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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) and the Hammond Department of Environmental Management (HDEM). 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 [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates steam boilers used for heating the university.

Source Address:	2200 169 th Street, Hammond, Indiana 46323-2094
Mailing Address:	2200 169 th Street, Hammond, Indiana 46323-2094
General Source Phone Number:	(219)989-2230
SIC Code:	8221 – Educational Services
County Location:	Lake County
Source Location Status:	Attainment/Unclassifiable for PM10, SO ₂ , CO, NO ₂ and Lead, Nonattainment area for PM2.5 and 8-hour ozone,
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act; and Not 1 of 28 Source Categories

A.2 Emissions Units and Pollution Control Equipment Summary

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

Six (6) Boilers

- (a) One (1) Cleaver Brooks Boiler (Central Plant), identified as #5F, with a maximum design capacity of 12.6 MMBtu/hr heat input, natural gas-fired, constructed in 2001, using no control equipment and exhausting at one (1) stack, identified as S-1.
- (b) Three (3) Burnham Boilers (Central Plant), identified as #2F, #3F, and #4F, each with a maximum design capacity of 6.3 MMBtu/hr heat input, primarily natural gas-fired with No. 2 Fuel Oil as a stand-by, constructed in 1997, using no control equipment and exhausting at two (2) stacks, identified as S-3 (#2F) and S-2 (#3F & #4F).
- (c) Two (2) Highlander Boilers (K-Bldg.), identified as #1 and #2, each with a maximum design capacity of 5.6 MMBtu/hr heat input, natural gas-fired, constructed prior to 1967, using no control equipment and exhausting at two (2) stacks, identified as S-4 and S-5, respectively.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)] [326 IAC 2-1.1-9.5] [IC 13-15-3-6(a)]

- (a) This permit, MSOP 089-23035-00249, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ and HDEM, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM and HDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ and HDEM, within a reasonable time, any information that IDEM, OAQ and HDEM may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ and HDEM copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality and HDEM stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

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

and

Hammond Department of Environmental Management
Air Pollution Control Division
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

- (c) 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 and HDEM on or before the date it is due.

B.10 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ and HDEM upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and HDEM. IDEM, OAQ and HDEM may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to MSOP 089-23035-00249 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,

- (2) revised, or
- (3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least ninety (90) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7(b).

B.13 Permit Renewal [326 IAC 2-6.1-7]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and HDEM and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

and

Hammond Department of Environmental Management
Air Pollution Control Division
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

- (b) A timely renewal application is one that is:
- (1) Submitted at least ninety (90) days prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and HDEM on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ and HDEM takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ and HDEM any additional information identified as being needed to process the application.

B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

Hammond Department of Environmental Management
Air Pollution Control Division
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(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)]

B.15 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.16 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)] [IC 13-14-2-2] [IC13-17-3-2] [IC 13-30-3-1]

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, and HDEM 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) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.17 Transfer of Ownership or Operational Control [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 change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

and

Hammond Department of Environmental Management
Air Pollution Control Division
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

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

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.18 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to HDEM within thirty (30) calendar days of receipt of a billing.
- (b) The Permittee may call the following telephone number: 219-853-6306 to determine the appropriate permit fee.

B.19 Credible Evidence [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM and HDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

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

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

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

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

C.6 Fugitive Dust Emissions [326 IAC 6.8-10-3]

The Permittee shall be in violation of 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (Lake County Fugitive Particulate Matter Control Requirements), if the opacity of fugitive particulate emissions exceeds ten percent (10%).

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
- (A) Asbestos removal or demolition start date;
- (B) Removal or demolition contractor; or
- (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

and

Hammond Department of Environmental Management
Air Pollution Control Division
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

- (f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.9 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

and

Hammond Department of Environmental Management
Air Pollution Control Division
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ and HDEM of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an “authorized individual” as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and HDEM not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ and HDEM if the Permittee submits to IDEM, OAQ and HDEM, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

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

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

C.11 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.12 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

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

C.13 Instrument Specifications [326 IAC 2-1.1-11]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.14 Response to Excursions or Exceedances

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records;
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.

- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected emissions unit while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that re-testing in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the re-testing deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to non-compliant stack tests.

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

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.16 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 IDEM, OAQ and HDEM, using the attached 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.17 Annual Emission Inventory [Hammond Ordinance No. 7102]

- (a) The Permittee shall submit an annual emission inventory containing production information and/or fuel usage for each permitted unit. The emission inventory must be received by April 15th of each year. The submittal should cover the twelve (12) consecutive month time period starting January 1 and ending December 31. This is a local requirement only. The emission inventory must be submitted to:

Hammond Department of Environmental Management
Air Pollution Control Division
5925 Calumet Avenue - Room 304
Hammond, Indiana 46320

This inventory does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The emission inventory 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 HDEM on or before the date it is due.

C.18 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or HDEM makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or HDEM within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.19 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:

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

and

Hammond Department of Environmental Management
Air Pollution Control Division
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

- (b) 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 and HDEM on or before the date it is due.
- (c) Unless otherwise specified in this permit, any report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Six (6) Boilers

- (a) One (1) Cleaver Brooks Boiler (Central Plant), identified as #5F, with a maximum design capacity of 12.6 MMBtu/hr heat input, natural gas-fired, constructed in 2001, using no control equipment and exhausting at one (1) stack, identified as S-1.
- (b) Three (3) Burnham Boilers (Central Plant), identified as #2F, #3F, and #4F, each with a maximum design capacity of 6.3 MMBtu/hr heat input, primarily natural gas-fired with No. 2 Fuel Oil as a stand-by, constructed in 1997, using no control equipment and exhausting at two (2) stacks, identified as S-3 (#2F) and S-2 (#3F & #4F).
- (c) Two (2) Highlander Boilers (K-Bldg.), identified as #1 and #2, each with a maximum design capacity of 5.6 MMBtu/hr heat input, natural gas-fired, constructed prior to 1967, using no control equipment and exhausting at two (2) stacks, identified as S-4 and S-5, respectively.

