Suite 418
504 North Broadway
Gary, Indiana 46402

The application and enforcement of these standards have been delegated to the IDEM, OAM. The requirements of 40 CFR Part 60 are also federally enforceable.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 Preventive Maintenance Plan [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 (PMP) within ninety (90) days after issuance of this permit, including the following information on each emissions unit:

(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;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP 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 Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Division of Air Pollution Control
George Kolettis, Chief
Suite 1012
504 North Broadway
Gary, Indiana 46402

and

IDEM Northwest Indiana Office
Gainer Bank Building
Suite 418
504 North Broadway
Gary, Indiana 46402

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office, upon request and shall be subject to review and approval by IDEM, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office.

C.2 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of [326 IAC 2-6.1-6] 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 Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Division of Air Pollution Control
George Kolettis, Chief
Suite 1012
504 North Broadway
Gary, Indiana 46402

and

IDEM Northwest Indiana Office
Gainer Bank Building
Suite 418
504 North Broadway
Gary, Indiana 46402

Any such application should be certified by the “authorized individual” as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.3 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, Division of Air Pollution Control, the IDEM Northwest Indiana Office, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the

purpose of assuring compliance with this permit or applicable requirements.

(1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, Division of Air Pollution Control, the IDEM Northwest Indiana Office, nor an authorized representative, may disclose the information unless and until IDEM, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]

(2) The Permittee, and IDEM, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

C.4 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM Permits Branch, the Division of Air Pollution Control, and the IDEM Northwest Indiana Office within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

C.5 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM and the Division of Air Pollution Control and the IDEM Northwest Indiana Office the fact that continuance of this permit is not consistent with purposes of this article.

C.6 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of twenty percent (20%) 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.7 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.

Testing Requirements

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

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

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 Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

Division of Air Pollution Control
George Kolettis, Chief
Suite 1012
504 North Broadway
Gary, Indiana 46402

and

IDEM Northwest Indiana Office
Gainer Bank Building
Suite 418
504 North Broadway
Gary, Indiana 46402

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM the Division of Air Pollution Control and the IDEM Northwest Indiana Office within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

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

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend the compliance schedule an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

Division of Air Pollution Control
George Kolettis, Chief
Suite 1012
504 North Broadway
Gary, Indiana 46402

and

IDEM Northwest Indiana Office
Gainer Bank Building
Suite 418
504 North Broadway
Gary, Indiana 46402

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 "authorized individual" as defined by 326 IAC 2-1.1-1.

C.10 Maintenance of Monitoring Equipment [IC 13-14-1-13]

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary

monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.11 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.12 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office upon request and shall be subject to review and approval by IDEM, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

(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 corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(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, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction

Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 Annual Emission Statement [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

Division of Air Pollution Control
George Kolettis, Chief
Suite 1012
504 North Broadway
Gary, Indiana 46402

and

IDEM Northwest Indiana Office
Gainer Bank Building
Suite 418
504 North Broadway
Gary, Indiana 46402

(c) The annual 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, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.16 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM, the Division of Air Pollution Control and the IDEM Northwest Indiana Office may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.17 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information 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 kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner the Division of Air Pollution Control and the IDEM Northwest Indiana Office makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner the Division of Air Pollution Control and the IDEM Northwest Indiana Office within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) 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 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC2-1.1-1(1).

(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 Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

Division of Air Pollution Control
George Kolettis, Chief
Suite 1012
504 North Broadway
Gary, Indiana 46402

(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, OAM, Division of Air Pollution Control and the IDEM Northwest Indiana Office, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) 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.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions unit Description
(a) twenty five (25) individual passive gas vent flares (flares constructed in March, 1999) identified as GW-1 through GW-25, each with a maximum gas flow rate of 60 scfm of landfill gas.

Emission Limitations and Standards

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-8][40CFR 60.752, Subpart WWW]
Pursuant to 326 IAC 8-8 (Municipal Solid Waste Landfills) and 40 CFR 60, Subpart WWW (New Source Performance Standards), the VOC emissions from the municipal solid waste landfill shall be limited by the following:

(a) The twenty five (25) individual gas vent flares shall have a destruction efficiency of at least ninety-eight percent (98%).

D.1.2 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]
The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart WWW.

D.1.3 Municipal Solid Waste Landfill NSPS [326 IAC 12] [40CFR 60.752, Subpart WWW]
The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and shall either comply with 40CFR 60.752 (b)(2) or calculate the non methane organic compound (NMOC) emission rate for the landfill using the procedures specified in 40CFR 60.754.

D.1.4 Operational Standards for Collection and Control Systems [40CFR 60.753]
In order to comply with 40CFR 60.752 (b)(2)(ii) the Permittee shall:

(a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the municipal solid waste landfill in which solid waste has been in place for five years if active or 2 years or more if closed or at final grade.

(b) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(1) Fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40CFR 60.757(f)(1).

(2) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan.

(3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Office of Air Management (OAM) and VCAPC.

(c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55ºC and with either a nitrogen level less than 20 percent or an oxygen level

less than 5 percent. The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

(1) The nitrogen level shall be determined using Method 3C, unless an alternative method is established as allowed by 40CFR 60.752 (b)(2)(i).

(2) Unless an alternative test method is established as allowed by 40CFR 60.752 (b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A except that; the span shall be set so that the regulatory limit is between 20 and 50 percent of the span; a data recorder is not required; only two calibration gases are required, a zero and span, and ambient air may be used as the span; a calibration error check is not required; the allowable sample bias, zero drift, and calibration drift are 10 percent.

(d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

(e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.

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

(g) If monitoring demonstrates that the operational requirement in 40CFR 60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in 40CFR 60.752(a)(3) through (5) or 40CFR 60.755(c). If corrective actions are taken as specified in 40CFR 60.755, the monitored exceedance is not a violation of the operational requirements in 40CFR 60.753.

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [40CFR 60.754]

(a) Pursuant to 40CFR 60.754(b):

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

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

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

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

(1) The flow rate of landfill gas, Q_{LFG}, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40CFR 60.

(2) The average NMOC concentration, C_{NMOC}, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of 40CFR 60.

