



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: April 1, 2010

RE: Indiana Institute of Technology / 003-29017-00380

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FN-REGIS.dot 1/2/08



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REGISTRATION OFFICE OF AIR QUALITY

Indiana Institute of Technology
1600 E. Washington Blvd.
Fort Wayne, Indiana 46803

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. R003-29017-00380

Issued by:

Alfred C. Dumaul, Ph. D., Section Chief
Permits Branch
Office of Air Quality

Issuance Date: April 1, 2010

SECTION A

SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant 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 Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates natural gas-fired heaters and boilers at an existing college.

Source Address:	1600 E. Washington Blvd., Fort Wayne, IN 46803
Mailing Address:	1600 E. Washington Blvd., Fort Wayne, IN 46803
General Source Phone Number:	(260) 422-5561
SIC Code:	8221
County Location:	Allen County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) natural gas-fired boiler, identified as SCH-B4, with a maximum heat input capacity of 0.10 MMBtu per hour, constructed in 1993, located in the Schaefer building, exhausting to stack SCH-B4-S.
- (b) One (1) natural gas-fired boiler, identified as SCH-B3, with a maximum heat input capacity of 1.20 MMBtu per hour, constructed in 1989, located in the Schaefer building, exhausting to stack SCH-B3-S.
- (c) Two (2) natural gas-fired boilers, identified as SCH-B1 and SCH-B2, with a maximum heat input capacity of 1.0 MMBtu per hour, each, constructed in 1989, located in the Schaefer building, exhausting to stacks SCH-B1-S and SCH-B2-S, respectively.
- (d) Natural gas-fired kitchen equipment, identified as AN-KIT, with a maximum heat input capacity of 1.03 MMBtu per hour, located in the Kitchen, exhausting to vent AN-KIT-V.
- (e) One (1) natural gas-fired boiler, identified as AB-B1, with a maximum heat input capacity of 0.65 MMBtu per hour, constructed in 2000, located in the Abbott building, exhausting to stack AB-B1-S.
- (f) Two (2) natural gas-fired boilers, identified as PIE-B1 and PIE-B2, with a maximum heat input capacity of 2.05 MMBtu per hour, each, constructed in 2000, located in the Pierson building, exhausting to stacks PIE-B1-S and PIE-B2-S, respectively.
- (g) Eight (8) natural gas-fired boilers, identified as PIE-B3, PIE-B4, PIE-B5, PIE-B6, PIE-B7, PIE-B8, PIE-B9 and PIE-B10, with a maximum heat input capacity of 0.30 MMBtu per hour, each, constructed in 2000, located in the Pierson building, exhausting to vents PIE-B3-V, PIE-B4-V, PIE-B5-V, PIE-B6-V, PIE-B7-V, PIE-B8-V, PIE-B9-V, and PIE-B10-V, respectively.
- (h) One (1) natural gas-fired boiler, identified as ZOL-B3, with a maximum heat input capacity of 0.40 MMBtu per hour, constructed in 2001, located in the Zollner building, exhausting to stack ZOL-B123-S.

- (i) Two (2) natural gas-fired boilers, identified as ZOL-B1 and ZOL-B2, with a maximum heat input capacity of 1.06 MMBtu per hour, constructed in 2001, located in the Zollner building, both exhausting to stack ZOL-B123-S.
- (j) One (1) natural gas-fired water heater, identified as AB-WH1, with a maximum heat input capacity of 0.08 MMBtu per hour, constructed in 2003, located in the Abbott building, exhausting to stack AB-WH1-S.
- (k) Two (2) natural gas-fired boilers, identified as AN-B1 and AN-B2, with a maximum heat input capacity of 1.20 MMBtu per hour, each, constructed in 2003, located in the Andorfer building, both exhausting to stack AN-B1-B2-S.
- (l) Three (3) natural gas-fired boilers, identified as AN-AHU1, AN-AHU2, and AN-AHU4, with a maximum heat input capacity of 0.48 MMBtu per hour, each, constructed in 2003, located in the Andorfer building, exhausting to vents An-AHU1-V, AN-AHU2-V, and AN-AHU4-V, respectively.
- (m) One (1) natural gas-fired boiler, identified as AN-AHU3, with a maximum heat input capacity of 0.14 MMBtu per hour, constructed in 2003, located in the Andorfer building, exhausting to stack AN-AHU3-V.
- (n) One (1) natural gas-fired make-up air unit, identified as AN-MAU1, with a maximum heat input capacity of 0.80 MMBtu per hour, constructed in 2003, located in the Andorfer building, exhausting to vent AN-MAU1-V.
- (o) Twelve (12) natural gas-fired boilers, identified as YR-B1 through YR-B12, with a maximum heat input capacity of 0.06 MMBtu per hour, each, constructed in 2003, located in the Yergens-Rogers building, exhausting to vents YR-B1-V through YR-B4-V and stacks YR-B5-S through YR-B12-S, respectively.
- (p) Two (2) natural gas-fired water heaters, identified as AN-WH1 and AN-WH2, with a maximum heat input capacity of 0.24 MMBtu per hour, constructed in 2004, located in the Andorfer building, exhausting to vents AN-WH1-V and AN-WH2-V, respectively.
- (q) One (1) natural gas-fired boiler, identified as CUN-B1, with a maximum heat input capacity of 0.23 MMBtu per hour, constructed in 2004, located in the Cunningham building, exhausting to vent CUN-B1-V.
- (r) Thirteen (13) natural gas-fired water heaters, identified as YR-WH1 through YR-WH13, with a maximum heat input capacity of 0.04 MMBtu per hour, each, constructed in 2004, located in the Yergens-Rogers building, exhausting to stack YR-WH1-S, vents YR-WH2-V through YR-WH5-V, and stacks YR-WH6-S through YR-WH13-S, respectively.
- (s) Three (3) natural gas-fired boilers, identified as CUN-B2, CUN-B3 and CUN-B4, with a maximum heat input capacity of 0.31 MMBtu per hour, each, constructed in 2006, located in the Cunningham building, exhausting to vents CUN-B2-V, CUN-B3-V, and CUN-B4-V, respectively.
- (t) Two (2) natural gas-fired roof top units, identified as CUN-RTU1 and CUN-RTU2, with a maximum heat input capacity of 0.80 MMBtu per hour, each, constructed in 2006, located in the Cunningham building, exhausting to vents CUN-RTU1-V and CUN-RTU2-V, respectively.
- (u) One (1) natural gas-fired make-up air unit, identified as ZOL-MAU1, with a maximum heat input capacity of 0.60 MMBtu per hour, constructed in 2007, located in the Zollner building, exhausting to vent ZOL-MAU1-V.