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

Emission Limitations and Standards

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

Pursuant to 326 IAC 6-2-2 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(b)), particulate emissions from each facility used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed the pound of particulate matter per million British thermal units heat input, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu)
#1 Highlander Boiler	Prior to 1967	5.6	0.5911
#2 Highlander Boiler	Prior to 1967	5.6	0.5911

This emission limitation was based on the following equation:

$$Pt = 0.87 / Q^{0.16}$$

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

= 11.2 mmBtu/hr

D.1.2 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from each facility used for indirect heating purposes which were existing and in operation after September 21, 1983, shall in no case exceed the pound of particulate matter per million British thermal units heat input, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu)
#2F Burnham Boiler (Central Plant)	1997	6.3	0.4107
#3F Burnham Boiler (Central Plant)	1997	6.3	0.4107
#4F Burnham Boiler (Central Plant)	1997	6.3	0.4107
#5F Cleaver Brooks Boiler (Central Plant)	2001	12.6	0.4107

The emission limitation was based on the following equation:

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

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

= 42.7 mmBtu/hr

D.1.3 Particulate Matter Limitation (PM) [Hammond Air Quality Control Ordinance No. 3522]

Particulate matter emissions from the combustion of natural gas and No. 2 fuel oil will be governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended). As shown in the table below the local emission limitation will be more stringent than that using 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating.

Boiler	Local Limit (lbs/hr)	Local Limit (TPY)
#5F Cleaver Brooks Boiler (Central Plant)	0.0939	0.4112
#1 Highlander Boiler	0.0417	0.1828
#2 Highlander Boiler	0.0417	0.1828
#2F Burnham Boiler (Central Plant)	0.0913	0.3999
#3F Burnham Boiler (Central Plant)	0.0913	0.3999
#4F Burnham Boiler (Central Plant)	0.0884	0.3872

D.1.4 Sulfur Dioxide (SO₂), Nitrogen Oxide (NO_x), Volatile Organic Compound (VOC), and Carbon Monoxide (CO)
Emissions from the combustion of natural gas and No. 2 fuel oil are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Sulfur Dioxide (SO₂), Nitrogen Oxide (NO_x), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

Pollutant	Local Limit (lbs/hr)	Local Limit (TPY)
SO ₂	10.177	44.576
NO _x	5.044	22.090
VOC	0.230	1.009
CO	3.517	15.402

D.1.5 Sulfur Dioxide (SO₂) [Hammond Air Quality Control Ordinance No. 3522]
Pursuant to the Hammond Air Quality Control Ordinance No. 3522 (as amended), the sulfur content by weight of the fuel oil burned shall not exceed a maximum of 0.5%.

D.1.6 Preventive Maintenance Plan [326 IAC 1-6-3]
A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for these emissions units and any control device(s).

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.7 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Condition D.1.5 shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed five-tenths percent (0.5%) by weight by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the three (3) Burnham Boilers, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.8 Visible Emissions Notations

- (a) Daily visible emission notations of each of the three (3) Burnham Boilers' stack exhaust shall be performed during normal daylight operations while combusting No. 2 fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.9 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1 through D.1.4, the Permittee shall maintain monthly records of the following information for each of the Six (6) Boilers:
 - (1) Number of hours of operation for each of the Six (6) Boilers;
 - (2) Cubic feet of gaseous fuel fired; and
 - (3) Gallons of liquid fuel fired.
- (b) To document compliance with Conditions D.1.4 and D.1.5 the Permittee shall maintain records in accordance with (1) through (6) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
 - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

 - (4) Fuel supplier certifications;
 - (5) The name of the fuel supplier; and
 - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

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.

- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of daily visible emission notations of the three (3) Burnham Boilers' stack exhaust while combusting No. 2 fuel oil. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the boiler did not operate that day).
- (d) To document compliance with 326 IAC 12, the Permittee shall record and maintain records of the amounts of each fuel combusted during each day for the Cleaver Brooks Boiler (Central Plant).
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.10 Reporting Requirements

- (a) A summary of the information to document compliance with Condition D.1.9 shall be submitted to the address(es) listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, upon request.
- (b) The permittee shall certify, on the Natural Gas Fired Boiler Certification form provided, that natural gas was fired in the Cleaver Brooks Boiler (Central Plant) at all times during each quarter. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).
- (c) The natural gas boiler certification shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

New Source Performance Standard (NSPS) Requirements

D.1.11 New Source Performance Standard (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Dc] [326 IAC 12]

Pursuant to 40 CFR 60.40c, Subpart Dc, the Permittee shall comply with the provisions of 40 CFR 60, Subpart Dc, which are incorporated by reference as 326 IAC 12 for the Cleaver Brooks Boiler (Central Plant) as specified as follows.

§ 60.40c Applicability and delegation of authority.

- (a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam

generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388–77, 90, 91, 95, or 98a, Standard Specification for Classification of Coals by Rank (IBR—see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396–78, 89, 90, 92, 96, or 98, “Standard Specification for Fuel Oils” (incorporated by reference—see §60.17).