If using Method 18 of appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The Permittee shall divide the NMOC concentration from Method 25 of appendix A of 40CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

(3) The Permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator as provided in 40CFR 60.752(b)(2)(i)(B).

D.1.6 Volatile Organic Compounds (VOC)

The twenty five (25) individual gas vent flares for VOC control shall be in operation at all times. The destruction efficiency as determined in condition D.1.4 shall be a minimum of 98%.

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

D.1.7 Monitoring [40CFR 60.756]

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

(a) The Permittee seeking to comply with 40CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturers specifications the following equipment:

(1) Heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame

(2) A device that records flow to or bypass of the flare.

The Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

(b) The Permittee seeking to install a collection system that does not meet the specifications in 40CFR 60.759 or seeking to monitor alternative parameters to those required by 40CFR 60.753 through 40CFR 60.756 shall provide information satisfactory to the Office of Air Management (OAM) and IDEM Indiana Northwest Office as provided in 40CFR 60.752(b)(2)(i)(B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Office of Air Management (OAM) and IDEM Indiana Northwest Office may specify additional appropriate monitoring procedures.

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

D.1.8 Compliance Provisions [40CFR 60.755]

(a) Except as provided in 40CFR 60.752(b)(2)(i)(B), the specified methods below shall be used to determine whether the gas collection system is in compliance with 40CFR 60.752(b)(2)(i).

(1) For the purpose of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_o kinetic factors should be those published in the most recent Compilation of Air Pollution Emission Factors (AP-42) or other site-specific values demonstrated to be appropriate and approved by the Office of Air Management (OAM) and IDEM Indiana Northwest Office. If k has been determine as specified in 40CFR 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

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

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

where,
Q_m = maximum expected gas generation flow rate, cubic meters per year
L_o = methane generation potential, cubic meters per megagram solid waste
R = average annual acceptance rate, megagrams per year
k = methane generation rate constant, $year^{-1}$

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years.
c = time since closure, years (for an active landfill c = 0 and $e^{-kc} = 1$)

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

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

i=1

where,

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

k = methane generation rate constant, year $^{-1}$

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

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

t_i = age of the i th section, years

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

(2) For the purposes of determining sufficient density of gas collector for compliance with 40CFR 60.752 (b)(2)(ii)(A)(2), the Permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Office of Air Management (OAM) and IDEM Indiana Northwest Office, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.

(3) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40CFR 60.753(c). If a well exceeds any of these operating parameters, action shall be initiated to correct the exceedance within five (5) calendar days. If correction of the exceedance cannot be achieved within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.

(4) If the Permittee seeks to demonstrate compliance with 40CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40CFR 60.759 shall provide information satisfactory to the Office of Air Management (OAM) and IDEM Indiana Northwest Office as specified in 40CFR 60.752 (b)(2)(i)(C) demonstrating that off-site migration is being controlled.

(b) For purposes of compliance with 40CFR 60.753(a), the Permittee shall place each well or design component of a controlled landfill as specified in the approved design plan as provided in 40CFR 60.752(b)(2)(i). Each well shall be installed within 60 days of the date in which the initial solid waste has been in place for a period of five (5) years or more if active or two (2) years or more if closed or at final grade.

(c) The following procedures shall be used for compliance with the surface methane operational standard as provided in 40CFR 60.753 (d), the Permittee shall use the following procedures:

(1) After installation of the collection system, the Permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a serpentine pattern spaced 30 meters apart (or a site-specific established

spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40CFR 60.755(d).

(2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from perimeter wells.

(3) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of 40CFR60, except that the probe inlet shall be placed within five (5) to ten (10) centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

(4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in 40CFR 60.755(c)(4)(i) through (v) should be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40CFR 60.753(d).

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

Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be remonitored with ten (10) calendar days of detecting the exceedance.

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

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

For any location where monitored methane concentration equals of exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance.

An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be

submitted to the Office of Air Management (OAM) and IDEM Indiana Northwest Office for approval.

(5) The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

(d) The Permittee seeking to comply with the provisions of 40CFR 60.755(c) shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

(1) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of 40CFR 60, except the methane shall replace all references to volatile organic compound (VOC).

(2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.

(3) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of 40CFR 60, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of 40CFR 60 shall be used.

(4) The calibration procedures provided in section 4.2 of Method 21 of appendix A of 40CFR 60 shall be followed immediately before commencing a surface monitoring survey.

(e) The provisions of 40CFR 60.755 shall apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction, shall not exceed five (5) days for collection systems and shall not exceed one (1) hour for treatment or control devices.

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

D.1.9 Non Methane Organic Compound (NMOC) Rate Calculation [40CFR 60.754]

Pursuant to 40CFR 60.754 the Permittee shall:

(a) Calculate the non methane organic compound (NMOC) rate using either of the equations listed below. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o, and 4,000 parts per million by volume as hexane for the C_{NMOC}.

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

$$M_{NMOC} = \sum_{i=1}^{n} 2 k L_O M i (e^{-kt} i) (C_{NM OC})(3.6x10^{-9})$$

where,

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

k = methane generation rate constant, year $^{-1}$
L_o = methane generation potential, cubic meters per megagram solid waste
M_i = mass of solid waste in the i th section, megagrams
t_i = age of the i th section, years
C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
3.6 x 10 $^{-9}$ = conversion factor

The mass of the nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation provisions of 40CFR 60.758 are followed.

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

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

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

The mass of the nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation provisions of 40CFR 60.758(d)(2) are followed.

If the calculated non methane organic compound (NMOC) emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with the provisions of 40CFR 60.752 (b)(2) or determine a site-specific non methane organic compound (NMOC) emission rate using the procedures described in 40CFR 60.754 (a)(3).

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

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

Tier 2. The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger that 25

hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste.

The Permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25C of appendix A of 40 CFR 60 or Method 18 of appendix A of 40 CFR 60. If using Method 18 of appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in analysis. The Permittee shall divide the NMOC concentration from Method 25C of appendix A by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

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

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

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

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

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

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

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

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

D.1.10 Reporting Requirements [40CFR 60.757]

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

(a) Submit an initial design capacity report to the Office of Air Management (OAM) and IDEM Indiana Northwest Office no later than 90 days after October 8, 1997. An amended design capacity report shall be submitted to the Office of Air Management (OAM) and IDEM Indiana Northwest Office providing notification of any increase in the design capacity of the landfill. The Permittees initial design capacity report was submitted on June 10, 1996.

(b) Submit a non methane organic compound (NMOC) emission rate report to the Office of Air Management and IDEM Indiana Northwest Office initially and annually thereafter, except as provided for in 40CFR 60.757(b)(1)(ii) or (b) (3). The Office of Air Management (OAM) and IDEM Indiana Northwest Office may request such additional information as may be necessary to verify the reported NMOC emission rate. The report should contain an annual or 5-year estimate of the non methane organic compound (NMOC) emission rate using the formula and procedures provided in 40CFR 60.754 (a) or (b), as applicable. The initial NMOC emission rate report shall be submitted within 90 days of the date waste acceptance commences and may be combined with the initial design capacity report required in 40CFR 60.757(a). Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided in 40CFR 60.757(b)(1)(ii) and (b)(3). If the estimated NMOC emission rate as reported in the annual report to the Office of Air Management (OAM) and IDEM Indiana Northwest Office is less than 50 megagrams per year in each of the next five (5) consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next five (5) year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five (5) years for which as NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Office of Air Management (OAM) and IDEM Indiana Northwest Office. This estimate shall be revised at least once every five (5) years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five (5) year estimate, a revised five (5) year estimate shall be submitted to the Office of Air Management and IDEM Indiana Northwest Office. The revised estimate shall cover the five (5) year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. The NMOC emission rate report shall include all the data, calculations, sample reports, and measurements used to estimate the annual or five (5) year emission rate. The Permittee is exempted from the requirements of 40CFR 60.757(b)(1) and (2) after the installation of a collection and control system in compliance with 40CFR 60.752 (b)(2), during such time as the system is in operation and in compliance with 40CFR 60.753 and 60.755.

(c) Submit a collection and control system design plan to the Office of Air Management (OAM) and IDEM Indiana Northwest Office within one (1) year of the first non methane organic compound (NMOC) emission rate report, required under 40CFR 60.757(b), in which NMOC emission rate exceeds 50 megagrams (Mg) per year; except if the Permittee elects to recalculate the NMOC emission rate after Tier 2 sampling and

analysis as provided in 40CFR 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year. If the Permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 40CFR 60.754(a)(4), and the resulting NMOC emission rate is less than 50 megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of 40CFR 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Office of Air Management (OAM) and IDEM Indiana Northwest Office within one (1) year of the first calculated emission rate exceeding 50 megagrams per year.

(d) Submit a closure report to the Office of Air Management (OAM) and IDEM Indiana Northwest Office within thirty days of waste acceptance cessation. The Office of Air Management (OAM) and IDEM Indiana Northwest Office may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40CFR 258.60. If a closure report has been submitted to the Office of Air Management (OAM) and IDEM Indiana Northwest Office, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40CFR 60.7(a)(4).

(e) Submit an equipment removal report to the Office of Air Management (OAM) and IDEM Indiana Northwest Office thirty (30) days prior to removal or cessation of operation of the control equipment. The equipment removal report shall contain all of the following items: a copy of the closure report submitted in accordance with 40CFR 60.757(d), a copy of the initial performance test report demonstrating that the fifteen (15) year minimum control period has expired, and dated copies of three (3) successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year. The Office of Air Management (OAM) and IDEM Indiana Northwest Office may request such additional information as may be necessary to verify that all of the conditions for removal in 40CFR 60.752(b)(2)(v) have been met.

(f) Annual reports of the following recorded information. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40CFR 60.756(a), (b), (c), and (d).

(1) Value and length of time for exceedance of applicable parameters monitored under 40CFR 60.756(a), (b), (c), and (d).

(2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40CFR 60.756.

(3) Description and duration of all periods when the control device was not operating for a period exceeding one (1) hour and length of time the control device was not operating.

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

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

(6) Date of installation and the location of each well or collection system expansion added pursuant to 40CFR 60.755(a)(3), (b), and (c)(4).

(g) The Permittee seeking to comply with 40CFR 40.752(b)(2)(i) shall include the following information with the initial performance test report required under 40CFR 60.8:

(1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion.

(2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based.

(3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material.

(4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area.

(5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill

(6) The provision for the control of off-site migration.

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

D.1.11 Record Keeping Requirements [326 IAC 12] [40CFR 60.758] Pursuant to 40CFR 60.758:

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

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

maintained until removal.

(1) Where the Permittee subject to the provisions of 40CFR 60.758 seeks to demonstrate compliance with 40CFR 60.752(b)(2)(ii):

The maximum expected gas generation flow rate as calculated in 40CFR 60.755(a)(1). The Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Office of Air Management (OAM).

The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40CFR 60.759(a)(1).

(2) Where the Permittee subject to the provisions of 40CFR 60.758 seeks to demonstrate compliance with 40CFR 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air -assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

(c) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40CFR 60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

(1) The Permittee subject to 40CFR 60.758 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40CFR 60.756.

(4) The Permittee seeking to comply with the provisions of 40CFR 60.758 by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40CFR 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

(d) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

(1) The Permittee subject to the provisions of 40CFR 60.758 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified in 40CFR 60.755 (b).

(2) The Permittee subject to the provisions of 40CFR 60.758 shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos containing or nondegradable waste excluded from collection as

provided in 40CFR 60.759 (a)(3)(i) as well as any non-productive areas excluded from collection as provided in 40CFR 60.759 (a)(3)(ii).

(e) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee subject to the provisions of this subpart shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40CFR 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.

