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

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY

Mishawaka Wastewater Treatment Plant
1020 Lincolnway West
Mishawaka, Indiana 46544

(herein known as the Permittee) is hereby authorized to 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 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 141-13782-00177	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 6, 2002 Expiration Date: June 6, 2007

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SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary municipally owned wastewater treatment facility.

Authorized Individual:	Karl Kopec
Source Address:	1020 Lincolnway West, Mishawaka, IN 46544
Mailing Address:	1020 Lincolnway West, Mishawaka, IN 46544
Phone Number:	219-258-1655
SIC Code:	4952
County Location:	St. Joseph
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD Rules;

A.2 Emissions units and Pollution Control Equipment Summary

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

(a) Three internal combustion engines, consisting of the following:

(1) One (1) internal combustion blower engine, installed in 1952, identified as Blower Engine #1, rated at 2.47 million British thermal units (MMBtu) per hour of natural gas or 1.47 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2;

(2) One (1) internal combustion blower engine, installed in 1952, identified as Blower Engine #2, rated at 2.44 million British thermal units (MMBtu) per hour of natural gas or 1.47 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2; and

(3) One (1) backup internal combustion blower engine, installed in 1988, identified as Blower Engine #3, rated at 2.27 million British thermal units (MMBtu) per hour of natural gas or 1.28 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2.

Two of the engines are designated as primary systems and are run almost continuously. The third engine is designated as a standby, and is used when one of the primary engines is down for repairs. The engines can operate on natural gas or process gas. The process gas is produced on-site by an anaerobic digester. Due to physical limitations only two engines can be operated at a time. The flare is used in emergency situations when the gas engines are not operational and the process gas must be combusted.

(b) One (1) emergency flare used to combust digester gas that is produced if the internal combustion engines are not in operation, identified as flare, installed in 1993, rated at 11 million British thermal units (MMBtu) per hour of digester gas, exhausting at one (1) stack, identified as #3.

(c) Two boilers, consisting of the following:

(1) One (1) backup boiler, identified as Boiler #1, installed in 1989, rated at 1.5 million British thermal units (MMBtu) per hour of natural gas, exhausting at one (1) stack, identified as #1; and

(2) One (1) boiler, identified as Boiler #2, installed in 1993, rated at 2.16 million British thermal units (MMBtu) per hour of natural gas, exhausting at one (1) stack, identified as #1.

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 operate 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 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operating permits pursuant to 326 IAC 2 (Permit Review Rules).

B.5 Permit Term [326 IAC 2-6.1-7]

This permit is issued for a fixed term of five (5) years form the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

(a) The total source potential to emit of all criteria pollutants is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

(b) Any change or modification which may increase potential to emit to 10 tons per year of any single hazardous air pollutant, twenty-five tons per year of any combination of hazardous air pollutants, or 100 tons per year of any other regulated pollutant from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAM prior to making the change.

C.2 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) 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.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan 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, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 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 Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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 OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-7-6(2)]

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

(a) Enter upon the Permittee's premises where a 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.

C.5 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, OAQ, Permits Branch , 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, OAQ 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.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit 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, the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) 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.8 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.9 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

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, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, 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.10 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. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 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, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. 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.

Record Keeping and Reporting Requirements

C.13 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 Quality (OAQ) 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 OAQ, 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.14 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 Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(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, OAQ 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.15 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 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.16 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, OAQ representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner 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 failure to implement the Preventive Maintenance Plan 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 when operation begins.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

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

(b) Unless otherwise specified in this permit, any semi-annual 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).

(c) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) A malfunction as described in 326 IAC 1-6-2; or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

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

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.18 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

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

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

Corrective Actions and Response Steps

C.19 Risk Management Plan [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

(a) A compliance schedule for meeting the requirements of 40 CFR 68; or

(b) A verification to IDEM, OAQ, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68 on June 19, 1999.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

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

(a) Three internal combustion engines, consisting of the following:

(1) One (1) internal combustion blower engine, installed in 1952, identified as Blower Engine #1, rated at 2.47 million British thermal units (MMBtu) per hour of natural gas or 1.47 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2;

(2) One (1) internal combustion blower engine, installed in 1952, identified as Blower Engine #2, rated at 2.44 million British thermal units (MMBtu) per hour of natural gas or 1.47 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2; and

(3) One (1) backup internal combustion blower engine, installed in 1988, identified as Blower Engine #3, rated at 2.27 million British thermal units (MMBtu) per hour of natural gas or 1.28 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2.