Dry flue gas desulfurization technology means a sulfur dioxide (SO₂) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO₂ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR Parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of

beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane, or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835–86, 87, 91, or 97, "Standard Specification for Liquefied Petroleum Gases" (incorporated by reference—see §60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO₂ emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396–78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils" (incorporated by reference—see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO₂ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO₂.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. The owner or operator of an affected facility that only burns very low sulfur fuel oil or other liquid or gaseous fuels with potential sulfur dioxide emissions rate of 140 ng/J (0.32 lb/MMBtu) heat input or less shall record and maintain records of the fuels combusted during each calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

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

and

**HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
-AIR POLLUTION CONTROL DIVISION-**

**MINOR SOURCE OPERATING PERMIT
CERTIFICATION**

Source Name: **Purdue University Calumet**
Source Address: 2200 169th Street, Hammond, Indiana 46323-2094
Mailing Address: 2200 169th Street, Hammond, Indiana 46323-2094
Permit No.: **M089-23035-00249**

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

Please check what document is being certified:

- Annual Notification
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit (specify)
- Other (specify)

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
MINOR SOURCE OPERATING PERMIT**

NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: **Purdue University Calumet**
Source Address: 2200 169th Street, Hammond, Indiana 46323-2094
Mailing Address: 2200 169th Street, Hammond, Indiana 46323-2094
Permit No.: **M089-23035-00249**

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

Report period

Beginning: _____

Ending: _____

Boiler Affected

Alternate Fuel

Days burning alternate fuel

Cleaver Brooks Boiler (Central Plant)

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

Signature:
Printed Name:
Title/Position:
Date:

A certification by the authorized individual as defined by 326 IAC 2-1.1-1(1) is required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**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:	Purdue University Calumet
Address:	2200 169th Street
City:	Hammond, Indiana 46323-2094
Phone #:	(219) 989-2230
MSOP #:	089-23035-00249

I hereby certify that **Purdue University Calumet** is still in operation.
 no longer in operation.

I hereby certify that **Purdue University Calumet** is
 in compliance with the requirements of MSOP **089-23035-00249**.
 not in compliance with the requirements of MSOP **089-23035-00249**.

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 - 317 233-6865
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
FAX NUMBER - 219 853-6343**

**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 PERM 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: ____/____/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:

**Indiana Department of Environmental Management
Office of Air Quality**

and

Hammond Department of Environmental Management

Addendum to the Technical Support Document for a
Minor Source Operating Permit (MSOP) Renewal

Source Name: Purdue University Calumet
Source Location: 2200 169th Street, Hammond, Indiana 46323
County: Lake
SIC Code: 8221 – Educational Services
Operation Permit No.: **M089-23035-00249**
Permit Reviewer: Debra Malone, HDEM

On June 16, 2007, the Hammond Department of Environmental Management (HDEM) had a notice published in the Times, Hammond, Indiana, stating that Purdue University Calumet had applied for a Minor Source Operating Permit Renewal to operate steam boilers used for heating the university. The notice also stated that HDEM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the HDEM has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

Minor Source Operating Permit (MSOP)

1. On page 3 of 28 of the Table of Contents, prior to section D.1.7, where it reads **Compliance Determination Requirements** the rule cites [326 IAC 2-5.1-3(e)(2)] and [326 IAC 2-6.1-5(a)(2)] have been inserted.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

2. On page 3 of 28 of the Table of Contents, prior to section D.1.8, where it reads **Compliance Monitoring Requirements** the rule cites [326 IAC 2-5.1-3(e)(2)] and [326 IAC 2-6.1-5(a)(2)] have been inserted.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

3. On page 3 of 28 of the Table of Contents, prior to section D.1.9, where it reads **Record Keeping and Reporting Requirements** the rule cites [326 IAC 2-5.1-3(e)(2)] and [326 IAC 2-6.1-5(a)(2)] have been inserted.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

4. On page 12 of 28, prior to Section C.9, where it reads **Testing Requirements**, the rule cite **[326 IAC 2-6.1-5(a)(2)]** has been inserted.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

5. On page 14 of 28, under C.16 Malfunctions Report, in (b), IDEM has been added before OAQ and the word "attached" has been inserted between the words the and Malfunction.
 - (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 **IDEM**, OAQ and HDEM, using the **attached** 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.
6. On page 25 of 28, **NATURAL GAS FIRED BOILER CERTIFICATION**, the permit number on the form was changed from **M089-11480-00249** to **M089-23035-00249**.

Permit No.: **M089-23035-00249**

**Indiana Department of Environmental Management
Office of Air Quality
and
Hammond Department of Environmental Management
-Air Pollution Control Division-**

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

Source Background and Description

Source Name:	Purdue University Calumet
Source Location:	2200 169 th Street, Hammond, Indiana 46323-2094
County:	Lake
SIC Code:	8221 – Educational Services
Permit Renewal No.:	M089-23035-00249
Permit Reviewer:	Debra Malone

The Hammond Department of Environmental Management (HDEM) has reviewed the operating permit renewal application from Purdue University Calumet relating to the operation of steam boilers used for heating the university.

History

On April 27, 2006, Purdue University Calumet submitted applications to the OAQ and HDEM requesting to renew its operating permit. Purdue University Calumet was issued a Minor Source Operating Permit (MSOP) on August 1, 2001.