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

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ?_____, 100 LBS/HR VOC ?_____, 100 LBS/HR SULFUR DIOXIDE ?_____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ?_____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: Gary Sanitary Landfill PHONE NO. (219) 882-3000

LOCATION: (CITY AND COUNTY) Gary, Lake County
PERMIT NO. CP 089-10679 AFS PLANT ID: 089-00143 AFS POINT ID: _____ INSP: Rick Massoels/ Ramesh Tejuja
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____
_____
_____

MALFUNCTION REPORTED BY: _____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____DATE:_____TIME:_____

FAX NUMBER - 317 233-5967

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO2, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m. : 11 IR 2373)

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____
_____

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document (TSD) for a New Source Construction Permit

Source Background and Description

Source Name: **Gary Sanitary Landfill**
Source Location: **1900 Burr Street, Gary, Indiana, 46406**
County: **Lake**
SIC Code: **4953**
Operation Permit No.: **CP089-10679-00143**
Permit Reviewer: **PR/EVP**

On April 30, 1999, the Office of Air Management (OAM) had a notice published in the Gary Post Tribune, Gary, Indiana, stating that Gary Sanitary Landfill had applied for a construction permit to construct and operate twenty five (25) individual passive gas vent flares at a closed municipal landfill. The notice also stated that OAM proposed to issue a permit for this installation 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 June 21, 1999, Weaver Boos & Gordon, Inc. (Weaver Boos), submitted comments on the proposed construction permit on behalf of Gary Sanitary Landfill. The summary of the comments and corresponding responses are as follows (changes in **bold** or ~~strikeout~~ for emphasis):

Comment 1

Based on our review of the draft permit, it appears that several portions of the permit relate to a construction permit for an active gas collection system and would not apply to the system installed at the Gary Sanitary Landfill. For example, Section D.1.4 discusses operational standards for an active collection and control system. The system included in the Construction Permit Application presented a passive venting system. Therefore, conditions included in the Draft Construction Permit may not be achievable with the system installed. Please review the draft permit considering this situation.

Response 1

The entire New Source Performance Standard, 326 IAC 12, (40 CFR 60.750, Subpart WWW) was restated in order to allow application to all affected facilities. Portions of the NSPS that do not apply, have been met, and/or performed may be ignored. To clarify for the source which regulations do not apply, the following regulations applying only to active control systems have been deleted. Section D.1.4 also discusses what requirements must be met for sources utilizing a passive control system (a system which does not operate under negative pressure). The following changes have been made to Section D.1, and the Table of Contents has been revised:

(a) Condition D.1.5(b), under Testing Requirements, the following requirements for active control systems has been deleted:

~~(a)~~ Pursuant to 40CFR 60.754(b):

After installation of a collection and control system in compliance with 40CFR 60.755, the Permittee shall calculate the non methane organic compound (NMOC) emission rate for

purposes of determining when the system can be removed using the following equation:

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

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

~~(1)~~**(a)** The flow rate of landfill gas, Q_{LFG}, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40CFR 60.

~~(2)~~**(b)** The average NMOC concentration, C_{NMOC}, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of 40CFR 60.

If using Method 18 of appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The Permittee shall divide the NMOC concentration from Method 25 of appendix A of 40CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

~~(3)~~**(c)** The Permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Administrator as provided in 40CFR 60.752(b)(2)(i)(B).

~~(b) Pursuant to 40CFR 60.754(d):~~

~~During the period between 12 and 18 months after issuance of this permit, the performance testing required in 40CFR 60.752(b)(2)(iii)(B), Method 25 or Method 18 of appendix A of 40CFR 60 shall be used to determine compliance with 98 weight percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Office of Air Management (OAM) and VCAPC as provided by 40CFR 60.752(b)(2)(i)(B). If using Method 18 of appendix A, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:~~

~~Control Efficiency = $(NMOC_{in} - NMOC_{out})/(NMOC_{in})$~~
~~where,~~
~~$NMOC_{in}$ = mass of NMOC entering the control device~~
~~$NMOC_{out}$ = mass of NMOC exiting control device~~

(b) Condition D.1.7, under Monitoring, the following requirements for active control systems has been deleted, and the remaining conditions have been renumbered:

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

~~D.1.7 Monitoring [40CFR 60.756]~~

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

~~(a) The Permittee seeking to comply with 40CFR 60.752(b)(2)(ii)(A) for an active gas collection shall install a sampling port and a thermometer or other temperature measuring device at each wellhead and:~~

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

~~(2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40CFR 60.755(a)(5); and~~

~~(3) Monitor temperature of the landfill gas on a monthly basis as provided in 40CFR 60.755(a)(5).~~

~~(b) The Permittee seeking to comply with 40CFR 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturers specifications, the following equipment:~~

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

~~(2) A gas flow rate measuring device that provides a measurement of gas flow to or bypass of the control device. The Permittee shall either; install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.~~

~~(c)~~**(a)** The Permittee seeking to comply with 40CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturers specifications the following equipment:

(1) Heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame

(2) A device that records flow to or bypass of the flare.

The Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

~~(d) The Permittee seeking to comply with 40CFR 6.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Office of Air Management (OAM) and IDEM Indiana Northwest Office as provided in 40CFR 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Office of Air Management (OAM) and IDEM Indiana Northwest Office shall review the information and either approve it, or request that additional information be submitted. The~~

~~Office of Air Management (OAM) and IDEM Indiana Northwest Office may specify additional monitoring procedures.~~

~~(e)~~**(b)** The Permittee seeking to install a collection system that does not meet the specifications in 40CFR 60.759 or seeking to monitor alternative parameters to those required by 40CFR 60.753 through 40CFR 60.756 shall provide information satisfactory to the Office of Air Management (OAM) and IDEM Indiana Northwest Office as provided in 40CFR 60.752(b)(2)(i)(B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Office of Air Management (OAM) and IDEM Indiana Northwest Office may specify additional appropriate monitoring procedures.

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

(c) Condition D.1.8, under Compliance Provisions, the following requirements for active control systems has been deleted, and the remaining conditions have been renumbered:

~~(3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40CFR 60.752(b)(2)(ii)(A)(3), the Permittee shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within five (5) calendar days, except for the three conditions allowed under 40CFR 60.753(b). If negative pressure cannot be achieved without excess air infiltration within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance with 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.~~

~~(4) The Permittee is not required to install additional wells as required in 40CFR 60.755(a)(3) during the first 180 days after gas collection system start-up.~~

~~(5)~~**(3)** For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40CFR 60.753(c). If a well exceeds any of these operating parameters, action shall be initiated to correct the exceedance within five (5) calendar days. If correction of the exceedance cannot be achieved within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards.