- (v) One (1) natural gas-fired roof top unit, identified as WF-RTU1, with a maximum heat input capacity of 0.20 MMBtu per hour, constructed in 2007, located in the Warrior Fieldhouse, exhausting to vent WF-RTU1-V.
- (w) Two (2) natural gas-fired roof top units, identified as WF-RTU2 and WF-RTU4, with a maximum heat input capacity of 0.08 MMBtu per hour, each, constructed in 2007, located in the Warrior Fieldhouse, exhausting to vents WF-RTU2-V and WF-RTU4-V, respectively.
- (x) Two (2) natural gas-fired roof top units, identified as WF-RTU3 and WF-RTU5, with a maximum heat input capacity of 0.25 MMBtu per hour, each, constructed in 2007, located in the Warrior Fieldhouse, exhausting to vents WF-RTU3-V and WF-RTU5-V, respectively.
- (y) Two (2) natural gas-fired roof top units, identified as WF-RTU6 and WF-RTU7, with a maximum heat input capacity of 0.35 MMBtu per hour, each, constructed in 2007, located in the Warrior Fieldhouse, exhausting to vents WF-RTU6-V and WF-RTU7-V, respectively.
- (z) One (1) natural gas-fired water heater, identified as KAL-WH1, with a maximum heat input capacity of 0.20 MMBtu per hour, constructed in 2008, located in the Basement, exhausting to stack KAL-WH1-S.
- (aa) One (1) natural gas-fired water heater, identified as AC-WH1, with a maximum heat input capacity of 0.25 MMBtu per hour, approved for construction in 2010, located in the Athletic Center, exhausting to vent AC-WH1V.
- (bb) Seven (7) natural gas-fired water heaters, identified as WR-WH1 through WR-WH6, with a maximum heat input capacity of 0.15 MMBtu per hour, each, approved for construction in 2010, located in the Warrior Row building, exhausting to vents WR-WH1V through WR-WH6V, respectively.
- (cc) Three (3) natural gas-fired boilers, identified as WR-B1 through WR-B3, with a maximum heat input capacity of 0.08 MMBtu per hour, each, approved for construction in 2010, located in the Warrior Row building, exhausting to vents WR-B1V through WR-B3V, respectively.
- (dd) Four (4) natural gas-fired boilers, identified as WR-B4 through WR-B7, with a maximum heat input capacity of 0.06 MMBtu per hour, each, approved for construction in 2010, located in the Warrior Row building, exhausting to vents WR-B4V through WR-B7, respectively.

SECTION B

GENERAL CONDITIONS

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

Terms in this registration 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 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

B.3 Registration Revocation [326 IAC 2-1.1-9]

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

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (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 registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to Registration No. R003-29017-00380 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 registration.

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.
- (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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

- (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 on or before the date it is due.

B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

B.8 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, 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.

The Permittee shall implement the PMPs.

If, due to circumstances beyond the Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant notifies:

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

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 Opacity [326 IAC 5-1]

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

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

C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant 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).

SECTION D.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (a) One (1) natural gas-fired boiler, identified as SCH-B4, with a maximum heat input capacity of 0.10 MMBtu per hour, constructed in 1993, located in the Schaefer building, exhausting to stack SCH-B4-S.
- (b) One (1) natural gas-fired boiler, identified as SCH-B3, with a maximum heat input capacity of 1.20 MMBtu per hour, constructed in 1989, located in the Schaefer building, exhausting to stack SCH-B3-S.
- (c) Two (2) natural gas-fired boilers, identified as SCH-B1 and SCH-B2, with a maximum heat input capacity of 1.0 MMBtu per hour, each, constructed in 1989, located in the Schaefer building, exhausting to stacks SCH-B1-S and SCH-B2-S, respectively.
- (e) One (1) natural gas-fired boiler, identified as AB-B1, with a maximum heat input capacity of 0.65 MMBtu per hour, constructed in 2000, located in the Abbott building, exhausting to stack AB-B1-S.
- (f) Two (2) natural gas-fired boilers, identified as PIE-B1 and PIE-B2, with a maximum heat input capacity of 2.05 MMBtu per hour, each, constructed in 2000, located in the Pierson building, exhausting to stacks PIE-B1-S and PIE-B2-S, respectively.
- (g) Eight (8) natural gas-fired boilers, identified as PIE-B3, PIE-B4, PIE-B5, PIE-B6, PIE-B7, PIE-B8, PIE-B9 and PIE-B10, with a maximum heat input capacity of 0.30 MMBtu per hour, each, constructed in 2000, located in the Pierson building, exhausting to vents PIE-B3-V, PIE-B4-V, PIE-B5-V, PIE-B6-V, PIE-B7-V, PIE-B8-V, PIE-B9-V, and PIE-B10-V, respectively.
- (h) One (1) natural gas-fired boiler, identified as ZOL-B3, with a maximum heat input capacity of 0.40 MMBtu per hour, constructed in 2001, located in the Zollner building, exhausting to stack ZOL-B123-S.
- (i) Two (2) natural gas-fired boilers, identified as ZOL-B1 and ZOL-B2, with a maximum heat input capacity of 1.06 MMBtu per hour, constructed in 2001, located in the Zollner building, both exhausting to stack ZOL-B123-S.
- (j) One (1) natural gas-fired water heater, identified as AB-WH1, with a maximum heat input capacity of 0.08 MMBtu per hour, constructed in 2003, located in the Abbott building, exhausting to stack AB-WH1-S.
- (k) Two (2) natural gas-fired boilers, identified as AN-B1 and AN-B2, with a maximum heat input capacity of 1.20 MMBtu per hour, each, constructed in 2003, located in the Andorfer building, both exhausting to stack AN-B1-B2-S.
- (l) Three (3) natural gas-fired boilers, identified as AN-AHU1, AN-AHU2, and AN-AHU4, with a maximum heat input capacity of 0.48 MMBtu per hour, each, constructed in 2003, located in the Andorfer building, exhausting to vents An-AHU1-V, AN-AHU2-V, and AN-AHU4-V, respectively.
- (m) One (1) natural gas-fired boiler, identified as AN-AHU3, with a maximum heat input capacity of 0.14 MMBtu per hour, constructed in 2003, located in the Andorfer building, exhausting to stack AN-AHU3-V.