Two of the engines are designated as primary systems and are run almost continuously. The third engine is designated as a standby, and is used when one of the primary engines is down for repairs. The engines can operate on natural gas or process gas. The process gas is produced on-site by an anaerobic digester. Due to physical limitations only two engines can be operated at a time. The flare is used in emergency situations when the gas engines are not operational and the process gas must be combusted.

(b) One (1) emergency flare used to combust digester gas that is produced if the internal combustion engines are not in operation, identified as flare, installed in 1993, rated at 11 million British thermal units (MMBtu) per hour of digester gas, exhausting at one (1) stack, identified as #3.

(c) Two boilers, consisting of the following:

(1) One (1) backup boiler, identified as Boiler #1, installed in 1989, rated at 1.5 million British thermal units (MMBtu) per hour of natural gas, exhausting at one (1) stack, identified as #1; and

(2) One (1) boiler, identified as Boiler #2, installed in 1993, rated at 2.16 million British thermal units (MMBtu) per hour of natural gas, exhausting at one (1) stack, identified as #1.

Emission Limitations and Standards

D.1.1 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating, the PM emissions from each boiler (ID Boilers 1 and 2) shall be limited to 0.6 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = 1.09/Q^{0.26}$$

where: Pt = maximum allowable particulate matter (PM) emitted per MMBtu heat input

Q = total source max. indirect heater input = 1.50 + 2.16
= 3.66 MMBtu/hr

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

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	**Mishawaka Wastewater Treatment Plant**
Address:	**1020 Lincolnway West**
City:	**Mishawaka, IN 46544**
Phone #:	**219-258-1655**
MSOP #:	**MSOP141-13782-00177**

I hereby certify that Mishawaka Wastewater Treatment Plant is **9** still in operation.
9 no longer in operation.

I hereby certify that Mishawaka Wastewater Treatment Plant is
9 in compliance with the requirements of **MSOP141-13782-00177**.
9 not in compliance with the requirements of **MSOP141-13782-00177**

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Air Quality
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 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. 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 :Mishawaka Wastewater Treatment Plant PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY) Mishawaka, IN, St. Joseph County
PERMIT NO. MSOP141-13782-00177 AFS PLANT ID: 141-00177 POINT ID: _____ INSP: Rick Reynolds
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND
REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ 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:_____

*SEE PAGE 2

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. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

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.

***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:

_____
_____

PAGE 2 OF 2

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for Minor Source Operating Permit

Source Name:	Mishawaka Wastewater Treatment Plant
Source Location:	1020 Lincolnway West, Mishawaka, IN 46544
County:	St. Joseph
SIC Code:	4952
Operation Permit No.:	141-13782-00177
Permit Reviewer:	Phillip Ritz/EVP

On May 26, 2001, the Office of Air Quality (OAQ) had a notice published in the South Bend Tribune, South Bend, Indiana, stating that Mishawaka Wastewater Treatment Plant had applied for a Minor Source Operating Permit to construct and operate a municipally owned wastewater treatment facility. The notice also stated that OAQ 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 19, 2001, Karl Kopec and Tim Brill submitted comments on behalf of Mishawaka Wastewater Treatment Plant on the proposed Minor Source Operating Permit. The summary of the comments and corresponding responses is as follows:

Comment 1
Section A.2 (a) (1): Blower engine #1 is a primary system. It is not a backup system.

(3): Blower engine #3 is a backup system. It was installed in 1988, not 1952.

Response 1
The emission unit descriptions in Section A.2 and D.1 of the permit have been revised as follows (additions indicated in **boldface**, deletions indicated by ~~strikeout~~ for emphasis):

The following revisions have also been made to the TSD (**bolded** language has been added, the language with a ~~line~~ through it has been deleted). The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

(a) Three internal combustion engines, consisting of the following:
  (1) One (1) ~~backup~~ internal combustion blower engine, installed in 1952, identified as Blower Engine #1, rated at 2.47 million British thermal units (MMBtu) per hour of natural gas or 1.47 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2;

(2) One (1) internal combustion blower engine, installed in 1952, identified as Blower Engine #2, rated at 2.44 million British thermal units (MMBtu) per hour of natural gas or 1.47 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2; and

(3) One (1) **backup** internal combustion blower engine, installed in ~~1952~~ **1988**, identified as Blower Engine #3, rated at 2.27 million British thermal units (MMBtu) per hour of natural gas or 1.28 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2.