~~(6)~~**(4)** If the Permittee seeks to demonstrate compliance with 40CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40CFR 60.759 shall provide information satisfactory to the Office of Air Management (OAM) and IDEM Indiana Northwest Office as specified in 40CFR 60.752 (b)(2)(i)(C) demonstrating that off-site migration is being controlled.

(d) Condition D.1.11, under Record Keeping Requirements, the following requirements for active control systems has been deleted, and the remaining conditions have been renumbered:

~~(2) Where the Permittee subject to the provisions of 40CFR 60.758 seeks to demonstrate compliance with 40CFR 60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:~~

~~The average combustion temperature measured at least every fifteen (15) minutes and averaged over the same time period of the performance test.~~

~~The percent reduction of NMOC determined as specified in 40CFR 60.752(b)(2)(iii)(B) achieved by the control device.~~

~~(3) Where the Permittee subject to the provisions of 40CFR 60.758 seeks to demonstrate compliance with 40CFR 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.~~

~~(4)~~**(2)** Where the Permittee subject to the provisions of 40CFR 60.758 seeks to demonstrate compliance with 40CFR 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air -assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

(c) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40CFR 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 40CFR 60.757(f):~~

~~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 28EC below the average combustion temperature during the most recent performance test at which compliance with 40CFR 60.752(b)(2)(iii) was determined.~~

~~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 40CFR 60.758(b)(3)(i) of this section.~~

~~(2)~~**(1)** The Permittee subject to 40CFR 60.758 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40CFR 60.756.

~~(3) The Permittee subject to the provisions of 40CFR 60.758 who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with 40CFR 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal or Federal regulatory requirements.)~~

~~(4)~~**(2)** The Permittee seeking to comply with the provisions of 40CFR 60.758 by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40CFR 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.

Indiana Department of Environmental Management
Office of Air Management
Division of Air Pollution Control
and
IDEM Northwest Indiana Office

Technical Support Document (TSD) for a New Source Construction Permit

Source Background and Description

Source Name:	Gary Sanitary Landfill
Source Location:	1900 Burr Street, Gary, Indiana, 46406
County:	Lake
SIC Code:	4953
Operation Permit No.:	CP089-10679-00143
Permit Reviewer:	PR/EVP

The Office of Air Management (OAM) has reviewed an application from Gary Sanitary Landfill relating to the construction and operation of twenty five (25) individual passive gas vent flares at a closed municipal landfill.

Permitted Emission Units and Pollution Control Equipment

There are no permitted facilities operating at this source during this review process.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

(a) twenty five (25) individual passive gas vent flares (flares constructed in March, 1999) identified as GW-1 through GW-25, each with a maximum gas flow rate of 60 scfm of landfill gas.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
GW-1	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-2	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-3	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-4	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-5	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-6	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-7	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-8	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-9	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-10	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300

GW-11	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-12	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-13	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-14	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-15	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-16	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-17	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-18	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-19	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-20	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-21	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-22	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-23	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-24	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300
GW-25	Landfill Gas Combustion	11	0.67	2 - 60	900 - 1300

Enforcement Issue

On March 12, 1996, the New Source Performance Standard, 326 IAC 12, 40 CFR Part 60.750 - 60.759, Subpart WWW, “Standards of Performance for Municipal Solid Waste Landfills”, was promulgated. This rule established landfills as point sources which would therefore be subject to the air permitting rules for point sources. Before this time, landfills were considered fugitive or area sources unless there was a control device on the landfill and were not required to be permitted. Therefore, landfills constructed or modified before May 30, 1991 would not have required a permit. This landfill was constructed in 1955, however, it was modified after May 30, 1991, to increase capacity. Therefore, on March 12, 1996, this source became subject to 40 CFR Part 60.750 - 60.759, Subpart WWW.

(a) This source has a calculated NMOC emission rate equal to or greater than 50 megagrams per year, and was therefore required by Subpart WWW and 326 IAC 8-8 to submit a collection and control system design plan within 12 months of March 12, 1996 and to install a collection and control system within 18 months of the submittal of the design plan. The collection and control system was required to have been installed on September 12, 1998 (12 + 18 months after becoming subject to Subpart WWW). The source installed the collection and control system on March 3, 1999, after the required date, and is therefore in violation of Subpart WWW and 326 IAC 8-8.

(b) This source was required to apply for a Part 70 (Title V) operating permit within twelve (12) months after March 12, 1996, when this source became subject to Title V.

(c) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Recommendation

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

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

An application for the purposes of this review was received on February 24, 1999, with additional information received on March 30, 1999.

Emission Calculations

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

Potential To Emit

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

Pollutant	Potential To Emit (tons/year)
PM	0.00
PM-10	0.00
SO_2	0.00
VOC	114.35
CO	0.00
NO_x	0.00

HAP's	Potential To Emit (tons/year)
1,1,1 - Trichloroethane	less than 10
1,1,2,2 - Tetrachloroethane	less than 10
1,1 - Dichloroethane (ethylidene dichloride)	less than 10
1,1 - Dichloroethane (vinylidene chloride)	less than 10
1,2 - Dichloroethane (ethylene dichloride)	less than 10
1,2 - Dichloroethane (propylene dichloride)	less than 10
Acrylonitrile	less than 10
Carbon Disulfide	less than 10
Carbon Tetrachloride	less than 10
Carbonyl Sulfide	less than 10
Chloroethane (ethyl chloride)	less than 10
Chloroform	less than 10
Dichloromethane (methylene chloride)	less than 10
Ethylbenzene	less than 10
Hexane	less than 10
Methyl Ethyl Ketone	less than 10
Methyl Isobutyl Ketone	less than 10
Perchloroethylene (tetrachloroethylene)	less than 10
Trichloroethylene (trichloroethene)	less than 10
Vinyl Chloride	less than 10
Xylenes	less than 10
TOTAL	less than 25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is equal to or greater than 25 tons per year in Lake county. Therefore, the source is subject to the provisions of 326 IAC 2-7.