- (o) Twelve (12) natural gas-fired boilers, identified as YR-B1 through YR-B12, with a maximum heat input capacity of 0.06 MMBtu per hour, each, constructed in 2003, located in the Yergens-Rogers building, exhausting to vents YR-B1-V through YR-B4-V and stacks YR-B5-S through YR-B12-S, respectively.
- (p) Two (2) natural gas-fired water heaters, identified as AN-WH1 and AN-WH2, with a maximum heat input capacity of 0.24 MMBtu per hour, constructed in 2004, located in the Andorfer building, exhausting to vents AN-WH1-V and AN-WH2-V, respectively.
- (q) One (1) natural gas-fired boiler, identified as CUN-B1, with a maximum heat input capacity of 0.23 MMBtu per hour, constructed in 2004, located in the Cunningham building, exhausting to vent CUN-B1-V.
- (r) Thirteen (13) natural gas-fired water heaters, identified as YR-WH1 through YR-WH13, with a maximum heat input capacity of 0.04 MMBtu per hour, each, constructed in 2004, located in the Yergens-Rogers building, exhausting to stack YR-WH1-S, vents YR-WH2-V through YR-WH5-V, and stacks YR-WH6-S through YR-WH13-S, respectively.
- (s) Three (3) natural gas-fired boilers, identified as CUN-B2, CUN-B3 and CUN-B4, with a maximum heat input capacity of 0.31 MMBtu per hour, each, constructed in 2006, located in the Cunningham building, exhausting to vents CUN-B2-V, CUN-B3-V, and CUN-B4-V, respectively.
- (z) One (1) natural gas-fired water heater, identified as KAL-WH1, with a maximum heat input capacity of 0.20 MMBtu per hour, constructed in 2008, located in the Basement, exhausting to stack KAL-WH1-S.
- (aa) One (1) natural gas-fired water heater, identified as AC-WH1, with a maximum heat input capacity of 0.25 MMBtu per hour, approved for construction in 2010, located in the Athletic Center, exhausting to vent AC-WH1V.
- (bb) Seven (7) natural gas-fired water heaters, identified as WR-WH1 through WR-WH6, with a maximum heat input capacity of 0.15 MMBtu per hour, each, approved for construction in 2010, located in the Warrior Row building, exhausting to vents WR-WH1V through WR-WH6V, respectively.
- (cc) Three (3) natural gas-fired boilers, identified as WR-B1 through WR-B3, with a maximum heat input capacity of 0.08 MMBtu per hour, each, approved for construction in 2010, located in the Warrior Row building, exhausting to vents WR-B1V through WR-B3V, respectively.
- (dd) Four (4) natural gas-fired boilers, identified as WR-B4 through WR-B7, with a maximum heat input capacity of 0.06 MMBtu per hour, each, approved for construction in 2010, located in the Warrior Row building, exhausting to vents WR-B4V through WR-B7, 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 [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 Particulate Emission Limitations [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a), particulate emissions from indirect heating facilities constructed after September 21, 1983, shall be limited to the following:

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

where:

Pt = pounds of particulate matter (PM) emitted per MMBtu heat input
Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input.

Year Constructed	Unit Descriptions	Pt
1989	SCH-B1, SCH-B2, SCH-B3	0.6
1993	SCH-B4	0.6
2000	AB-B1, PIE-B1 through PIE-B10	0.59
2001	ZOL-B1, ZOL-B2, and ZOL-B3	0.56
2003	AB-WH1, AN-B1, AN-B2, AN-AHU1 through AN-AHU4, YR-B1 through YR-B12	0.52
2004	AN-WH1, AN-WH2, YR-WH1 through YR-WH13	0.51
2006	CUN-B1 through CUN-B4	0.50
2008	KAL-WH1	0.50
2010	AC-WH1, WR-WH1 through WR-WH7, WR-B1 through B7	0.49

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

**REGISTRATION
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Indiana Institute of Technology
Address:	1600 E. Washington Blvd.
City:	Fort Wayne, Indiana 46803
Phone Number:	(260) 422-5561
Registration No.:	R003-29017-00380

I hereby certify that Indiana Institute of Technology is :

- still in operation.
- no longer in operation.