Permitted Emission Units and Pollution Control Equipment

Six (6) Boilers

- (a) One (1) Cleaver Brooks Boiler (Central Plant), identified as #5F, with a maximum design capacity of 12.6 MMBtu/hr heat input, natural gas-fired, constructed in 2001, using no control equipment and exhausting at one (1) stack, identified as S-1.
- (b) Three (3) Burnham Boilers (Central Plant), identified as #2F, #3F, and #4F, each with a maximum design capacity of 6.3 MMBtu/hr heat input, primarily natural gas-fired with No. 2 Fuel Oil as a stand-by, constructed in 1997, using no control equipment and exhausting at two (2) stacks, identified as S-3 (#2F) and S-2 (#3F & #4F).
- (c) Two (2) Highlander Boilers (K-Bldg.), identified as #1 and #2, each with a maximum design capacity of 5.6 MMBtu/hr heat input, natural gas-fired, constructed prior to 1967, using no control equipment and exhausting at two (2) stacks, identified as S-4 and S-5, respectively.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

There are no unpermitted emission units operating at this source during this review process.

Existing Approvals

Since the issuance of the MSOP (089-11480-00249) on August 1, 2001, the source has been operating under the following approvals as well:

- (a) Notice-only (089-20329-00249), issued on February 22, 2005.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S-1	#5F Cleaver Brooks Boiler (Central Plant)	35	7	568	330
S-3	#2F Burnham Boiler (Central Plant)	35	7	215	350
S-2	#3F Burnham Boiler (Central Plant)	35	7	625	425
S-2	#4F Burnham Boiler (Central Plant)	35	7	625	425
S-4	#1 Highlander Boiler (K-Bldg.)	35	2	215	400
S-5	#2 Highlander Boiler (K-Bldg.)	35	2	215	400

Emission Calculations

See Appendix A of this document for detailed emission calculations (five (5) pages).

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM10	Attainment
PM2.5	Nonattainment
SO ₂	Attainment
NOx	Unclassifiable/Attainment
8-hour Ozone	Moderate Nonattainment
CO	Unclassifiable/Attainment
Lead	Attainment

- (a) U.S.EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Lake County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a lawsuit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Nonattainment New Source Review requirements. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as moderate nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.
- (c) Lake County has been classified as attainment or unclassifiable in Indiana for particulates less than ten (10) microns in diameter (PM10), sulfur dioxides (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), and Lead (Pb). Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (e) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	Potential to Emit (tons/yr)
PM	1.96
PM-10	1.42
SO ₂	44.58
VOC	1.01
CO	15.40
NO _x	22.09

HAPs	Potential to Emit (tons/yr)
Lead	0.0003
Total	0.0003

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM-10, SO₂, VOC, CO and NO_x are less than 100 tons per year. The source is not subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of SO₂ is equal to or greater than 25 tons per year. This existing source is subject to the provisions of 326 IAC 2-6.1 Minor Source Operating Permit Program. Therefore, the source will be issued an MSOP.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.
- (d) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2005 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	0.21
PM-10	0.21
SO ₂	0.02
VOC	0.15
CO	2.36
NO _x	2.81
Lead	0

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this MSOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/emission unit	Potential To Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
#2F Boiler	0.40	0.22	15.00	0.15	2.27	4.00	0
#3F Boiler	0.40	0.22	15.00	0.15	2.27	4.00	0
#4F Boiler	0.39	0.21	14.52	0.15	2.27	3.87	0
#5 Boiler	0.41	0.41	0.03	0.30	4.54	5.41	0
#1 Highlander Boiler	0.18	0.18	0.01	0.13	2.02	2.40	0
#2 Highlander Boiler	0.18	0.18	0.01	0.13	2.02	2.40	0
Total Emissions	1.96	1.42	44.57	1.01	15.39	22.08	0

This table shows the allowable emissions for each pollutant for the entire source. PM, PM-10, SO₂, VOC, CO and NO_x allowable emissions limits were based on the Hammond Air Quality Control Ordinance No. 3522 (as amended).

- (a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than two hundred fifty (<250) tons per year, and it is not one of the twenty-eight (28) listed source categories.
- (b) This existing stationary source is not major for Emission Offset because the emissions of the nonattainment pollutants, VOC, NO_x and PM10 (as a surrogate for PM2.5), are less than one hundred (<100) tons per year.
- (c) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Federal Rule Applicability

- (a) The Cleaver Brooks Boiler (Central Plant) is subject to the New Source Performance Standard for Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, which is incorporated by reference as 326 IAC 12. The Cleaver Brooks Boiler (Central Plant) is subject to the requirements of this New Source Performance Standard since it was constructed after June 9, 1989 and has a maximum design heat input capacity of greater than 10 MMBtu/hr.

Nonapplicable portions of the NSPS will not be included in the permit. The Cleaver Brooks Boiler (Central Plant) is subject to the following portions of Subpart Dc.

- (1) 40 CFR 60.40c(a)
- (2) 40 CFR 60.41c
- (3) 40 CFR 60.48c(a)(1)
- (4) 40 CFR 60.48c(g)
- (5) 40 CFR 60.48c(i)

- (b) The two (2) Highlander Boilers (K-Bldg.) are not subject to the New Source Performance Standard, 326 IAC 12, 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units since they were constructed prior to June 9, 1989 and have a maximum design heat input capacity of less than 10 MMBtu/hr.
- (c) The three (3) Burnham Boilers (Central Plant) even though constructed after June 9, 1989, are not subject to the New Source Performance Standard, 326 IAC 12, 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units since they each have a maximum design heat input capacity of less than 10 MMBtu/hr.
- (d) The two (2) Highlander Boilers (K-Bldg.) are not subject to the New Source Performance Standard, 326 IAC 12, 40 CFR 60, Subpart Db Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units since they were constructed prior to June 19, 1984 and each have a maximum design heat input capacity of less than 100 MMBtu/hr.
- (e) The Cleaver Brooks Boiler (Central Plant) and three (3) Burnham Boilers (Central Plant) even though constructed after June 19, 1984, are not subject to the New Source Performance Standard, 326 IAC 12, 40 CFR 60, Subpart Db Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units since they each have a maximum design heat input capacity of less than 100 MMBtu/hr.
- (f) The Cleaver Brooks Boiler (Central Plant), two (2) Highlander Boilers (K-Bldg.), and three (3) Burnham Boilers (Central Plant) are not subject to the New Source Performance Standard, 326 IAC 12, 40 CFR 60, Subpart Da Standards of Performance for Electric Utility Steam Generating Units since they each have a maximum design heat input capacity of less than 250 MMBtu/hr.
- (g) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14,20 and 40 CFR Part 61, 63) included in this permit renewal.

