

**CONSTRUCTION PERMIT  
OFFICE OF AIR MANAGEMENT**

**Praxair, Inc.  
Clark and Dean Mitchell Roads  
Gary, Indiana 46406**

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-089-10205-00177	
Issued by:  Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

## 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 information describing the source contained in conditions A.1 and A.2 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

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The Permittee owns and operates an industrial gas plant.

Responsible Official: Mike Barsotelli  
Source Address: Clark and Dean Mitchell Roads, Gary, Indiana 46406  
Mailing Address: P.O. Box 6188, Gary, Indiana 46406  
SIC Code: 2813  
County Location: Lake  
County Status: Non-attainment for particulate matter 10 microns or less in diameter (PM10), Ozone, and sulfur dioxide (SO<sub>2</sub>);  
Attainment for all other criteria pollutants  
Source Status: Part 70 Permit Program  
Major Source, under Emission Offset Rules;

### A.2 Emission Units and Pollution Control Equipment Summary

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The source is hereby authorized to construct the following emission units:

- (a) one (1) 750 horsepower (HP) diesel fuel internal combustion emergency generator designated A11 exhausting through stack S011,
- (b) one (1) natural gas fired Vaporizer Heater designated A12 with a maximum heat input rate of 41.8 million British thermal units per hour (MMBtu/hr) equipped with low NO<sub>x</sub> burners for reduction of nitrogen oxide emissions exhausting through two (2) stacks designated S012, and
- (c) one (1) 2,000 gallon fuel oil storage tank

### A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because it is a major source, as defined in 326 IAC 2-7-1(22).

## **Section B Construction Conditions**

### **General Construction Conditions [326 IAC 2-1-3]**

#### **B.1 Allowable Emissions**

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).

#### **B.2 General Rule Applicability**

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.3 Effective Date of the Permit [IC 13-15-5-3]**

Pursuant to IC 13-15-5-3, Sections C and D.1 of this permit become effective upon its issuance.

#### **B.4 Revocation of Permits [326 IAC 2-1-9(b)]**

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

#### **B.5 Modification of Construction Conditions**

Notwithstanding Condition B.6, all requirements of these construction conditions 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]**

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) The Permittee has submitted their Part 70 permit application (T089-7990-00177) on December 12, 1996, for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

**B.7 Operation Meter Requirement and Specifications**

Construction of the emergency generator, Unit A11, shall include the installation of a meter to record the actual operating hours of the unit as specified in Section D of this permit. The meter employed shall be designed such that the cumulative hours of operation can be determined to the nearest one tenth (1/10) of an hour.

**Section C Source Operation Conditions**

Entire Source
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**General Operation Conditions [326 IAC 2-1-4]**

**C.1 General Operation Conditions**

- (a) 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).
- (b) 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.

**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) within ninety (90) days after issuance of this permit, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (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

- (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, upon request and shall be subject to review and approval by IDEM, OAM.

**C.3 Transfer of Permit [326 IAC 2-1-6]**  
**Pursuant to 326 IAC 2-1-6 (Transfer of Permits):**

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- (a) In the event that ownership of the emission units 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.

**C.4 Permit Revocation [326 IAC 2-1-9(a)]**  
**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:**

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- (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).

**C.5 Availability of Permit [326 IAC 2-1-3(l)]**  
**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, or other public official having jurisdiction.**

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**C.6 Opacity Limitations [326 IAC 5-1-2]**  
**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:**

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- (a) Opacity shall not exceed an average of 40% in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed 60% for more than a cumulative total of 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) compliance with the requirements of (a) and (b), above, does not preclude a facility from any more stringent requirements specified in Section D.

**C.7 Fugitive Dust Emissions [326 IAC 6-4]**

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That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

**C.8 Malfunction Condition [326 IAC 1-6-2]**

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

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- (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]

**Compliance Monitoring Requirements**

**C.9 Compliance Monitoring**

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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 compliance schedule an additional ninety (90) days provided the Permittee notify:

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

and

Gary Division of Air Pollution Control  
Air and Land Pollution Control  
504 Broadway, Suite 1012  
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.