I hereby certify that Indiana Institute of Technology is :

- in compliance with the requirements of Registration No. R003-29017-00380.
- not in compliance with the requirements of Registration No. R003-29017-00380.

Authorized Individual (typed):
Title:
Signature:
Phone Number:
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:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Description and Location

Source Name:	Indiana Institute of Technology
Source Location:	1600 E. Washington Blvd., Fort Wayne IN 46803
County:	Allen
SIC Code:	8221
Registration No.:	R003-29017-00380
Permit Reviewer:	Summer Keown

On February 25, 2010, the Office of Air Quality (OAQ) received an application from Indiana Institute of Technology related to the operation of natural gas-fired heaters and boilers at an existing college.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Allen County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective February 12, 2007, for the Fort Wayne area, including Allen County, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

- (a) **Ozone Standards**
 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 ozone. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM2.5**
 Allen County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

- (c) Other Criteria Pollutants
Allen County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Indiana Institute of Technology on February 25, 2010, relating to the operation of natural gas-fired heaters and boilers at an existing college.

The following existing emission units were considered exempt at the time of construction:

- (a) One (1) natural gas-fired boiler, identified as SCH-B4, with a maximum heat input capacity of 0.10 MMBtu per hour, constructed in 1993, located in the Schaefer building, exhausting to stack SCH-B4-S.
- (b) One (1) natural gas-fired boiler, identified as SCH-B3, with a maximum heat input capacity of 1.20 MMBtu per hour, constructed in 1989, located in the Schaefer building, exhausting to stack SCH-B3-S.
- (c) Two (2) natural gas-fired boilers, identified as SCH-B1 and SCH-B2, with a maximum heat input capacity of 1.0 MMBtu per hour, each, constructed in 1989, located in the Schaefer building, exhausting to stacks SCH-B1-S and SCH-B2-S, respectively.
- (d) Natural gas-fired kitchen equipment, identified as AN-KIT, with a maximum heat input capacity of 1.03 MMBtu per hour, located in the Kitchen, exhausting to vent AN-KIT-V.
- (e) One (1) natural gas-fired boiler, identified as AB-B1, with a maximum heat input capacity of 0.65 MMBtu per hour, constructed in 2000, located in the Abbott building, exhausting to stack AB-B1-S.
- (f) Two (2) natural gas-fired boilers, identified as PIE-B1 and PIE-B2, with a maximum heat input capacity of 2.05 MMBtu per hour, each, constructed in 2000, located in the Pierson building, exhausting to stacks PIE-B1-S and PIE-B2-S, respectively.
- (g) Eight (8) natural gas-fired boilers, identified as PIE-B3, PIE-B4, PIE-B5, PIE-B6, PIE-B7, PIE-B8, PIE-B9 and PIE-B10, with a maximum heat input capacity of 0.30 MMBtu per hour, each, constructed in 2000, located in the Pierson building, exhausting to vents PIE-B3-V, PIE-B4-V, PIE-B5-V, PIE-B6-V, PIE-B7-V, PIE-B8-V, PIE-B9-V, and PIE-B10-V, respectively.
- (h) One (1) natural gas-fired boiler, identified as ZOL-B3, with a maximum heat input capacity of 0.40 MMBtu per hour, constructed in 2001, located in the Zollner building, exhausting to stack ZOL-B123-S.
- (i) Two (2) natural gas-fired boilers, identified as ZOL-B1 and ZOL-B2, with a maximum heat input capacity of 1.06 MMBtu per hour, constructed in 2001, located in the Zollner building, both exhausting to stack ZOL-B123-S.
- (j) One (1) natural gas-fired water heater, identified as AB-WH1, with a maximum heat input capacity of 0.08 MMBtu per hour, constructed in 2003, located in the Abbott building, exhausting to stack

AB-WH1-S.

- (k) Two (2) natural gas-fired boilers, identified as AN-B1 and AN-B2, with a maximum heat input capacity of 1.20 MMBtu per hour, each, constructed in 2003, located in the Andorfer building, both exhausting to stack AN-B1-B2-S.
- (l) Three (3) natural gas-fired boilers, identified as AN-AHU1, AN-AHU2, and AN-AHU4, with a maximum heat input capacity of 0.48 MMBtu per hour, each, constructed in 2003, located in the Andorfer building, exhausting to vents An-AHU1-V, AN-AHU2-V, and AN-AHU4-V, respectively.
- (m) One (1) natural gas-fired boiler, identified as AN-AHU3, with a maximum heat input capacity of 0.14 MMBtu per hour, constructed in 2003, located in the Andorfer building, exhausting to stack AN-AHU3-V.
- (n) One (1) natural gas-fired make-up air unit, identified as AN-MAU1, with a maximum heat input capacity of 0.80 MMBtu per hour, constructed in 2003, located in the Andorfer building, exhausting to vent AN-MAU1-V.
- (o) Twelve (12) natural gas-fired boilers, identified as YR-B1 through YR-B12, with a maximum heat input capacity of 0.06 MMBtu per hour, each, constructed in 2003, located in the Yergens-Rogers building, exhausting to vents YR-B1-V through YR-B4-V and stacks YR-B5-S through YR-B12-S, respectively.
- (p) Two (2) natural gas-fired water heaters, identified as AN-WH1 and AN-WH2, with a maximum heat input capacity of 0.24 MMBtu per hour, constructed in 2004, located in the Andorfer building, exhausting to vents AN-WH1-V and AN-WH2-V, respectively.
- (q) One (1) natural gas-fired boiler, identified as CUN-B1, with a maximum heat input capacity of 0.23 MMBtu per hour, constructed in 2004, located in the Cunningham building, exhausting to vent CUN-B1-V.
- (r) Thirteen (13) natural gas-fired water heaters, identified as YR-WH1 through YR-WH13, with a maximum heat input capacity of 0.04 MMBtu per hour, each, constructed in 2004, located in the Yergens-Rogers building, exhausting to stack YR-WH1-S, vents YR-WH2-V through YR-WH5-V, and stacks YR-WH6-S through YR-WH13-S, respectively.

