

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Indiana-American Water Co., Inc.
2423 Middle Road
Jeffersonville, Indiana 47130**

is hereby authorized to construct

- (a) one (1) 11.04 MMBtu/hr No. 2 diesel fuel fired reciprocating internal combustion emergency generator, identified as Generator 01, and
- (b) one (1) 9.09 MMBtu/hr No. 2 diesel fuel fired reciprocating internal combustion emergency generator, identified as Generator 02.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-019-10143-00094	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That 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.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That pursuant to 326 IAC 2-1-9(b)(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.
5. That notwithstanding Construction Condition No. 6, 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).

First Time Operation Permit

6. 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 2-1-7.1(Fees).
 - (e) Pursuant to 326 IAC 2-10, this source will follow the restrictions of permit by rule.

7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
2. That the permittee shall 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.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
 - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
 - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
 - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):
 - (a) In the event that ownership of these emergency generators is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
 - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
 - (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That 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, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, (local agency if applicable) or other public official having jurisdiction.

Malfunction Condition

7. That 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]

Emission Offset Minor Source Limit

8. That the diesel fuel usage of the two generators, Generator 01 and 02, combined shall be limited to 456,000 gallons per year, rolled on a monthly basis. This production limitation is equivalent to NOx emissions of less than 100 tons per year, rolled on a monthly basis. Therefore, the Emission Offset rules, 326 IAC 2-3, will not apply.

During the first 12 months of operation, the fuel usage shall be limited such that the total usage divided by the accumulated months of operation shall not exceed 38,000 gallons per month.

Nitrogen Oxide Emissions

9. That pursuant to rule 10-1, the nitrogen oxide emissions shall be limited to less than 100 tons per year. Condition 8 accomplishes this limitation.

Annual Emission Reporting

10. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement 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 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

The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30.

Opacity Limitations

11. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:
- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
 - (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 1 minutes (60 readings) in a 6 hour period.

Reporting Requirements

12. That a log of information necessary to document compliance with operation permit condition no. 8 shall be maintained. These records shall be kept for at least the past 36 month period and made available upon request to the Office of Air Management (OAM).
- (a) A quarterly summary 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

within thirty (30) calendar days after the end of the quarter being reported in the format attached. Use the form on page 7 for reporting the first year period. Then use the form on page 8 for any subsequent reporting.

- (b) Unless otherwise specified in this permit, any notice, report, or other submissions required by this permit shall be timely if:
 - (i) Postmarked on or before the date it is due; or
 - (ii) Delivered by any other method if it is received and stamped by IDEM, OAM (and local agency if applicable), on or before the date it is due.
- (c) All instances of deviations from any requirements of this permit must be clearly identified in such reports.
- (d) Any corrective actions taken as a result of an exceedance of a limit, an excursion from the parametric values, or a malfunction that may have caused excess emissions must be clearly identified in such reports.
- (e) The first report shall cover the period commencing the postmarked submission date of the Affidavit of Construction.

**Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section**

Quarterly Report

Company Name: Indiana American Water Company
Location: Jeffersonville
Permit No.: 019-10143-00094
Source: Two emergency generators
Pollutant: NOx
Limit: 38,000 gallons per month

Year: _____

Month	Usage (gallons/month)

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

**Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section**

Quarterly Report

Company Name: Indiana American Water Company
Location: Jeffersonville
Permit No.: 019-10143-00094
Source: Two emergency generators
Pollutant: NOx
Limit: 456,000 gallons per year, rolled on a monthly basis

Year: _____

Month	Usage (gal/ this month)	Usage (gal/ last 12 months)

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background And Description

Source Name: Indiana-American Water Co., Inc.
 Source Location: 2423 Middle Road, Jeffersonville, Indiana 47130
 County: Clark
 SIC Code: Water Treatment Facility
 Operation Permit No.: CP 019-10143-00094
 Permit Reviewer: SDF

The Office of Air Management (OAM) has reviewed an application from Indiana-American Water Co., Inc. relating to the construction and operation of the following equipment:

- 1) one (1) 11.04 MMBtu/hr No. 2 diesel fuel fired reciprocating internal combustion emergency generator, identified as Generator 01, and
- 2) one (1) 9.09 MMBtu/hr No. 2 diesel fuel fired reciprocating internal combustion emergency generator, identified as Generator 02.

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 September 14, 1998, with additional information received on November 30, 1998.

Emissions Calculations

See Emissions Calculations for detailed calculations (2 pages).

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	6.1	6.1
Particulate Matter (PM-10)	5.1	5.1
Sulfur Dioxide (SO ₂)	44.5	44.5

Volatile Organic Compounds (VOC)	8.8	8.8
Carbon Monoxide (CO)	74.9	74.9
Nitrogen Oxides (NOx)	282.1	282.1

HAP	Potential Emissions (tons/year)
Single HAP	0.2
Combined HAP	0.4

See attached spreadsheets for detailed calculations

- (a) The allowable emissions (as defined in the Indiana rule) of nitrogen oxides are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.
- (b) The potential emissions (as defined in the Indiana Rule) of oxides of nitrogen (NOx) are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. The source has decided to follow permit by rule (326 IAC 2-10) to stay below the Title V emission levels.