Comment 2
Condition D.1.2 PMP: This section requires preventive maintenance on the emission control devices. As we read the MSOP permit, it does not appear that the engines or waste gas flare should be considered emission control devices. If these units are not operating, the emissions would not exist.

Response 2
Preventive Maintenance Plans may be required without a control device, however, this emission unit has actual emissions of less than 25 tons per year for PM, SO2, and VOC. There are no conditions limiting the PTE to keep the units out of applicable requirements, and no NSPS or NESHAPs apply. Therefore, a PMP is not required for these units and D.1.2 has been removed from the permit as follows:

~~D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the two (2) natural gas-fired or digester gas-fired reciprocating internal combustion compressor engines, identified as Blower Engines #1 and #2 and the two natural gas-fired Boilers, identified as Boilers #1 and #2.~~

Comment 3
The boilers are run only on purchased natural gas. The engines run on either purchased natural gas or digester gas that is produced in the anaerobic digesters. These combustion devices are not used to burn VOCs.

Response 3
The OAQ has reevaluated this and records of fuel usage are not necessary to show compliance with the permit as there are no limitations or requirements applicable to fuel usage. Therefore, the Record Keeping and Reporting Requirements have been removed from the permit as follows:

~~D.1.6 Reporting Requirements~~

~~(a) The Permittee shall certify, on the form provided, that natural gas was fired in each of the engines at all times during each quarter. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during each quarter.~~

~~(b) The Permittee shall certify, on the form provided, that natural gas was fired in the boiler at all times during each quarter. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during each quarter.~~

Comment 4
D 1.3, 1.4, 1.5 The waste gas flare is used to burn digester gas that is produced if the engines cannot be run. The digester gas, a mixture of methane and carbon dioxide, is flared as a safety precaution. Its unburned release would probably be less detrimental from an air quality perspective.

Response 4
The emission units are not control devices, as the emissions of any criterial pollutant will not increase when the units are not in operation. Therefore, compliance determination requirements, compliance monitoring requirements and record keeping requirements for the flare are not required, and the permit has been revised as follows:

~~D.1.3 Digester Waste Gas~~

~~The digester waste gas-fired flare shall be in operation and control emissions of digester gas at all times that the digester gas is vented to the flare and the engines are not operational.~~

~~D.1.4 Flare Notations~~

~~(a) Observations of the presence of a flame at the flare should be monitored once per shift when digester gas is vented to the flare. A trained employee shall record whether the flame is present.~~

~~(b) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance of a flame at the flare.~~

~~(c) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.~~

~~D.1.5 Record Keeping Requirements~~

~~(a) To document compliance with Condition D.1.4, the Permittee shall maintain records of observations of the presence of the flame at the flare once per shift.~~

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

The emission unit description in Section A.2 and D.1 of the permit has also been revised to clarify when the emergency flare is in operation. The changes are as follows:

(b) One (1) emergency flare **used to combust digester gas that is produced if the internal combustion engines are not in operation,** identified as flare, installed in 1993, rated at 11 million British thermal units (MMBtu) per hour of digester gas, exhausting at one (1) stack, identified as #1.

Comment 4
Section A (A.2)(b) Stack #1 has been previously designated as the exhaust location for boilers 1 and 2. Stack #2 has been previously designated as the exhaust location for engines 1,2 and 3. The emergency flare stack is independent and located approximately 250 feet from stacks 1 and 2. We recommend that the emergency flare stack be designated #3 to prevent confusion.

Response 4
The emission unit description in Section A.2 and D.1 of the permit has been revised to clarify the stack identification of the emergency flare. The changes are as follows:

(b) One (1) emergency flare used to combust digester gas that is produced if the internal combustion engines are not in operation, identified as flare, installed in 1993, rated at 11 million British thermal units (MMBtu) per hour of digester gas, exhausting at one (1) stack, identified as ~~#1~~ **#3**.

Upon further review from the OAQ, the OAQ has decided to make the following changes to the MSOP Operating Permit.