Unpermitted Emission Units and Pollution Control Equipment

The source consists of the following unpermitted emission units:

- (a) Three (3) natural gas-fired boilers, identified as CUN-B2, CUN-B3 and CUN-B4, with a maximum heat input capacity of 0.31 MMBtu per hour, each, constructed in 2006, located in the Cunningham building, exhausting to vents CUN-B2-V, CUN-B3-V, and CUN-B4-V, respectively.
- (b) Two (2) natural gas-fired roof top units, identified as CUN-RTU1 and CUN-RTU2, with a maximum heat input capacity of 0.80 MMBtu per hour, each, constructed in 2006, located in the Cunningham building, exhausting to vents CUN-RTU1-V and CUN-RTU2-V, respectively.
- (c) One (1) natural gas-fired make-up air unit, identified as ZOL-MAU1, with a maximum heat input capacity of 0.60 MMBtu per hour, constructed in 2007, located in the Zollner building, exhausting to vent ZOL-MAU1-V.
- (d) One (1) natural gas-fired roof top unit, identified as WF-RTU1, with a maximum heat input capacity of 0.20 MMBtu per hour, constructed in 2007, located in the Warrior Fieldhouse, exhausting to vent WF-RTU1-V.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)								
	PM	PM10 *	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Natural gas combustion	0.22	0.90	0.90	0.07	11.79	0.65	9.91	0.22	0.21 (hexane)
Total PTE of Entire Source	0.22	0.90	0.90	0.07	11.79	0.65	9.91	0.22	0.21 (hexane)
Exemptions Levels	5	5	5	10	10	5 or 10	25	25	10
Registration Levels	25	25	25	25	25	25	100	25	10
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".									

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of NO_x is within the ranges listed in 326 IAC 2-5.1-2(a)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the permit for the natural gas-fired boilers and water heaters, because each of the units has a maximum heat input capacity of less than ten (10) MMBtu per hour.
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

- (a) 326 IAC 2-5.1-2 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 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 Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) 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.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.
- (f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.
- (h) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

Boilers and Hot Water Heaters

- (i) 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-4(a), particulate emissions from indirect heating facilities constructed after September 21, 1983, shall be limited to the following:

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

where:

Pt = pounds of particulate matter (PM) emitted per MMBtu heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input.

For Q less than 10 MMBtu/hr, Pt shall not exceed 0.6.

Year Constructed	Unit Descriptions	Q	Pt
1989	SCH-B1 SCH-B2, SCH-B3	$1.0 + 1.0 + 1.2 = 3.2$	0.6
1993	SCH-B4	$3.2 + 0.1 = 3.3$	0.6
2000	AB-B1, PIE-B1 through PIE-B10	$3.3 + 0.65 + (2.05 * 2) + (0.30 * 8) = 10.45$	0.59
2001	ZOL-B1, ZOL-B2, and ZOL-B3	$10.45 + 1.06 + 1.06 + 0.40 = 12.97$	0.56
2003	AB-WH1, AN-B1, AN-B2, AN-AHU1 through AN-AHU4, YR-B1 through YR-B12	$12.97 + 0.08 + 1.20 + 1.20 + 0.48 + 0.48 + 0.14 + 0.48 + (0.06 * 12) = 17.75$	0.52
2004	AN-WH1, AN-WH2, YR-WH1 through YR-WH13	$17.75 + 0.24 + 0.24 + (0.04 * 13) = 18.75$	0.51
2006	CUN-B1 through CUN-B4	$18.75 + 0.23 + (0.31 * 3) = 19.91$	0.50
2008	KAL-WH1	$19.91 + 0.20 = 20.11$	0.50
2010	AC-WH1, WR-WH1 through WR-WH7, WR-B1 through B7	$20.11 + 0.25 + (0.15 * 7) + (0.08 * 3) + (0.06 * 4) = 21.89$	0.49

The potential to emit of each boiler and water heater is less than 0.49 pounds of particulate matter per MMBtu heat input. Therefore, the boilers and water heaters shall be in compliance with this rule.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on February 25, 2010.

The operation of this source shall be subject to the conditions of the attached proposed Registration No. R003-29017-00380. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Summer Keown at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5175 or toll free at 1-800-451-6027 extension 4-5175.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>

- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

**Appendix A: Emissions Calculations
Summary**

Company Name: Indiana Institute of Technology
Address City IN Zip: 1600 E. Washington Blvd., Fort Wayne, IN 46803
Registration Number: R003-29017-00380
Reviewer: Summer Keown
Date: March 30, 2010

Uncontrolled Potential to Emit (tons/year)

Emissions Unit	PM	PM10	PM2.5	SO₂	NOx	VOC	CO	Single HAP	Total HAPs
Natural Gas Combustion	0.22	0.90	0.90	0.07	11.79	0.65	9.91	0.20 (hexane)	0.22
Total	0.22	0.90	0.90	0.07	11.79	0.65	9.91	0.20 (hexane)	negl.