State Rule Applicability – Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source has submitted a Preventive Maintenance Plan (PMP) on March 31, 1997. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements)

This existing source, located in Lake County, is not a major stationary source under 326 IAC 2-2 (PSD) because the emissions of each criteria pollutant are less than one hundred (<100) tons per year, and it is not one of the twenty-eight (28) listed source categories.

326 IAC 2-3 (Emission Offset)

This existing source, located in Lake County, is not a major stationary source under 326 IAC 2-3 (Emission Offset) because the emissions of the nonattainment pollutants are less than one hundred (<100) tons per year.

326 IAC 2-6 (Emission Reporting)

This source, located in Lake County, is not required to have a Part 70 operation permit and it does not emit volatile organic compounds (VOC) or oxides of nitrogen (NOx) at levels equal to or greater than twenty-five (25) tons per year, therefore, it is not subject to 326 IAC 2-6 (Emission Reporting).

Per Hammond Ordinance No. 7102, the source will be required to submit an annual emission inventory containing production information and/or fuel usage for each permitted unit. The emission inventory must be received by April 15th of each year. The submittal shall cover the twelve (12) consecutive month time period starting January 1 and ending December 31. This is a local requirement only.

The source is in compliance with the required emission reporting submittals.

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

State Rule Applicability – Individual Facilities

326 IAC 6.8-1-1 (Particulate Matter Limitations for Lake County – General Provisions)

This source is located in Lake County. It is not specifically listed in 326 IAC 6.8-2 through 326 IAC 6.8-11 of this rule and it does not have the potential to emit one hundred (100) tons or more; or actual emissions of ten (10) tons or more of particulate matter per year. Therefore, 326 IAC 6.8-1-1 does not apply to this source.

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

Pursuant to 326 IAC 6-2-2 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(b)), each of the boilers shall be limited to 0.5911 pounds per million British thermal unit, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu) 326 IAC 6-2-2	Equivalent Limit (lbs/hr)	Equivalent Limit (TPY)	Local Limit (lbs/hr)	Local Limit (TPY)
#1 Highlander Boiler	Prior to 1967	5.6	0.5911	3.3102	14.4985	0.0417	0.1828
#2 Highlander Boiler	Prior to 1967	5.6	0.5911	3.3102	14.4985	0.0417	0.1828

Q = 11.2 Pt = 0.5911

This emission limitation was based on the following equation:

$$\begin{aligned}
 Pt &= 0.87 / Q^{0.16} = 0.87 / (11.2^{(0.16)}) \\
 &= 0.87 / 1.4719 \\
 &= 0.5911 \text{ lb/mmBtu}
 \end{aligned}$$

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

Particulate emissions from the combustion of natural gas and no. 2 fuel oil will be governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended). As shown in the table above the local emission limitation will be more stringent than that using 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating; therefore, the source is in compliance with the rule.

326 IAC 6-2-4 (Particulate Matter Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), each of the boilers shall be limited to 0.4107 pounds per million British thermal unit, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu) 326 IAC 6-2-4	Equivalent Limit (lbs/hr)	Equivalent Limit (TPY)	Local Limit (lbs/hr)	Local Limit (TPY)
#2F Burnham Boiler (Central Plant)	1997	6.3	0.4107	2.5874	11.3329	0.0469	0.2056
#3F Burnham Boiler (Central Plant)	1997	6.3	0.4107	2.5874	11.3329	0.0469	0.2056
#4F Burnham Boiler (Central Plant)	1997	6.3	0.4107	2.5874	11.3329	0.0469	0.2056
#5F Cleaver Brooks Boiler (Central Plant)	2001	12.6	0.4107	5.1748	22.6657	0.0939	0.4112

Where: Q = 11.2 + 31.5 = 42.7 Pt = 0.4107

The emission limitation was based on the following equation:

$$Pt = 1.09 / Q^{0.26} = 1.09 / (42.7^{(0.26)}) = 1.09 / 2.654 = 0.4107 \text{ lb/mmBtu}$$

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

Particulate emissions from the combustion of natural gas and no. 2 fuel oil will be governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended). As shown in the table above the local emission limitation will be more stringent than that using 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating; therefore, the source is in compliance with the rule.

Local Rule Applicability

Hammond Air Quality Control Ordinance No. 3522 (as amended)

Emissions from the combustion of natural gas are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Particulate Matter (PM), Sulfur Dioxide (SO₂), Volatile Organic Compound (VOC), Carbon Monoxide (CO), and Nitrogen Oxide (NO_x).