**C.10 Monitoring Methods [326 IAC 3]**

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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.11 Compliance Monitoring Plan - Failure to Take Response Steps**

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- (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, upon request and shall be subject to review and approval by IDEM, OAM. 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.12 General Record Keeping Requirements**

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- (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 and available within one (1) hour upon verbal request of an IDEM, OAM representative, for a minimum of three (3) years. They may be stored elsewhere for the remaining two (2) years providing they are made available within thirty (30) days after written request.
- (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. 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.13 General Reporting Requirements

- (a) To affirm that the source has met all the requirements stated in this permit the source shall submit a Quarterly Compliance Report. Any deviation from the requirements and the date(s) of each deviation must be reported.
- (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  
  
and  
  
Gary Division of Air Pollution Control  
Air and Land Pollution Control  
504 Broadway, Suite 1012  
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, 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.
- (e) 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 defined 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.

- (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 FACILITY OPERATION CONDITIONS

- (a) one (1) 750 horsepower (HP) diesel fuel internal combustion emergency generator designated A11 exhausting through stack S011,
- (b) one (1) natural gas fired Vaporizer Heater designated A12 with a maximum heat input rate of 41.8 million British thermal units per hour (MMBtu/hr) equipped with low NO<sub>x</sub> burners for reduction of nitrogen oxide emissions exhausting through two (2) stacks designated S012, and
- (c) one (1) 2,000 gallon fuel oil storage tank

### Emission Limitations and Standards

#### D.1.1 Emission Offset Minor Limits [326 IAC 2-3]

- (a) The hours of operation of the 750 HP emergency generator (A11) shall be limited to 500 hours per twelve (12) consecutive month period. This limitation is equivalent to nitrogen oxides (NO<sub>x</sub>) emissions of 4.5 tons per twelve (12) consecutive months.
- (b) The input of natural gas to the Vaporizer Heater (A12) shall be limited to 38 million cubic feet per twelve (12) consecutive month period. This limitation is equivalent to nitrogen oxides (NO<sub>x</sub>) emissions of 1.5 tons per twelve (12) consecutive months.

The limitations in (a) and (b), above, were taken voluntarily by the source and combined are equivalent to nitrogen oxides (NO<sub>x</sub>) emissions of 6.0 tons per twelve (12) consecutive months. Due to these limits, 326 IAC 2-3 (Emission Offset) rules do not apply.

### Compliance Determination Requirements

#### D.1.2 Testing Requirements

Testing of these facilities are not specifically required by this permit. This does not preclude testing requirements on this facility under 326 IAC 2-7-5 and 326 IAC 2-7-6.

## **Record Keeping and Reporting Requirement**

### **D.1.3 Record Keeping Requirements**

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- (a) Emergency Generator (A11) -The Permittee shall maintain monthly records at the source of the following values:
  - (1) A log of the hours of operation of the unit including a monthly reading from the unit's operation hours meter, and
  - (2) Amount of diesel fuel used each month.
- (b) Vaporizer Heater (A12) - The Permittee shall maintain monthly records at the source of the following values:
  - (1) Amount of natural gas input to the heater;

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

### **D.1.4 Reporting Requirements**

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- (a) A quarterly summary to document compliance with Operation Condition D.1.1(a) shall be submitted to the addresses listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported. This report shall include the hours of operation for each month of the quarter and the total hours of operation for the twelve (12) consecutive month period ending each month of the quarter.
- (b) A quarterly summary to document compliance with Operation Condition D.1.1(b) shall be submitted to the addresses listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported. This report shall include the natural gas input for each month of the quarter and the total natural gas input for the twelve (12) consecutive month period ending each month of the quarter.

**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: \_\_\_\_\_ PHONE NO. (    ) \_\_\_\_\_

LOCATION: (CITY AND COUNTY) \_\_\_\_\_

PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_

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: \_\_\_\_\_

**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 SO<sub>2</sub>, 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:

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

**Quarterly Report**

Source Name: Praxair, Inc.  
 Source Location: Clark and Dean Mitchell Roads, Gary, Indiana 46406  
 Mailing Address: P.O. Box 6188, Gary, Indiana 46406  
 Construction Permit No.: 089-10205-00177  
 Facility: Emergency Generator (A11)  
 Parameter: Nitrogen Oxides (NOx)  
 Limit: Operating hours not to exceed 500 hours per twelve (12) consecutive month period.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	Operation hours this month	Operation hours previous 11 Months	Operation hours 12 Month Total