Appendix A: Emissions Calculations
Natural Gas Combustion

Company Name: Indiana Institute of Technology
Address City IN Zip: 1600 E. Washington Blvd., Fort Wayne, IN 46803
Registration Number: R003-29017-00380
Reviewer: Summer Keown
Date: March 30, 2010

Emission factor (lb/MMCF)	PM	PM10	SO2	NOx	VOC	CO
1.9	7.6	0.6	100	5.5	84	

Building	Location	Unit ID	Equipment	Installation Date	Heat Input Capacity (MMBtu/hr)	Potential Throughput (MMCF/yr)	Potential Emission (tons/yr)					
							PM	PM10	SO2	NOx	VOC	CO
Abbott	Sprinkler Room	AB-B1	Bryan Boiler	2000	0.65	5.58	0.01	0.02	0.00	0.28	0.02	0.23
Abbott	Sprinkler Room	AB-WH1	A.O. Smith Water Heater	2003	0.08	0.67	0.00	0.00	0.00	0.03	0.00	0.03
Andorfer	Penthouse	AN-B1	Bryan Boiler - B1	2003	1.20	10.31	0.01	0.04	0.00	0.52	0.03	0.43
Andorfer	Penthouse	AN-B2	Bryan Boiler - B2	2003	1.20	10.31	0.01	0.04	0.00	0.52	0.03	0.43
Andorfer	Penthouse	AN-AHU2	Trane AHU - 2	2003	0.48	4.11	0.00	0.02	0.00	0.21	0.01	0.17
Andorfer	Penthouse	AN-AHU3	Trane AHU - 3	2003	0.14	1.18	0.00	0.00	0.00	0.06	0.00	0.05
Andorfer	Penthouse	AN-AHU4	Trane AHU - 4	2003	0.48	4.12	0.00	0.02	0.00	0.21	0.01	0.17
Andorfer	Basement (023)	AN-AHU1	Trane AHU - 1	2003	0.48	4.12	0.00	0.02	0.00	0.21	0.01	0.17
Andorfer	Basement (023)	AN-WH1	A.O. Smith Water Heater - 1	2004	0.24	2.06	0.00	0.01	0.00	0.10	0.01	0.09
Andorfer	Basement (023)	AN-WH2	A.O. Smith Water Heater - 2	2004	0.24	2.06	0.00	0.01	0.00	0.10	0.01	0.09
Andorfer	Lower Roof	AN-MAU1	Reznor MAU	2003	0.80	6.87	0.01	0.03	0.00	0.34	0.02	0.29
Andorfer	Kitchen	AN-KIT	Kitchen Equipment (All)	N/A	1.03	8.84	0.01	0.03	0.00	0.44	0.02	0.37
Athletic Center	Mech Room	AC-WH1	Cyclone XI #250	2010	0.25	2.15	0.00	0.01	0.00	0.11	0.01	0.09
Cunningham	Mech Room	CUN-B1	Weil-McClain Boiler - P-1	2004	0.23	1.98	0.00	0.01	0.00	0.10	0.01	0.08
Cunningham	Mech Room	CUN-B2	Weil-McClain Boiler - P-2	2006	0.31	2.66	0.00	0.01	0.00	0.13	0.01	0.11
Cunningham	Mech Room	CUN-B3	Weil-McClain Boiler - P-3	2006	0.31	2.66	0.00	0.01	0.00	0.13	0.01	0.11
Cunningham	Mech Room	CUN-B4	Weil-McClain Boiler - P-4	2006	0.31	2.66	0.00	0.01	0.00	0.13	0.01	0.11
Cunningham	East Roof	CUN-RTU1	Trane RTU	2006	0.80	6.87	0.01	0.03	0.00	0.34	0.02	0.29
Cunningham	West Roof	CUN-RTU2	Trane RTU	2006	0.80	6.87	0.01	0.03	0.00	0.34	0.02	0.29
Kalbfleisch	Basement	KAL-WH1	State Water Heater	2008	0.20	1.71	0.00	0.01	0.00	0.09	0.00	0.07
Pierson	Basement (006)	PIE-B1	Ajax Boiler - B1	2000	2.05	17.61	0.02	0.07	0.01	0.88	0.05	0.74
Pierson	Basement (006)	PIE-B2	Ajax Boiler - B2	2000	2.05	17.61	0.02	0.07	0.01	0.88	0.05	0.74
Pierson	E-109	PIE-B3	Lochnivar Boiler	2000	0.30	2.58	0.00	0.01	0.00	0.13	0.01	0.11
Pierson	W-109	PIE-B4	Lochnivar Boiler	2000	0.30	2.58	0.00	0.01	0.00	0.13	0.01	0.11
Pierson	E-209	PIE-B5	Lochnivar Boiler	2000	0.30	2.58	0.00	0.01	0.00	0.13	0.01	0.11
Pierson	W-209	PIE-B6	Lochnivar Boiler	2000	0.30	2.58	0.00	0.01	0.00	0.13	0.01	0.11
Pierson	E-309	PIE-B7	Lochnivar Boiler	2000	0.30	2.58	0.00	0.01	0.00	0.13	0.01	0.11
Pierson	W-309	PIE-B8	Lochnivar Boiler	2000	0.30	2.58	0.00	0.01	0.00	0.13	0.01	0.11
Pierson	E-409	PIE-B9	Lochnivar Boiler	2000	0.30	2.58	0.00	0.01	0.00	0.13	0.01	0.11
Pierson	W-409	PIE-B10	Lochnivar Boiler	2000	0.30	2.58	0.00	0.01	0.00	0.13	0.01	0.11
Schaefer	Mech Room	SCH-B3	A.O. Smith Boiler - B3	1989	1.20	10.31	0.01	0.04	0.00	0.52	0.03	0.43
Schaefer	Mech Room	SCH-B2	Rite Boiler - B2	1989	1.00	8.59	0.01	0.03	0.00	0.43	0.02	0.36
Schaefer	Mech Room	SCH-B1	Rite Boiler - B1	1989	1.00	8.59	0.01	0.03	0.00	0.43	0.02	0.36
Schaefer	Mech Room	SCH-B4	Trane Boiler	1993	0.10	0.86	0.00	0.00	0.00	0.04	0.00	0.04
Warrior Fieldhouse	Roof Top	WF-RTU1	Trane RTU - 1	2007	0.20	1.72	0.00	0.01	0.00	0.09	0.00	0.07
Warrior Fieldhouse	Roof Top	WF-RTU2	Trane RTU - 2	2007	0.08	0.69	0.00	0.00	0.00	0.03	0.00	0.03