A Risk Management Plan was prepared and submitted to the United States Environmental Protection Agency on June 19, 1999 as chlorine and SO_2 is stored on site. The RMP is mentioned in a new C condition under corrective actions and response steps. The new condition reads as follows:

Corrective Actions and Response Steps

C.19 Risk Management Plan [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

(a) A compliance schedule for meeting the requirements of 40 CFR 68; or

(b) A verification to IDEM, OAQ, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68 on June 19, 1999.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name:	**Mishawaka Wastewater Treatment Plant**
Source Location:	**1020 Lincolnway West, Mishawaka, IN 46544**
County:	**St. Joseph**
SIC Code:	**4952**
Operation Permit No.:	**141-13782-00177**
Permit Reviewer:	**Phillip Ritz/EVP**

The Office of Air Quality (OAQ) has reviewed an application from Mishawaka Wastewater Treatment Plant relating to the construction and operation of a municipally owned wastewater treatment facility.

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 consists of the following unpermitted facilities/units:

(a) Three internal combustion engines, consisting of the following:

(1) One (1) backup internal combustion blower engine, installed in 1952, identified as Blower Engine #1, rated at 2.47 million British thermal units (MMBtu) per hour of natural gas or 1.47 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2;

(2) One (1) internal combustion blower engine, installed in 1952, identified as Blower Engine #2, rated at 2.44 million British thermal units (MMBtu) per hour of natural gas or 1.47 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2; and

(3) One (1) internal combustion blower engine, installed in 1952, identified as Blower Engine #3, rated at 2.27 million British thermal units (MMBtu) per hour of natural gas or 1.28 mmBtu/hr digester gas, exhausting at one (1) stack, identified as #2.

Two of the engines are designated as primary systems and are run almost continuously. The third engine is designated as a standby, and is used when one of the primary engines is down for repairs. The engines can operate on natural gas or process gas. The process gas is produced on-site by an anaerobic digester. Due to physical limitations only two engines can be operated at a time. The flare is used in emergency situations when the gas engines are not operational and the process gas must be combusted.

(b) One (1) emergency flare, identified as flare, installed in 1993, rated at 11 million British thermal units (MMBtu) per hour of digester gas, exhausting at one (1) stack, identified as #1.

(c) Two boilers, consisting of the following:

(1) One (1) backup boiler, identified as Boiler #1, installed in 1989, rated at 1.5 million British thermal units (MMBtu) per hour of natural gas, exhausting at one (1) stack, identified as #1; and

(2) One (1) boiler, identified as Boiler #2, installed in 1993, rated at 2.16 million British thermal units (MMBtu) per hour of natural gas, exhausting at one (1) stack, identified as #1.

New Emission Units and Pollution Control Equipment

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

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
1	Boilers	30	1.33	Unknown	Unknown
2	Engines	30	1.00	Unknown	Unknown

Enforcement Issue

(a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled *Unpermitted Emission Units and Pollution Control Equipment.*

(b) 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 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.

A complete application for the purposes of this review was received on January 16, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 6.)

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	1.47
PM-10	1.56
SO_2	0.02
VOC	2.63
CO	44.31
NO_x	91.27

HAP's	Potential To Emit (tons/year)
Formaldehyde	less than 10
TOTAL	less than 25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of NOx are equal to or greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-6.1-2, an operating permit is required.

(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

The following table shows the actual emissions from the source. This information reflects the 1999 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	0.00
PM-10	0.00
SO_2	0.00
VOC	2.00
CO	9.00
NO_x	71.00
HAP (specify)	0.00

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) St. Joseph County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing 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	1.47
PM10	1.56
SO_2	0.02
VOC	2.63
CO	44.31
NO_x	91.27
Single HAP	1.49
Combination HAPs	0.03

(a) This new source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source, total emissions specified in this permit **MSOP141-13782-00177**, is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status has been verified by the OAQ inspector assigned to the source. This is the first approval issued to the source.

Federal Rule Applicability

(a) This MSOP was received after April 20, 1998 and therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, could be applicable. This MSOP does not involve a pollutant-specific emissions unit with a control and the potential to emit in an amount equal to or greater than one hundred (100) tons per year. Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable.

(b) The natural gas fired boilers (ID Boilers 1 and 2) are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.40c through 60.48c, Subpart Dc) (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units) because although they were constructed after June 9, 1989, they each have a heat input capacity less than 10 MMBtu per hour.

(c) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.

(d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

The total source potential emissions of all attainment pollutants (PM, PM10, SO2, NOx and CO) are less than two hundred and fifty (250) tons per year. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 do 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 NOx in St. Joseph 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 from this source, which is not located in the area north of Kern Road and east of Pine Road in St. Joseph County, shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) 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.