County Attainment Status

The source is located in Clark County.

Pollutant	Status
TSP	attainment or unclassifiable
PM-10	attainment or unclassifiable
SO ₂	attainment or unclassifiable
NO ₂	attainment or unclassifiable
Ozone	nonattainment
CO	attainment or unclassifiable

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Clark 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) Clark County has been designated as attainment or unclassifiable for all other criteria pollutants.

Source Status

New Source PSD Definition (emissions after controls, based on limited operations to keep NOx emissions at less than 100 tons per year):

Pollutant	Emissions (ton/year)
PM	2.2

PM10	1.8
SO2	15.6
VOC	3.1
CO	26.6
NOx	Less than 100
Single HAP	0.09
Combination HAP	0.16

- (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.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) at least one of the criteria pollutants is greater than or equal to 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or
- (c) any combination of HAPs is greater than or equal to 25 tons per year.

This new source will accept the limitation contained in the permit by rule (326 IAC 2-10). This will negate the need for Title V applying to this operation.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (326 IAC 12) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-3 (Emission Offset):

The source shall be limited to 456,000 gallons of diesel fuel per year, rolled on a monthly basis. This will hold the nitrogen oxide emissions to less than 100 tons per year.

326 IAC 2-6 (Emission Reporting):

This source is subject to 326 IAC 2-6 (Emission Reporting), because it emits more than ten (10) tons per year for Clark County of oxides of nitrogen (NOx). 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 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this permit:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings as determined by 326 IAC 5-1-4,
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

326 IAC 7 (SO2 Emission Limitations):

The proposed generators are not subject to 326 IAC 7 (SO2 Emission Limitations) because the SO2 emissions of each facility (20.1 and 24.4 ton/yr) are less than the applicable SO2 level of 25 tons/yr.

326 IAC 10-1 (Nitrogen Oxide Control in Clark and Floyd Counties):

This rule would apply to the generators. However, rule 10-1-3(2) allows the source to comply with the rule by accepting a limit to below 100 tons per year. This source will accept such a limit. Additionally, the source will choose permit by rule, which will limit their actual NOx emissions to less than 20 tons per year.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants 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.

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

Conclusion

The operation of these emergency generators will be subject to the conditions of the attached proposed **Construction Permit No. CP No. 019-10143-00094**.

Indiana American Water Company

CP 019-10143-00094

To limit the NOx emissions to less than 100 tons per year, the respective criteria pollutant emissions would be (these calculations are based on 3109 hours per year of operation):

PM:	2.2 tons per year	NOx:	100 tons per year
PM10:	1.8 tons per year	VOC:	3.1 tons per year
SO2:	15.6 tons per year	CO:	26.6 tons per year
Single HAP:	0.09 tons per year	Combination HAP:	0.16 tons per year

To determine the fuel usage allowed to meet the NOx limitation, the following calculation is necessary:

$$(0.137 \text{ MMBTU/gal})(Y \text{ gal/yr})(3.2 \text{ lb Nox/MMBTU})(1 \text{ ton}/2000 \text{ lb}) = 100 \text{ ton/yr}$$

$$Y = 456000 \text{ gallons per year (38000 gallons per month)}$$

**Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Turbine (>600 HP)**

Company Name: Indiana-American Water Company
City, Indiana: Jeffersonville, Indiana 47130
Reviewer: SDF
Date: 10-06-98

CP#: 019-10143
Plt ID: 019-00094

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

Heat Input Capacity
MM Btu/hr

S= = WEIGHT % SULFUR

Emission Factor in lb/MMBtu	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	0.0697	0.0573	0.5 (1.01S)	3.1	0.1	0.81
Potential Emission in tons/yr	3.4	2.8	24.4	149.9	4.8	39.2

Methodology

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

Emission Factors are from AP 42 Table 3.4-2 and Table 3.4-5

PM emissions calculated from AP42 (Fifth edition, January 1995), Table 3.4-5, Footnotes c and d.

1 hp-hr = 7000 Btu, AP42 (Fifth edition, January 1995), Table 3.3-2, Footnote a.

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

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

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Internal Combustion Engines - Diesel Fuel
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City, Indiana: Jeffersonville, Indiana 47130
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CP#: 019-10143
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A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity
MM Btu/hr

S= = WEIGHT % SULFUR

Emission Factor in lb/MMBtu	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	0.0697	0.0573	0.5 (1.01S)	3.1	0.1	0.81
Potential Emission in tons/yr	2.8	2.3	20.1	123.4	4.0	32.2

Methodology

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

Emission Factors are from AP 42 Table 3.4-2 and Table 3.4-5

PM emissions calculated from AP42 (Fifth edition, January 1995), Table 3.4-5, Footnotes c and d.

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