Warrior Fieldhouse	Roof Top	WF-RTU3	Trane RTU - 3	2007	0.25	2.15	0.00	0.01	0.00	0.11	0.01	0.09
Warrior Fieldhouse	Roof Top	WF-RTU4	Trane RTU - 4	2007	0.08	0.69	0.00	0.00	0.00	0.03	0.00	0.03
Warrior Fieldhouse	Roof Top	WF-RTU5	Trane RTU - 5	2007	0.25	2.15	0.00	0.01	0.00	0.11	0.01	0.09
Warrior Fieldhouse	Roof Top	WF-RTU6	Trane RTU - 6	2007	0.35	3.01	0.00	0.01	0.00	0.15	0.01	0.13
Warrior Fieldhouse	Roof Top	WF-RTU7	Trane RTU - 7	2007	0.35	3.01	0.00	0.01	0.00	0.15	0.01	0.13
Warrior Row	105A	WR-WH1	Navien NR-240	2010	0.15	1.29	0.00	0.00	0.00	0.06	0.00	0.05
Warrior Row	105A	WR-B1	Carrier 58MVC080	2010	0.08	0.69	0.00	0.00	0.00	0.03	0.00	0.03
Warrior Row	105B	WR-WH2	Navien NR-240	2010	0.15	1.29	0.00	0.00	0.00	0.06	0.00	0.05
Warrior Row	105B	WR-B2	Carrier 58MVC080	2010	0.08	0.69	0.00	0.00	0.00	0.03	0.00	0.03
Warrior Row	105C	WR-WH3	Navien NR-240	2010	0.15	1.29	0.00	0.00	0.00	0.06	0.00	0.05
Warrior Row	105C	WR-B3	Carrier 58MVC080	2010	0.08	0.69	0.00	0.00	0.00	0.03	0.00	0.03
Warrior Row	105D	WR-WH4	Navien NR-240	2010	0.15	1.29	0.00	0.00	0.00	0.06	0.00	0.05
Warrior Row	105D	WR-B4	Carrier 58MVC060	2010	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Warrior Row	105E	WR-WH5	Navien NR-240	2010	0.15	1.29	0.00	0.00	0.00	0.06	0.00	0.05
Warrior Row	105E	WR-B5	Carrier 58MVC060	2010	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Warrior Row	105F	WR-WH6	Navien NR-240	2010	0.15	1.29	0.00	0.00	0.00	0.06	0.00	0.05
Warrior Row	105F	WR-B6	Carrier 58MVC060	2010	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Warrior Row	105G	WR-WH7	Navien NR-240	2010	0.15	1.29	0.00	0.00	0.00	0.06	0.00	0.05
Warrior Row	105G	WR-B7	Carrier 58MVC060	2010	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	3rd Floor Mech Room	YR-WH1	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	1A	YR-WH2	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	1A	YR-B1	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	1B	YR-WH3	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	1B	YR-B2	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	1C	YR-WH4	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	1C	YR-B3	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	1D	YR-WH5	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	1D	YR-B4	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	2A	YR-WH6	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	2A	YR-B5	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	2B	YR-WH7	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	2B	YR-B6	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	2C	YR-WH8	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	2C	YR-B7	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	2D	YR-WH9	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	2D	YR-B8	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	3A	YR-WH10	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	3B	YR-B9	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	3B	YR-WH11	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	3B	YR-B10	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	3C	YR-WH12	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	3C	YR-B11	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Yergens-Rogers	3D	YR-WH13	State Water Heater	2004	0.04	0.34	0.00	0.00	0.00	0.02	0.00	0.01
Yergens-Rogers	3D	YR-B12	Trane Boiler	2003	0.06	0.52	0.00	0.00	0.00	0.03	0.00	0.02
Zollner	Mech Room	ZOL-B3	Lochnivar Boiler	2001	0.40	3.43	0.00	0.01	0.00	0.17	0.01	0.14
Zollner	Mech Room	ZOL-B1	Lochnivar Boiler - B1	2001	1.06	9.09	0.01	0.03	0.00	0.45	0.02	0.38
Zollner	Mech Room	ZOL-B2	Lochnivar Boiler - B2	2001	1.06	9.09	0.01	0.03	0.00	0.45	0.02	0.38
Zollner	Outside South	ZOL-MAU1	Engineered Air MAU	2007	0.60	5.15	0.00	0.02	0.00	0.26	0.01	0.22