State Rule Applicability - Individual Facilities

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The two (2) natural gas fired boilers (ID Boilers 1 and 2), each rated at 1.5 and 2.16 MMBtu/hr of natural gas, respectively, are subject to the particulate matter limitations of 326 IAC 6-2. Pursuant to this rule, the two (2) natural gas fired boilers (ID Boilers 1 and 2) (constructed after September 21, 1983) are limited by the following equation from 326 IAC 6-2-4:

$Pt = 1.09/Q^{0.26}$

where: Pt = maximum allowable particulate matter (PM) emitted per MMBtu heat input
Q = total source max. indirect heater input = 1.50 + 2.16 = 3.66 MMBtu/hr

$Pt = 1.09/(3.66)^{0.26} = 0.77$ lbs PM/MMBtu

For Q less than 10 mmBtu/hr, Pt shall not exceed 0.6 pounds per mmBtu.

compliance calculation:
(0.12 tons PM/yr) * (hr/3.66 MMBtu) * (yr/8,760 hrs) * (2,000 lbs/ton) = 0.007 lbs PM/MMBtu

Actual lbs PM/MMBtu (0.007) are less than allowable lbs PM/MMBtu (0.6), therefore, the two (2) natural gas fired boilers (ID Boilers 1 and 2) will comply with the requirements of 326 IAC 6-4.

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

This rule is not applicable because the potential to emit SO_2 from all facilities and from the entire source is less than twenty-five (25) tons per year.

326 IAC 8-1-6 (New facilities: general reduction requirements)

Since there are no 326 IAC 8 rules that apply to this source 326 IAC 8-1-6, which requires Best Available Control Technology (BACT), could apply. This rule is not applicable since the potential VOC emissions from this source are less than twenty-five (25) tons per year.

Conclusion

The operation of this municipally owned wastewater treatment facility shall be subject to the conditions of the attached proposed **Minor Source Operating Permit 141-13782-00177.**

Appendix A: Emission Calculations

Company Name: Mishawaka Wastewater Treatment Plant
Address City IN Zip: 1020 Lincolnway West, Mishawaka, IN 46544
CP: 141-13782-00177
Reviewer: PR/EVP
Date: January 16, 2001

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Boilers 1 and 2	Stationary Internal Combustion Blower Engines 1, 2 and 3	Digester Gas Flare	**TOTAL**
PM	0.03	0.62	0.82	1.47
PM10	0.12	0.62	0.82	1.56
SO2	0.01	0.01	0.00	0.02
NOx	1.60	87.74	1.93	91.27
VOC	0.09	2.54	0.00	2.63
CO	1.35	6.82	36.14	44.31
total HAPs	0.03	1.46	0.00	1.49
worst case single HAP	0.03	1.14	0.00	0.03
	Hexane	Formaldehyde		Formaldehyde

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Boilers 1 and 2	Stationary Internal Combustion Blower Engines 1, 2 and 3	Digester Gas Flare	**TOTAL**
PM	0.03	0.62	0.82	1.47
PM10	0.12	0.62	0.82	1.56
SO2	0.01	0.01	0.00	0.02
NOx	1.60	87.74	1.93	91.27
VOC	0.09	2.54	0.00	2.63
CO	1.35	6.82	36.14	44.31
total HAPs	0.03	1.46	0.00	1.49
worst case single HAP	0.03	1.14	0.00	0.03
	Hexane	Formaldehyde		Formaldehyde

Total emissions based on rated capacity at 8,760 hours/year, after control.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Mishawaka Wastewater Treatment Plant
Address City IN Zip: 1020 Lincolnway West, Mishawaka, IN 46544
CP: 141-13782-00177
Reviewer: PR/EVP
Date: January 16, 2001

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.7	32.1

1.5 mmBtu/hr Boiler
2.16 mmBtu/hr Boiler

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.90	7.60	0.60	100.00 **see below	5.50	84.00
Potential Emission in tons/yr	0.03	0.12	0.01	1.60	0.09	1.35

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: Mishawaka Wastewater Treatment Plant
Address City IN Zip: 1020 Lincolnway West, Mishawaka, IN 46544
CP: 141-13782-00177
Reviewer: PR/EVP
Date: January 16, 2001

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	0.00	0.00	0.00	0.03	0.00

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	0.00	0.00	0.00	0.00	0.00
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.00

Methodology is the same as page 1.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Digester Gas Combustion -4-cycle Lean Burn Engines