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

Actual Emissions

No previous emission data has been received from the source.

Limited Potential to Emit

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

	Limited Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	any single HAP	any combination of HAPs
twenty five (25) individual gas vent flares	0.00	0.00	0.00	1.14	76.50	14.06	0.01	0.08
Total Emissions	0.00	0.00	0.00	1.14	76.50	14.06	0.01	0.08

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	nonattainment (moderate)
SO_2	nonattainment
NO_2	attainment
Ozone	nonattainment (severe -17)
CO	nonattainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Lake County has been classified as nonattainment for PM-10, SO_2, and CO. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.00
PM10	0.00
SO_2	0.00
VOC	1.14
CO	76.50
NO_x	14.06
Single HAP	0.01
Combination HAPs	0.08

(a) This new source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3, and 40 CFR 52.21, the PSD and Emission Offset requirements do not apply.

(b) The emission of VOC is limited to 24 tons/yr, therefore, the 326 IAC 2-2, PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

(a) This existing source is subject to the Part 70 Permit requirements because it is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.750 - 60.759, Subpart WWW).

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC are equal to or greater than 25 tons per year in Lake county. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(c) This source was required to apply for a Part 70 (Title V) operating permit within twelve (12) months after March 12, 1996, when this source became subject to Title V as a result of the promulgation of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.750 - 60.759, Subpart WWW).

Federal Rule Applicability

Federal Rule Applicability
The municipal solid waste landfill is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.750, Subpart WWW) because the municipal solid waste landfill commenced construction, reconstruction or modification or began accepting waste on or after May 30, 1991.

(1) Pursuant to 40CFR 60.752, a municipal solid waste landfill with a design capacity greater than 2.5 million megagrams (Mg) shall either comply with 40CFR 60.752 (b)(2) or calculate the non methane organic compound emission (NMOC) rate for the landfill using the procedures specified in 40CFR 60.754. (The Permittees initial design capacity report was submitted on June 13, 1996. The Permittees initial NMOC report was submitted on August 11, 1997. The Permittees design plan was submitted on June 13, 1996.)

If the Permittee has calculated non methane organic compound (NMOC) emissions less than 50 megagrams (Mg) per year, the Permittee shall:

(a) Submit an annual NMOC report to the Office of Air Management (OAM);and

(b) Recalculate the non methane organic compound (NMOC) emission rate annually using the procedures specified in 40CFR 60.754(a)(1) until such time as the calculated non methane organic compound (NMOC) emission rate is equal to or greater than 50 megagrams (Mg) per year or the landfill is closed.

If the Permittee has calculated non methane organic compound (NMOC) emissions of greater than 50 megagrams per year, the Permittee shall:

(a) Submit a collection and control system design plan prepared by a professional engineer that meets the requirements of 40CFR 60.752 (b)(2)(ii) to the Office of Air Management (OAM) within one year after calculated non methane organic compound (NMOC) emissions of greater than 50 megagrams (Mg) per year. The design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, record keeping or reporting provisions of 40CFR 60.753 through 40CFR 60.758 that are proposed by the Permittee. The design plan shall either conform with specifications for active collection systems in 40 CFR 60.759 or include a demonstration to the Office of Air Managements (OAM) satisfaction of the sufficiency of the alternative provisions to 40 CFR 60.759. The Office of Solid and Hazardous Waste Management (OSHWM) shall review the design plan and can either approve, disapprove, or request additional information be submitted by the Permittee.

(b) Install a collection and control system within eighteen months of the submittal of the design plan that effectively captures the gas generated within the landfill.

An active collection system shall:

(i) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment.

(ii) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of five years or more if active or two years or more if closed or at final grade.

(iii) Collect gas at a sufficient extraction rate.

(iv) Be designed to minimize off-site migration of subsurface gas.

A passive collection system shall:

(i) Comply with the provisions specified in paragraphs A, B, and D above.

(ii) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 258.40 of the title.

(c) Route all collected gas to an open flare collection system that is designed and operated in accordance with 40CFR 60.18.

(d) Operate the collection and control device installed to comply with this subpart in accordance with the provisions of 40CFR 60.753, 60.755, and 60.756.

(e) Cap or remove the collection and control system provided that the following conditions are met:

(i) The landfill shall be no longer accepting solid waste and be permanently closed under the requirements of 258.60 of this title. A closure report shall be submitted to the Office of Solid and Hazardous Waste Management (OSHWM) as provided in 40CFR 60.757 (d);

(ii) The collection and control system shall have been in operation a minimum of fifteen years; and

(iii) The calculated non methane organic compound (NMOC) gas produced by the landfill shall be less than 50 megagrams (Mg) per year on three consecutive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

(2) Pursuant to 40CFR 60.754 the Permittee shall calculate the non methane organic compound (NMOC) rate using either the equation provided in 40 CFR 60.754(a)(1)(i) or the equation provided in 40 CFR 60.754(a)(1)(ii). Both equation may be used in the actual year-to-year solid waste acceptance rate is known, as specified in 40 CFR 60.754(a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph 40 CFR 60.754(a)(1)(ii), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o , and 4,000 parts per million by volume as hexane for the C NMOC. For landfills locat3ed in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used in 0.02 per year.

The following equation when the actual year-to-year solid waste acceptance rate is known.

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

where,

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

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

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

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

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year L_o = methane generation potential, cubic meters per megagram solid waste R = average annual acceptance rate, megagrams per year k = methane generation rate constant, $year^{-1}$
t = age of landfill, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
c = time since closure, years. For active landfill c = 0 and $e^{-kc} = 1$
3.6×10^{-9} = conversion factor

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

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

(1) Operate the collection system such that gas is collected from each area, cell, or group of cells in the municipal solid waste landfill in which solid waste has been in place for five years if active or 2 years or more if closed or at final grade.

(2) Operate the collection system with negative pressure at each wellhead except under the following conditions:

(a) Fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40CFR 60.757(f)(1).

(b) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan.

(c) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Office of Air Management (OAM).