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-6.1 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-6.1-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

The Compliance Determination Requirements applicable to this source are as follows:

1. The three (3) Burnham Boilers have applicable compliance determination conditions as specified below:
 - (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed five-tenths percent (0.5%) by weight by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

- (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the three (3) Burnham Boilers, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

The Compliance Monitoring Requirements applicable to this source are as follows:

1. The three (3) Burnham Boilers have applicable compliance monitoring conditions as specified below:
 - (a) Visible emission notations of each of the three (3) Burnham Boilers' stack exhaust shall be performed once per day during normal daylight operations while combusting No. 2 fuel oil. A trained employee shall record whether emissions are normal or abnormal.
 - (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
 - (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
 - (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
 - (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances shall be considered a deviation from this permit.

This monitoring condition is necessary because the three (3) Burnham Boilers must operate properly to ensure compliance with Hammond Air Quality Control Ordinance No. 3522 (as amended) and 326 IAC 2-6.1 Minor Source Operating Permit Program.

Recommendation

The staff recommends to the Commissioner that the MSOP Renewal 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 April 27, 2006.

Conclusion

The operation of steam boilers used for heating the university shall be subject to the conditions of the attached MSOP Renewal No. **M089-23035-00249**.

ALABAMA POWER LAW (CDS)/EIS CALCULATIONS

Purdue University Calumet
 169th & Wicker Avenue
 Hammond, Indiana 46323-2094

PLANT ID NO: 00249
 REC'D DATE: 4/27/06
 CALC DATE: 4/28/06

CALCULATIONS BY: Kristina Massey

NO. OF POINTS: 6

****NOTES****

EF: EMISSION FACTOR
 CE: CONTROL EFFICIENCY
 MDR: MAXIMUM DESIGN RATE
 MDC: MAXIMUM DESIGN CAPACITY
 Ts: STACK DISCHARGE TEMPERATURE
 UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

#2F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mmcft/hr): 0.0062 QTY BURNED (mmcft/yr): N/A FLOWRATE (ACFM): 215
 (Stack S-3) Ts(°F): 330
 CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

AP-42			POTENTIAL EMISSIONS						ALLOWABLE	
POLLUTANT	EF(lbs/mmcft)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	7.6	0	0.0469	1.1266	0.2056	0.0469	0.2056	0.0380	0.0469	0.2056
PM10	7.6	0	0.0469	1.1266	0.2056	0.0469	0.2056	0.0380	0.0469	0.2056
SOx	0.6	0	0.0037	0.0889	0.0162	0.0037	0.0162	N/A	0.0037	0.0162
NOx	100	0	0.6176	14.8235	2.7053	0.6176	2.7053	N/A	0.6176	2.7053
VOC	5.5	0	0.0340	0.8153	0.1488	0.0340	0.1488	N/A	0.0340	0.1488
CO	84	0	0.5188	12.4518	2.2724	0.5188	2.2724	N/A	0.5188	2.2724
LEAD	0.0005	0	0.0000	0.0001	0.0000	0.0000	0.0000	N/A	0.0000	0.0000

*Natural Gas Fired
 **Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
 SCC No. 1-02-006-03

#2F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/gal): 138,000 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mgal/hr): 0.0457 ASH CONTENT (%): N/A FLOWRATE (ACFM): 215
 (Stack S-1) QTY BURNED (mgal/yr): N/A SULFUR CONTENT (%): 0.5 Ts(°F): 330
 CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

AP-42			POTENTIAL EMISSIONS						ALLOWABLE	
POLLUTANT	EF(lbs/mgal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	2	0	0.0913	2.1913	0.3999	0.0913	0.3999	0.0739	0.0913	0.3999
PM10	1.08	0	0.0493	1.1833	0.2160	0.0493	0.2160	0.0399	0.0493	0.2160
SOx	75	0	3.4239	82.1739	14.9967	3.4239	14.9967	N/A	3.4239	14.9967
NOx	20	0	0.9130	21.9130	3.9991	0.9130	3.9991	N/A	0.9130	3.9991
VOC	0.252	0	0.0115	0.2761	0.0504	0.0115	0.0504	N/A	0.0115	0.0504
CO	5	0	0.2283	5.4783	0.9998	0.2283	0.9998	N/A	0.2283	0.9998
LEAD	0.0004	0	0.0000	0.0004	0.0001	0.0000	0.0001	N/A	0.0000	0.0001

*No. 2 Fuel Oil Combustion
 **Calculations made using emission factors from AP-42, Table 1.3-2, 1.3-4, and 1.3-8; SCC No. 1-03-005-03
 Table 1.3-2 SO2, NOx, & CO; Table 1.3-4 VOC; Table 1.3-8 PM10 & PM; SCC No. 1-03-005-02 Lead.
 Per Company's request, 150S was used for SOx instead of 142S.

#3F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mmcft/hr): 0.0062 QTY BURNED (mmcft/yr): N/A FLOWRATE (ACFM): 625
(Stack S-2) Ts(°F): 425
CNTRL DEV: NONE PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	AP-42		POTENTIAL EMISSIONS						ALLOWABLE	
	EF(lbs/mmcft)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	7.6	0	0.0469	1.1266	0.2056	0.0469	0.2056	0.0146	0.0469	0.2056
PM10	7.6	0	0.0469	1.1266	0.2056	0.0469	0.2056	0.0146	0.0469	0.2056
SOx	0.6	0	0.0037	0.0889	0.0162	0.0037	0.0162	N/A	0.0037	0.0162
NOx	100	0	0.6176	14.8235	2.7053	0.6176	2.7053	N/A	0.6176	2.7053
VOC	5.5	0	0.0340	0.8153	0.1488	0.0340	0.1488	N/A	0.0340	0.1488
CO	84	0	0.5188	12.4518	2.2724	0.5188	2.2724	N/A	0.5188	2.2724
LEAD	0.0005	0	0.0000	0.0001	0.0000	0.0000	0.0000	N/A	0.0000	0.0000