0.22 0.90 0.07 11.79 0.65 9.91

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

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

PM10 is assumed to be equal to PM2.5.

**Appendix A: Emissions Calculations
Natural Gas Combustion
HAPs Emissions**

Company Name: Indiana Institute of Technology
Address City IN Zip: 1600 E. Washington Blvd., Fort Wayne, IN 46803
Permit Number: R003-29017-00380
Reviewer: Summer Keown
Date: March 30, 2010

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.477E-04	1.415E-04	8.846E-03	2.123E-01	4.010E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	5.897E-05	1.297E-04	1.651E-04	4.482E-05	2.477E-04

Methodology is the same as page 2.

Total HAPs = 0.22

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Justin Elder
Indiana Institute of Technology
1600 E. Washington Blvd
Fort Wayne, IN 46803

DATE: April 1, 2010

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Registration
003-29017-00380

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Mike Townsley - Director of Facilities
Jennifer Aselage - Engineerin & Environmental Consultant
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	GHOTOPP 4/1/2010 Indiana Institute of Technology 003-29017-00380 Final		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Justin Elder Indiana Institute of Technology 1600 E Washington Blvd Fort Wayne IN 46803 (Source CAATS) via confirmed delivery										
2		Mike Townsley Director of Facilities Indiana Institute of Technology 1600 E Washington Blvd Fort Wayne IN 46803 (RO CAATS)										
3		Daniel & Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 (Affected Party)										
4		Duane & Deborah Clark Clark Farms 6973 E. 500 S. Columbia City IN 46725 (Affected Party)										
5		Mr. Victor Locke WPTA-TV P.O.Box 2121 Fort Wayne IN 46801 (Affected Party)										
6		Fort Wayne City Council and Mayors Office One Main Street Fort Wayne IN 46802 (Local Official)										
7		Mr. John E. Hampton Plumbers & Steamfitters, Local 166 2930 W Ludwig Rd Fort Wayne IN 46818-1328 (Affected Party)										
8		Allen Co. Board of Commissioners One Main St. Fort Wayne IN 46802 (Local Official)										
9		Fort Wayne-Allen County Health Department 1 E Main Street, 5th Floor Fort Wayne IN 46802-1810 (Health Department)										
10		Mrs. Jennifer Aselage Engineering & Environmental Consultant 3954 New Vision Drive Fort Wayne IN 46845 (Consultant)										
11		Aziz Zane 1706 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
12		James Underwood 1712 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
13		Mary Hughes 1722 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
14		Allen County Community Development Corp 1 West Superior Street Fort Wayne IN 46802 (Affected Party)										
15		John Wilenski 1730 Maumee Ave Fort Wayne IN 46803 (Affected Party)										

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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1		City of Fort Wayne, Board of Public Works 1 East Main Street Fort Wayne IN 46802 (Affected Party)										
2		Ernestine Hogan 1514 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
3		John Otto 2701 East State Blvd Fort Wayne IN 46805 (Affected Party)										
4		Midtowne/Brown, LLC P.O. Box 6069 Fort Wayne IN 46896 (Affected Party)										
5		James & Laurel Uhlig 1614 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
6		Carlos & Lucillia Cano 1121 Ohio Street Fort Wayne IN 46803 (Affected Party)										
7		Jill Sutton 1418 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
8		Rainbow Community Organization, Inc. P.O. Box 12981 Fort Wayne IN 46866 (Affected Party)										
9		Sharon Benson 1426 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
10		Hattie Ellis 1440 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
11		Barry & Susie Nelson 1510 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
12		Islamic Center of Fort Wayne, Inc. P.O. Box 11993 Fort Wayne IN 46862 (Affected Party)										
13		Scott & LeAnne White 1202 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
14		Roger Mill 1210 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
15		Huser Apartment Complex 2515 Ladue Lane Fort Wayne IN 46804 (Affected Party)										

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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1		1304 Maumee LLC 1121 Ohio Street Fort Wayne IN 46803 (Affected Party)										
2		T.K. Wong 1118 Cedar Street Fort Wayne IN 46803 (Affected Party)										
3		Joe Greene 1320 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
4		Carlotta Boyd 1322 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
5		Affordable Housing, Inc. P.O. Box 5464 Fort Wayne IN 46895 (Affected Party)										
6		Vera White 1418 Maumee Ave Fort Wayne IN 46803 (Affected Party)										
7		Barbara Harriston 915 East Washington Blvd Fort Wayne IN 46803 (Affected Party)										
8		Frances Muricio 3108 Stardale Drive Fort Wayne IN 46816 (Affected Party)										
9		Theresa Mairicio-Love 1001 East Rudisill Blvd Fort Wayne IN 46806 (Affected Party)										
10		Carolyn Woods 1325 East Washington Blvd Fort Wayne IN 46803 (Affected Party)										
11		John Bojrab 6851 St. Joe Center Road Fort Wayne IN 46835 (Affected Party)										
12		Sander Freeman 2316 Drexel Ave Fort Wayne IN 46806 (Affected Party)										
13		Pauline Roger 1315 East Washington Blvd Fort Wayne IN 46803 (Affected Party)										
14		Thomas Blackwell, Jr. & Tanya Bowley 3025 Abbott Street Fort Wayne IN 46806 (Affected Party)										
15		Richard Kriz II 6127 Stoney Brook Drive Fort Wayne IN 46835 (Affected Party)										

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1		Mary P.O. Box 13726 Fort Wayne IN 46865 (Affected Party)										
2		Willie Oxendine 814 East Jefferson Blvd Fort Wayne IN 46803 (Affected Party)										
3		Barbara Pearson & Dora Simmons 1617 East Washington Blvd Fort Wayne IN 46803 (Affected Party)										
4		Clinton Woodfin 1601 East Washington Blvd Fort Wayne IN 46803 (Affected Party)										
5		Sigma Phi Epsilon 1529 East Washington Blvd Fort Wayne IN 46803 (Affected Party)										
6		Donald Holland 1720 Hartzell Road New Haven IN 46744 (Affected Party)										
7		Concordia Cemetery Association 5300 Lake Avenue Fort Wayne IN 46815 (Affected Party)										
8		Alex Palermo 918 North Anthony Blvd Fort Wayne IN 46805 (Affected Party)										
9		Paul & Cynthia Oshaughnessey 17008 Platter Parkway New Haven IN 46744 (Affected Party)										
10		Patricia Powers 1645 East Washington Blvd Fort Wayne IN 46803 (Affected Party)										
11		Gary & Sharon Konkie 2654 N. Wells Street Fort Wayne IN 46808 (Affected Party)										
12												
13												
14												
15												

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