(3) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55ºC and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

(a) The nitrogen level shall be determined using Method 3C, unless an alternative method is established as allowed by 40CFR 60.752 (b)(2)(i).

(b) Unless an alternative test method is established as allowed by 40CFR 60.752 (b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A except that; the span shall be set so that the regulatory limit is between 20 and 0 percent of the span; a data recorder is not required; only two calibration gases are required, a zero and span, and ambient air may be used as the span; a calibration error check is not required; the allowable sample bias, zero drift, and calibration drift are 10 percent.

(4) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

(5) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.

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

(7) If monitoring demonstrates that the operational requirement in 40CFR 60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in 40CFR 60.752(a)(3) through (5) or 40CFR 60.755(c). If corrective actions are taken as specified in 40CFR 60.755, the monitored exceedance is not a violation of the operational requirements in 40CFR 60.753.

This landfill has a maximum design capacity of 3.67 million megagrams and a maximum NMOC emission rate of 323.3 megagrams per year (293.21 tons per year - see Appendix A, page 2 of 4).

(a) This municipal solid waste landfill is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.30c, Subpart Cc) Emissions Guidelines and Compliance Times for Municipal Solid Waste Landfills, as it was modified after May 30, 1991 to increase its capacity.

(b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart M National Emission Standard for Asbestos because this source is a closed landfill which is not an active waste disposal site that receives asbestos-containing waste material. Also, this inactive waste disposal site was not operated by a manufacturing or fabrication operation using commercial asbestos or a asbestos mill.

State Rule Applicability - Entire Source

326 IAC 2-3 (Emission Offset)

This proposed modification is not subject to the requirements of 326 IAC 2-3 (Emission Offset). The potential to emit CO and PM from the source is less than 100 tons per year. Volatile Organic Compound (VOC) and Oxides of Nitrogen (NOx) emissions from the source shall be limited to less than 25 tons per year. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC in Lake County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

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

(a) Opacity shall not exceed an average of twenty percent (20%) 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 8-8 (Municipal Solid Waste Landfills)

This source is subject to the requirements of 326 IAC 8-8. This rule applies to new and existing municipal solid waste landfills in Clark, Floyd, Lake, and Porter Counties. Pursuant to 326 IAC 8-8 (Municipal Solid Waste Landfills), this existing municipal solid waste landfill shall comply with the requirements of 40 CFR Part 60.750 - 60.759, Subpart WWW and is subject to the permit requirements contained in 326 IAC 2-7. Also, the landfills meeting the requirements of this rule shall install and air emission collection and control system capable of meeting the emission guidelines established in section 3(a)(2) of this rule no later than May 1, 1996.

State Rule Applicability - Individual Facilities

326 IAC 6-1-2 (Particulate Emissions Limitations)

The particulate matter emissions from the municipal solid waste landfill are not subject to the requirements of 326 IAC 6-1-2 (Particulate Emissions Limitations), because potential particulate matter emissions are less than 100 tons per year and actual PM emissions are less than 10 tons per year.

326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements)

The particulate matter emissions from the municipal solid waste landfill are not subject to the requirements of 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), because potential particulate matter emissions are less than 5 tons per year.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

(b) See attached calculations for detailed air toxic calculations (Appendix A, page 3 of 4).

Conclusion

The construction and operation of this closed landfill utilizing twenty five (25) individual gas extraction wells shall be subject to the conditions of the attached proposed **New Source Construction Permit CP089-10679-00143.**

Appendix A: Emission Calculations

Company Name: Gary Sanitary Landfill
Address City IN Zip: 504 Broadway, Gary, Indiana 46402
CP: 089-10679
Plt ID: 089-00143
Reviewer: Phillip Ritz/EVP
Date: February 24, 1999

Uncontrolled Potential Emissions (tons/year)

Emissions Generating Activity			
Pollutant	*Methane Gas Combustion	Landfill Gas Emissions	**TOTAL**
PM	0.00	0.00	0.00
PM10	0.00	0.00	0.00
SO2	0.00	0.00	0.00
NOx	0.00	0.00	0.00
VOC	0.00	114.35	114.35
CO	0.00	0.00	0.00
total HAPs	0.00	8.14	8.14
worst case single HAP	0.00	1.50 Carbonyl Sulfide	1.50 Carbonyl Sulfide
Total emissions based on rated capacity at 8,760 hours/year.			

Controlled Potential Emissions (tons/year)

Emissions Generating Activity			
Pollutant	*Methane Gas Combustion	Landfill Gas Emissions	**TOTAL**
PM	0.00	0.00	0.00
PM10	0.00	0.00	0.00
SO2	0.00	0.00	0.00
NOx	14.06	0.00	14.06
VOC	0.00	1.14	1.14
CO	76.50	0.00	76.50
total HAPs	0.00	0.08	0.08
worst case single HAP	0.00	0.01 Carbonyl Sulfide	0.01 Carbonyl Sulfide
Total emissions based on rated capacity at 8,760 hours/year, after control.			
*Methane Gas Combustion occurs only when Landfill Gas is controlled (flared).			

Appendix A: Emission Calculations
Landfill Gas Emissions
Landfill Gas Collection System

Company Name: Gary Sanitary Landfill
Address City IN Zip: 504 Broadway, Gary, Indiana 46402
CP: 089-10679
Plt ID: 089-00143
Reviewer: Phillip Ritz/EVP
Date: February 24, 1999

Objective: Determine the current mass emission rate for Gary Sanitary Landfill

Assumptions: 1) The USEPA emission rate model will be used.