Company Name: Mishawaka Wastewater Treatment Plant
Address City IN Zip: 1020 Lincolnway West, Mishawaka, IN 46544
CP: 141-13782-00177
Reviewer: PR/EVP
Date: January 16, 2001

Digester Gas Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
2.9	25.8

1.47 mmBtu/hr Blower Engine #1- Internal combustion engine - Digester Gas
1.47 mmBtu/hr Blower Engine #2- Internal combustion engine - Digester Gas
1.28 mmBtu/hr backup Blower Engine #3- Internal combustion engine - Digester Gas

	PM*	PM10*	SO2	NOx	VOC	CO
Digester Gas Emission Factor in lb/mmBtu	48.00	48.00	0.00	250.00	0.00	470.00
Digester Gas Potential Emission in tons/yr	**0.62**	**0.62**	**0.00**	**3.22**	**0.00**	**6.05**

Natural Gas Heat Input Capacity MMBtu/hr	Potential Throughput mmBtu/yr
4.9	43011.6

2.47 [illegible] Natural Gas
2.44 [illegible] Natural Gas
2.27 [illegible] Natural Gas

	PM*	PM10*	SO2	NOx	VOC	CO
Natural Gas Emission Factor in lb/mmBtu	0.01	0.00	0.00	4.08	0.12	0.32
Natural Gas Potential Emission in tons/yr	**0.20**	**0.00**	**0.01**	**87.74**	**2.54**	**6.82**
Worst Case Potential Emission in tons/yr	**0.62**	**0.62**	**0.01**	**87.74**	**2.54**	**6.82**

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
[illegible]
5-01-004-21
2-02-002-54
Emission (tons/yr) = Throughput (mmBtu/yr) x Emission Factor (lb/mmBtu)/2,000 lb/ton
Worst Case potential Emissions = Assumes worst case fuel combusted 8760 hours /year
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Digester Gas Combustion -Engines

Company Name: **Mishawaka Wastewater Treatment Plant**
Address City IN Zip: **1020 Lincolnway West, Mishawaka, IN 46544**
CP: **141-13782-00177**
Reviewer: **PR/EVP**
Date: **January 16, 2001**

HAPs - Organics -Natural Gas Combustion

	Acetaldehyde	Acrolein	Benzene	1,3 Butadiene	Carbon Tetrachloride	
Emission Factor in lb/mmBtu	8.4E-03	5.1E-03	4.4E-04	2.7E-04	3.7E-05	
Potential Emission in tons/yr	0.18	0.11	0.01	0.01	0.00	0.31

	Chlorobenzene	Chloroform	1,3 Dichloropropene	Ethylbenzene	Ethylene Dibromide	
Emission Factor in lb/mmBtu	3.67E-05	2.85E-05	2.64E-05	3.97E-05	4.43E-05	
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00

	Ethylene Dichloride	Formaldehyde	Napthalene	Propylene Dichloride	Styrene	
Emission Factor in lb/mmBtu	2.36E-05	5.28E-02	7.44E-05	2.69E-05	2.36E-05	
Potential Emission in tons/yr	0.00	1.14	0.00	0.00	0.00	1.14

	Tetrachloroethane	Toluene	1,1,2 Trichloroethane	Xylene	Vinyl Chloride	
Emission Factor in lb/mmBtu	4.00E-05	4.08E-04	3.18E-05	1.84E-04	1.49E-05	
Potential Emission in tons/yr	0.00	0.01	0.00	0.00	0.00	0.01
						1.46

Methodology is the same as page 1.

Appendix A: Emissions Calculations

Digester Gas Combustion -Flare
Company Name: Mishawaka Wastewater Treatment Plant
Address City IN Zip: 1020 Lincolnway West, Mishawaka, IN 46544
CP: 141-13782-00177
Reviewer: PR/EVP
Date: January 16, 2001

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
11.00	96.4

11.00 mmBtu/hr Digester Waste Gas Flare

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	17.00	17.00	0.00	40.00 **see below	0.00	750.00
Potential Emission in tons/yr	0.82	0.82	0.00	1.93	0.00	36.14

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from the USEPA-FIRE 6.2, 9/20/99, SCC Code 5-01-004-10
Emission (tons/yr) = Throughput (mmBtu/yr) x Emission Factor (lb/mmBtu)/2,000 lb/ton
See page 2 for HAPs emissions calculations.