*Natural Gas Fired
**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-02-006-03

#3F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/gal): 138,000 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mgal/hr): 0.0457 ASH CONTENT (%): N/A FLOWRATE (ACFM): 625
(Stack S-3) QTY BURNED (mgal/yr): N/A SULFUR CONTENT (%): 0.5 Ts(°F): 425
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	AP-42		POTENTIAL EMISSIONS						ALLOWABLE	
	EF(lbs/mgal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	2	0	0.0913	2.1913	0.3999	0.0913	0.3999	0.0285	0.0913	0.3999
PM10	1.08	0	0.0493	1.1833	0.2160	0.0493	0.2160	0.0154	0.0493	0.2160
SOx	75	0	3.4239	82.1739	14.9967	3.4239	14.9967	N/A	3.4239	14.9967
NOx	20	0	0.9130	21.9130	3.9991	0.9130	3.9991	N/A	0.9130	3.9991
VOC	0.252	0	0.0115	0.2761	0.0504	0.0115	0.0504	N/A	0.0115	0.0504
CO	5	0	0.2283	5.4783	0.9998	0.2283	0.9998	N/A	0.2283	0.9998
LEAD	0.0004	0	0.0000	0.0004	0.0001	0.0000	0.0001	N/A	0.0000	0.0001

*No. 2 Fuel Oil Combustion
**Calculations made using emission factors from AP-42, Table 1.3-2, 1.3-4, and 1.3-8; SCC No. 1-03-005-03
Table 1.3-2 SO2, NOx, & CO; Table 1.3-4 VOC; Table 1.3-8 PM10 & PM; SCC No. 1-03-005-02 Lead.
Per Company's request, 150S was used for SOx instead of 142S.

#4F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mmcft/hr): 0.0062 QTY BURNED (mmcft/yr): N/A FLOWRATE (ACFM): 625
(Stack S-2) Ts(°F): 425
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

AP-42			POTENTIAL EMISSIONS						ALLOWABLE	
POLLUTANT	EF(lbs/mmcft)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	7.6	0	0.0469	1.1266	0.2056	0.0469	0.2056	0.0146	0.0469	0.2056
PM10	7.6	0	0.0469	1.1266	0.2056	0.0469	0.2056	0.0146	0.0469	0.2056
SOx	0.6	0	0.0037	0.0889	0.0162	0.0037	0.0162	N/A	0.0037	0.0162
NOx	100	0	0.6176	14.8235	2.7053	0.6176	2.7053	N/A	0.6176	2.7053
VOC	5.5	0	0.0340	0.8153	0.1488	0.0340	0.1488	N/A	0.0340	0.1488
CO	84	0	0.5188	12.4518	2.2724	0.5188	2.2724	N/A	0.5188	2.2724
LEAD	0.0005	0	0.0000	0.0001	0.0000	0.0000	0.0000	N/A	0.0000	0.0000

*Natural Gas Fired
**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-02-006-03

#4F BOILER MDC (mmBtu/hr): 6.1 HEAT CONTENT (Btu/gal): 138,000 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mgal/hr): 0.0442 ASH CONTENT (%): N/A FLOWRATE (ACFM): 625
(Stack S-2) QTY BURNED (mgal/yr): N/A SULFUR CONTENT (%): 0.5 Ts(°F): 425
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

AP-42			POTENTIAL EMISSIONS						ALLOWABLE	
POLLUTANT	EF(lbs/mgal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	2	0	0.0884	2.1217	0.3872	0.0884	0.3872	0.0276	0.0884	0.3872
PM10	1.08	0	0.0477	1.1457	0.2091	0.0477	0.2091	0.0149	0.0477	0.2091
SOx	75	0	3.3152	79.5652	14.5207	3.3152	14.5207	N/A	3.3152	14.5207
NOx	20	0	0.8841	21.2174	3.8722	0.8841	3.8722	N/A	0.8841	3.8722
VOC	0.252	0	0.0111	0.2673	0.0488	0.0111	0.0488	N/A	0.0111	0.0488
CO	5	0	0.2210	5.3043	0.9680	0.2210	0.9680	N/A	0.2210	0.9680
LEAD	0.0004	0	0.0000	0.0004	0.0001	0.0000	0.0001	N/A	0.0000	0.0001

*Fuel Oil
**Calculations made using emission factors from AP-42, Table 1.3-2, 1.3-4, and 1.3-8; SCC No. 1-03-005-03
Table 1.3-2 SO2, NOx, & CO; Table 1.3-4 VOC; Table 1.3-8 PM10 & PM; SCC No. 1-03-005-02 Lead.
Per Company's request, 150S was used for SOx instead of 142S.

#5F CLEAVER BROOKS BOILER MDC (mmBtu/hr): 12.6 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mmcft/hr): 0.0124 QTY BURNED (mmcft/yr): N/A FLOWRATE (ACFM): 568
(Stack S-1) Ts(°F): 330
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

AP-42			POTENTIAL EMISSIONS						ALLOWABLE	
POLLUTANT	EF(lbs/mmcft)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	7.6	0	0.0939	2.2532	0.4112	0.0939	0.4112	0.0287	0.0939	0.4112
PM10	7.6	0	0.0939	2.2532	0.4112	0.0939	0.4112	0.0287	0.0939	0.4112
SOx	0.6	0	0.0074	0.1779	0.0325	0.0074	0.0325	N/A	0.0074	0.0325
NOx	100	0	1.2353	29.6471	5.4106	1.2353	5.4106	N/A	1.2353	5.4106
VOC	5.5	0	0.0679	1.6306	0.2976	0.0679	0.2976	N/A	0.0679	0.2976
CO	84	0	1.0376	24.9035	4.5449	1.0376	4.5449	N/A	1.0376	4.5449
LEAD	0.0005	0	0.0000	0.0001	0.0000	0.0000	0.0000	N/A	0.0000	0.0000