The following model values will be used:

Default Field Values	Refuse Methane generation potential (Lo)	=170 (m^2)/Mg
	Methane Generation Rate Constant (k)	=0.05 1/yr
	Concentration of NMOC (Cnmoc)	=4,000 ppm as hexane

Landfill Specific Values	Average Annual Acceptance Rate (R)	=76,235 Mg/yr
	Age of Landfill (t)*	=44.3 yr
	Years since closure (c)*	=0.5 yr
	* see average annual accept rate calculations below	

The annual acceptance rate at the Gary Sanitary Landfill is not known. Therefore, the tier 1, equation 1 will be used to estimated the average annual acceptance rate as of April 1, 1999. To obtain average annual acceptance rate, perform the following calculation:

Average annual acceptance rate (AR avg)

AR avg= (WVnet x 1,200 lbs/1yd x 1 ton/2000lbs x 0.907 Mg/1ton)/N
WVnet= Net waste volume, which is assumed to be the entire net waste volume of existing landfill as of April 1, 1999
WVnet= 6,210,000 yd^3
N= Number of years that filling has occurred at the landfill since it is only believed that the landfill began accepting waste sometime during the 1950's. It is assumed that the year acceptance began was 1955, thus we:

Therefore, using the above equation, calculate ARavg

ARavg= (6,120,000 x 0.6tons/1yd^3 x 0.907 Mg/1ton)/ (44.3 years (1999.33-1955)
ARavg= 76,234.6

Calculations:

Mnmoc= 2LoR [(e^-kc) - (e^-kt)] [Cnmoc] [3.6 x (10^-9)]
Mnmoc= 2(170)(76,234.6) [(e^(0.05 x 0.5)) - (e^(0.05 x 49.3))] (4,000) [3.6 x (10^-9)]
Mnmoc= 323.3 Mg/yr

Conclusions: **The current mass emission rate for the Gary Sanitary Landfill is 323 Mg/yr or 293.21 tons per year.**

Uncontrolled NMOC Emissions:	293.21	tons/yr, uncontrolled
	1,606.63	lbs/day, uncontrolled
	66.94	lbs/hr, uncontrolled
Uncontrolled VOC Emissions:	**114.35**	**tons/yr, uncontrolled (assumes 39% of NMOC is VOC)**
	626.59	**lbs/day, uncontrolled**
	26.11	**lbs/hr, uncontrolled**

Controlled NMOC Emissions:	2.93	tons/yr, controlled
	16.07	lbs/day, controlled
	0.67	lbs/hr, controlled
Controlled VOC Emissions:	**1.14**	**tons/yr, controlled (assumes 39% of NMOC is VOC)**
	6.27	**lbs/day, controlled**
	0.26	**lbs/hr, controlled**

(a) Gas vent flaring system results in 99% thermal destruction of VOC and HAPs

Appendix A: Emission Calculations
Landfill Gas HAP Emissions
Landfill Gas Collection System

Company Name: Gary Sanitary Landfill
Address City IN Zip: 504 Broadway, Gary, Indiana 46402
CP: 089-10679
Plt ID: 089-00143
Reviewer: Phillip Ritz/EVP
Date: February 24, 1999

Landfill Gas (LFG) Assumptions

Expected LFG Inlet Flow	1500	scfm
Standard Temperature	60	degrees F
	520	degrees R
Operation Period	8760	hours

LFG Compound (HAPs only)	MW (lb/lb-mol)	Concentration (ppmv)(a)	Uncontrolled Emissions	
			lb/hr	tons/yr
1,1,1 - Trichloroethane	133.42	0.27	0.01	0.04
1,1,2,2 - Tetrachloroethane	167.85	0.2	0.01	0.03
1,1 - Dichloroethane (ethylidene dichloride	98.95	2.07	0.05	0.21
1,1 - Dichloroethane (vinylidene chloride)	96.94	0.22	0.01	0.02
1,2 - Dichloroethane (ethylene dichloride)	98.96	0.79	0.02	0.08
1,2 - Dichloroethane (propylene dichloride	112.98	0.17	0.00	0.02
Acrylonitrile	53.06	7.56	0.10	0.42
Carbon Disulfide	76.13	1	0.02	0.08
Carbon Tetrachloride	153.84	0.0E+00	0.00	0.00
Carbonyl Sulfide	60.07	24	0.34	1.50
Chloroethane (ethyl chloride)	64.52	1.17	0.02	0.08
Chloroform	119.39	0.27	0.01	0.03
Dichloromethane (methylene chloride)	84.94	14.30	0.29	1.26
Ethylbenzene	106.16	4.49	0.11	0.49
Hexane	86.18	6.64	0.14	0.59
Methyl Ethyl Ketone	72.11	6.13	0.10	0.46
Methyl Isobutyl Ketone	100.16	1.22	0.03	0.13
Perchloroethylene (tetrachloroethylene)	165.83	3.34	0.13	0.58
Trichloroethylene (trichloroethene)	131.38	2.09	0.07	0.29
Vinyl Chloride	62.5	7.37	0.11	0.48
Xylenes	106.16	12.25	0.31	1.35
Total HAPs			**1.86**	**8.14**

Note:
(a) Concentrations obtained from USEPA's AP-42 (9/97), tables 2.4-1, 2.4-2, and 2.4-3.

Controlled Emissions	
lb/hr	tons/yr
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.01
0.00	0.00
0.00	0.00
0.00	0.01
0.00	0.00
0.00	0.01
0.00	0.00
0.00	0.00
0.00	0.01
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.01
0.02	**0.08**

Appendix A: Emission Calculations
Methane Gas Flare Combustion

Company Name: Gary Sanitary Landfill
Address City IN Zip: 504 Broadway, Gary, Indiana 46402
CP: 089-10679
Plt ID: 089-00143
Reviewer: Phillip Ritz/EVP
Date: February 24, 1999

Rate of Methane Combustion in dscfm

750.0	47.205 MMBtu/hr

Maximum Air Flow (scfm) of Landfill Gas per Fl	60
Number of Flares	25
Assume 50% of air flow is Methane	50.00%
Rate of Methane Combustion in scfm	750

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/hr/dscfm	0.00	0.00	0.00	0.07	0.00	0.37
Potential Emission in lbs/hr	0.00	0.00	0.00	3.21	0.00	17.47
Potential Emission in tons/yr	0.00	0.00	0.00	14.06	0.00	76.50

Methodology:
Maximum Air Flow (scfm) of Landfill Gas per Flare x Number of Flares x % of Methane in Air Flow = Rate of Methane Combustion in dscfm
MMBtu/hr = scfm * 60m/1hr * 1049Btu/cf * MM/10^6