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

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

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

**Quarterly Report**

Source Name: Praxair, Inc.  
Source Location: Clark and Dean Mitchell Roads, Gary, Indiana 46406  
Mailing Address: P.O. Box 6188, Gary, Indiana 46406  
Construction Permit No.: 089-10205-00177  
Facility: Vaporizer Heater (A12)  
Parameter: Nitrogen Oxides (NOx)  
Limit: Input of natural gas not to exceed 38 million cubic feet (MMCF) per twelve (12) consecutive month period.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	Natural gas usage this month (MMCF)	Natural gas usage previous 11 Months (MMCF)	Natural gas usage 12 Month Total (MMCF)

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

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

**Indiana Department of Environmental Management**  
**Office of Air Management**  
and  
**Gary Air and Land Pollution Control**

Technical Support Document (TSD) for New Construction and Operation

**Source Background and Description**

Source Name: Praxair, Inc.  
Source Location: Clark and Dean Mitchell Roads, Gary, Indiana 46406  
County: Lake  
Construction Permit No.: 089-10205-00177  
SIC Code: 2813  
Permit Reviewer: Janusz Johnson

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

- (a) one (1) 750 horsepower (HP) diesel fuel internal combustion emergency generator designated A11 exhausting through stack S011,
- (b) one (1) natural gas fired Vaporizer Heater designated A12 with a maximum heat input rate of 41.8 million British thermal units per hour (MMBtu/hr) equipped with low NO<sub>x</sub> burners for reduction of nitrogen oxide emissions exhausting through two (2) stacks designated S012, and
- (c) one (1) 2,000 gallon fuel oil storage tank

**Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S011	Emergency Generator A11	10.0	0.67	4600	1200
S012-1	Vaporizer Heater A12	14.2	0.83	4600	1200
S012-2	Vaporizer Heater A12	14.2	0.83	4600	1200

**Recommendation**

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

Information, unless otherwise stated, 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 September 28, 1998, with additional information received on October 30, 1998.

## Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (4 pages).

## Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	-	4.2
Particulate Matter (PM10)	-	3.9
Sulfur Dioxide (SO <sub>2</sub> )	-	13.4
Volatile Organic Compounds (VOC)	-	2.9
Carbon Monoxide (CO)	-	28.6
Nitrogen Oxides (NO <sub>x</sub> )	-	93.3
Single Hazardous Air Pollutant (HAP)	-	negligible
Combination of HAPs	-	negligible

- (a) The potential emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.
- (b) Allowable emissions (as defined in the Indiana Rule) of carbon monoxide (CO) and nitrogen oxides (NO<sub>x</sub>) are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

## County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as severe nonattainment for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) The portion of Lake County in which this source is located has also been classified as nonattainment for Particulate Matter 10 microns or less in diameter (PM10) and sulfur dioxide (SO<sub>2</sub>). Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (c) This source is not located in the portion of Lake County which is classified as nonattainment for carbon monoxide (CO).

**Source Status**

Existing Source PSD, Part 70 or FESOP 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	6.3
PM10	6.3
SO <sub>2</sub>	0.5
VOC	2.9
CO	135.2
NO <sub>x</sub>	303.1

- (a) This existing source is a major stationary source because carbon monoxide (CO) and nitrogen oxides (NO<sub>x</sub>) are emitted at a rate of 100 tons per year or greater.
- (b) These emissions were based on the Technical Support Document (TSD) for the Construction Permit (CP-089-8130-00177) issued on May 21, 1997.

**Proposed Modification**

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO <sub>2</sub> (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO <sub>x</sub> (ton/yr)
Proposed Modification	0.4	0.4	0.8	0.2	2.2	6.0
Contemporaneous Increases	-	-	-	-	-	-
Contemporaneous Decreases	-	-	-	-	-	-
Net Emissions	0.4	0.4	0.8	0.2	2.2	6.0
PSD or Offset Significant Level	25	15	40	25	100	25

- (a) This modification to an existing major stationary source is not major because the emissions increase is less than the Emission Offset significant levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (b) The operating hours of the emergency generator are limited to 500 hours per twelve (12) consecutive month period, and the natural gas input to the vaporizer heater is limited to 38 million cubic feet per twelve (12) consecutive month period, therefore, Emission Offset requirements do not apply. These limits combined are equivalent to 6.0 tons of nitrogen oxides (NO<sub>x</sub>) emissions per twelve (12) consecutive month period.