*Natural Gas Fired
**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-02-006-02

#1 HIGHLANDER BOILER MDC (mmBtu/hr): 5.6 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (2' : 35')
(K-Bldg.) MDR (mmcft/hr): 0.0055 QTY BURNED (mmcft/yr): N/A FLOWRATE (ACFM): 215
(Stack S-4) Ts(°F): 400
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	AP-42 EF(lbs/mmcft)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	7.6	0	0.0417	1.0014	0.1828	0.0417	0.1828	0.0367	0.0417	0.1828
PM10	7.6	0	0.0417	1.0014	0.1828	0.0417	0.1828	0.0367	0.0417	0.1828
SOx	0.6	0	0.0033	0.0791	0.0144	0.0033	0.0144	N/A	0.0033	0.0144
NOx	100	0	0.5490	13.1765	2.4047	0.5490	2.4047	N/A	0.5490	2.4047
VOC	5.5	0	0.0302	0.7247	0.1323	0.0302	0.1323	N/A	0.0302	0.1323
CO	84	0	0.4612	11.0682	2.0200	0.4612	2.0200	N/A	0.4612	2.0200
LEAD	0.0005	0	0.0000	0.0001	0.0000	0.0000	0.0000	N/A	0.0000	0.0000

*Natural Gas Fired

**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-03-006-03

#2 HIGHLANDER BOILER MDC (mmBtu/hr): 5.6 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (2' : 35')
(K-Bldg.) MDR (mmcft/hr): 0.0055 QTY BURNED (mmcft/yr): N/A FLOWRATE (ACFM): 215
(Stack S-5) Ts(°F): 400
CNTRL DEV: NONE PERMITTED OPERATING HRS: **8760** hr/yr

POLLUTANT	AP-42 EF(lbs/mmcft)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	7.6	0	0.0417	1.0014	0.1828	0.0417	0.1828	0.0367	0.0417	0.1828
PM10	7.6	0	0.0417	1.0014	0.1828	0.0417	0.1828	0.0367	0.0417	0.1828
SOx	0.6	0	0.0033	0.0791	0.0144	0.0033	0.0144	N/A	0.0033	0.0144
NOx	100	0	0.5490	13.1765	2.4047	0.5490	2.4047	N/A	0.5490	2.4047
VOC	5.5	0	0.0302	0.7247	0.1323	0.0302	0.1323	N/A	0.0302	0.1323
CO	84	0	0.4612	11.0682	2.0200	0.4612	2.0200	N/A	0.4612	2.0200
LEAD	0.0005	0	0.0000	0.0001	0.0000	0.0000	0.0000	N/A	0.0000	0.0000

*Natural Gas Fired

**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-03-006-03

Source Totals: (Natural Gas)

POLLUTANT	POTENTIAL EMISSIONS						ALLOWABLE	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	0.3182	7.6358	1.3935	0.3182	1.3935	0.1695	0.3182	1.3935
PM10	0.3182	7.6358	1.3935	0.3182	1.3935	0.1695	0.3182	1.3935
SOx	0.0251	0.6028	0.1100	0.0251	0.1100	N/A	0.0251	0.1100
NOx	4.1863	100.4706	18.3359	4.1863	18.3359	N/A	4.1863	18.3359
VOC	0.2302	5.5259	1.0085	0.2302	1.0085	N/A	0.2302	1.0085
CO	3.5165	84.3953	15.4021	3.5165	15.4021	N/A	3.5165	15.4021
LEAD	0.0000	0.0005	0.0001	0.0000	0.0001	N/A	0.0000	0.0001

Source Totals: (No. 2 Fuel Oil)

POLLUTANT	POTENTIAL EMISSIONS						ALLOWABLE	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	0.2710	6.5043	1.1870	0.2710	1.1870	0.1299	0.2710	1.1870
PM10	0.1463	3.5123	0.6410	0.1463	0.6410	0.0701	0.1463	0.6410
SOx	10.1630	243.9130	44.5141	10.1630	44.5141	N/A	10.1630	44.5141
NOx	2.7101	65.0435	11.8704	2.7101	11.8704	N/A	2.7101	11.8704
VOC	0.0341	0.8195	0.1496	0.0341	0.1496	N/A	0.0341	0.1496
CO	0.6775	16.2609	2.9676	0.6775	2.9676	N/A	0.6775	2.9676
LEAD	0.0001	0.0013	0.0002	0.0001	0.0002	N/A	0.0001	0.0002

Source Totals: Purdue University Calumet

POLLUTANT	POTENTIAL EMISSIONS						ALLOWABLE	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)		
PM	0.4483	10.7603	1.9638	0.4483	1.9638	0.2321	0.4483	1.9638
PM10	0.3237	7.7683	1.4177	0.3237	1.4177	0.1723	0.3237	1.4177
SOx	10.1770	244.2490	44.5755	10.1770	44.5755	N/A	10.1770	44.5755
NOx	5.0435	121.0435	22.0904	5.0435	22.0904	N/A	5.0435	22.0904
VOC	0.2302	5.5259	1.0085	0.2302	1.0085	N/A	0.2302	1.0085
CO	3.5165	84.3953	15.4021	3.5165	15.4021	N/A	3.5165	15.4021
LEAD	0.0001	0.0016	0.0003	0.0001	0.0003	N/A	0.0001	0.0003