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T-089-7990-00177) application on December 12, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

## Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 applicable to these facilities.

## State Rule Applicability

### 326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 10 tons/yr of VOC. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

### 326 IAC 5-1-2 (Visible Emission Limitations)

This rule requires the visible emissions to meet the following:

- (a) visible emissions shall not exceed an average of 20% opacity in 24 consecutive readings,
- (b) visible emissions shall not exceed 60% opacity for more that a cumulative total of 15 minutes (60 readings) in a 6 hour period.

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

This rule does not apply to the emergency generator because the facility does not have the potential to emit twenty-five (25) tons per year or more of sulfur dioxide.

## Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 189 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.

- (a) None of these listed air toxics will be emitted from this proposed construction.

## Conclusion

The construction of this emergency generator, vaporizer heater, and storage tank will be subject to the conditions of the attached proposed **Construction Permit No. CP-089-10205-00177**.

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

**Company Name:** Praxair, Inc.  
**City, Indiana:** Gary, Indiana  
**Reviewer:** Janusz Johnson  
**Date:** November 9, 1998

**CP#:** 089-10205  
**Plt ID:** 089-00177

**Emissions calculated based on output rating (hp)**

Heat Input Capacity  
Horsepower (hp)

Potential Throughput  
hp-hr/yr

S= 0.5 = WEIGHT % SULFUR

750.0

6570000.0

Emission Factor in lb/hp-hr	Pollutant					
	PM 0.000488	PM10 0.00040	SO2 0.0040 (.00809S)	NOx 0.024	VOC 0.00073	CO 0.00529
Potential Emission in tons/yr	1.6	1.3	13.3	78.8	2.4	17.4

**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)

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

**Company Name:** Praxair, Inc.  
**City, Indiana:** Gary, Indiana  
**Reviewer:** Janusz Johnson  
**Date:** November 9, 1998

**CP#:** 089-10205  
**Plt ID:** 089-00177

*As limited to operating 500 hours per year at the request of the source.*

**Emissions calculated based on output rating (hp)**

Heat Input Capacity  
Horsepower (hp)

Potential Throughput  
hp-hr/yr

S=  = WEIGHT % SULFUR

Emission Factor in lb/hp-hr	Pollutant					
	PM	PM10	SO2 (.00809S)	NOx	VOC	CO
	0.000488	0.00040	0.0040 (.00809S)	0.024	0.00073	0.00529
Potential Emission in tons/yr	0.1	0.1	0.8	4.5	0.1	1.0

**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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**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
Small Industrial Boiler (10 < MM BTU/HR <100)**

**Company Name:** Praxair, Inc.  
**City, Indiana:** Gary, Indiana  
**Reviewer:** Janusz Johnson  
**Date:** November 9, 1998

**CP#:** 089-10205  
**Plt ID:** 089-00177

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

41.8 Vaporizer Heater

366.2

Emission Factor in lb/MMCF **	Pollutant					
	PM 14.0	PM10 14.0	SO2 0.6	NOx 79.0	VOC 2.8	CO 61.0
Potential Emission in tons/yr	2.6	2.6	0.1	14.5	0.5	11.2

	<u>Uncontrolled</u>	<u>Low NOx Burn</u>	<u>Flue Recirculation</u>
**Emission Factor for NOx:	140	79	30
**Emission Factor for CO:	35	61	37

**Methodology**

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, EPA 450/4-90-003 SCC #1-02-006-02

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

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
Small Industrial Boiler (10 < MM BTU/HR <100)**

**Company Name:** Praxair, Inc. **CP#:** 089-10205  
**City, Indiana:** Gary, Indiana **Plt ID:** 089-00177  
**Reviewer:** Janusz Johnson  
**Date:** November 9, 1998

*As limited to 38 MMCF/yr at the request of the source.*

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
41.8 Vaporizer Heater	38.0

Emission Factor in lb/MM**	Pollutant					
	PM 14.0	PM10 14.0	SO2 0.6	NOx 79.0	VOC 2.8	CO 61.0
Potential Emission in tons/yr	0.3	0.3	0.0	1.5	0.1	1.2

	Uncontrolled	Low NOx Burn	Flue Recirculation
**Emission Factor for NOx:	140	79	30
**Emission Factor for CO:	35	61	37

**Methodology**

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, EPA 450/4-90-003 SCC #1-02-006-02

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