



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
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: March 22, 2013

RE: Anderson University / 095-32805-00134

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

Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

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 from 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
FNPER-AM.dot12/3/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

March 22, 2013

Dianna Conrad, Assistant Director Physical Plant
Anderson University
1100 East 5th Street
Anderson, IN 46012-3495

Re: 095-32805-00134
First Administrative Amendment to
M095-29609-00134

Dear Ms. Conrad:

Anderson University was issued a Minor Source Operating Permit (MSOP) No. M095-29609-00134 on December 17, 2010 for Ninety-three (93) natural gas-fired combustion units located at 1100 East 5th Street, Anderson, IN 46012-3495. On February 5, 2013, the Office of Air Quality (OAQ) received an application from the source requesting an Administrative Amendment to the current MSOP which involves the following items:

1. Pursuant to 326 IAC 2-6.1-6(d)(11), this change to the permit is considered an administrative amendment because the permit is amended to add emissions units, subject to 326 IAC 2-1.1-3 (Exemptions).

The following are the emissions units:

1. One (1) natural gas fired generator, identified as DH-5, with maximum heat input of 0.01 MMBtu/hr and constructed in 2009;
2. One (1) natural gas fired generator, identified as DH-6, with maximum heat input of 0.01 MMBtu/hr and constructed in 2009;
3. One (1) diesel fired generator, identified as RA-1, with maximum heat input of 0.01 MMBtu/hr and constructed in 1985;
4. One (1) natural gas fired boiler, identified as YH-1, with maximum heat input of 0.39 MMBtu/hr and constructed in 2012; and
5. One (1) natural gas fired boiler, identified as YH-2, with maximum heat input of 0.43 MMBtu/hr and constructed in 2012.

The PTE of the emission units is as follows:

Process/ Emission Unit	PTE of Proposed Modification (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP
DH-5	0.002	0.002	0.002	2.58E-05	0.139	0.005	0.017	6.00	0.003	Formaldehyde 0.002
DH-6	0.002	0.002	0.002	2.58E-05	0.139	0.005	0.017	6.00	0.003	Formaldehyde 0.002
RA-1	0.01	0.01	0.01	0.01	0.19	0.02	0.04	7.21	1.7E-4	Formaldehyde 5.17E-05
YH-1	0.00	0.01	0.01	0.00	0.17	0.01	0.14	202	0.003	Hexane 3.014E-03
YH-2	0.00	0.01	0.01	0.00	0.18	0.01	0.16	223	0.003	Hexane 3.324E-03
Total PTE of Proposed Modification	0.024	0.045	0.045	0.015	0.832	0.046	0.371	44431	0.014	Hexane-0.006

- (a) The uncontrolled/unlimited potential to emit of the entire source after the addition of these emission units will continue to be within the threshold levels specified in 326 IAC 2-6.1 (MSOP). (See Appendix A for the calculations).
- (b) No new state rules are applicable to this source due to the addition of the emission unit.
- (c) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) or National Emission standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in this administrative amendment.

PTE of the Entire Source After Issuance of the MSOP Administrative Amendment

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this MSOP permit revision, 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 of the Entire Source After Issuance of MSOP Administrative Amendment (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Source emissions prior to AA***	0.68	2.74	2.74	0.22	36.03	1.98	30.27	42,651	0.68	Hexane- 0.65
DH-5	0.002	0.002	0.002	2.5E-5	0.139	0.005	0.017	6.00	0.003	Formalde- hyde- 0.002
DH-6	0.002	0.002	0.002	2.5E-5	0.139	0.005	0.017	6.00	0.003	Formalde- hyde- 0.002
RA-1	0.01	0.01	0.01	0.01	0.19	0.02	0.04	7.21	1.7E-4	Formalde- hyde- 5.17E-5

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of MSOP Administrative Amendment (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
YH-1	0.00	0.01	0.01	0.00	0.17	0.01	0.14	202	0.003	Hexane- 3.01E-3
YH-2	0.00	0.01	0.01	0.00	0.18	0.01	0.16	223	0.003	Hexane- 3.3E-3
Total PTE of Entire Source	0.69	2.77	2.77	0.23	36.85	2.03	30.95	43095	0.69	Hexane- 0.656
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA
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". **The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.										

***PTE values are from MSOP #29609. GHG values are from Appendix A.

IDEM, OAQ has decided to make additional revisions to the permit as described below in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions.

Pursuant to the provisions of 326 IAC 2-6.1-6, the permit is hereby amended as follows with the deleted language as ~~strikeouts~~ and new language **bolded**.

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) ~~Ninety-three~~ **seven (937)** natural gas-fired combustion units **and one (1) diesel-fired combustion unit**, consisting of the following:

Building	Room No.	Boiler ID	Water Heater ID	Generator ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	
...							
Decker Hall	003	DH-1			1.90	1991	
		DH-2			1.90	1993	
		DH-3			1.90	1991	
		DH-4			1.90		
					DH-5	0.01	2009
					DH-6	0.01	2009
...							

Building	Room No.	Boiler ID	Water Heater ID	Generator ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date
Reardon Auditorium				RA-1	0.01	1985
York Performance Hall		YH-1			0.39	2012
		YH-2			0.43	2012

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:							
Building	Room No.	Boiler ID	Water Heater ID	Generator ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	
...							
Decker Hall	003	DH-1			1.90	1991	
		DH-2			1.90	1993	
		DH-3			1.90	1991	
		DH-4			1.90		
					DH-5	0.01	2009
					DH-6	0.01	2009
...							
Reardon Auditorium				RA-1	0.01	1985	
York Performance Hall		YH-1			0.39	2012	
		YH-2			0.43	2012	

(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 2-6.1-5(a)(1)]

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

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

- (a) ~~The natural gas-fired combustion units listed below are subject to the requirements of 326 IAC 6-2-3 because the source is located in Madison County and each unit was existing and in operation before September 21, 1983.~~

Pursuant to 326 IAC 6-2-3(d) particulate emissions from any facility used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.8 lb/MMBtu heat input.

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	Pt (lb/MMBtu)
Rice Hall	RH-1 boiler	3.70 (each)	1965	0.8
	RH-3 boiler			0.8
Student Center	StC-1 boiler	1.60	1963	0.8
Myers hall	MyH-1 boiler	1.60	1970	0.8

- (b) The natural gas-fired combustion units listed below are subject to the requirements of 326 IAC 6-23-32 because the source is located in Madison County and each unit began operation after June 8, 1972 and prior to September 21, 1983 and each unit shall be limited by the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

Where:

- C = 50 u/m³
- Pt = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)
- Q = total source max. operating indirect heating capacity (Q = 12 MMBtu/hr)
- N = number of stacks (N = 1)
- a = plume rise factor (a = 0.67)
- h = stack height (h = 30 ft)

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	Pt Emissions Limit (lb/MMBtu) PM
Morrison House	MoH-1 boiler	3.00	1982	0.6
Byrum Hall	BH-1 boiler	1.70	1974	0.6
Parking Garage	PG-1 water heater	0.07	1975	0.6
Fine Arts	FA-2	0.40	1983	0.6
	FA-3	0.40		
Camp Ground	C-1 water heater	0.37	1980	0.6

- (c) ...

For a total source maximum operating capacity rating (Q) less than 10 MMBtu/hr, particulate emissions (Pt) shall not exceed 0.6 pound per MMBtu of heat input. For Q greater than or equal to 10,000 MMBtu/hr, Pt shall not exceed 0.1 pound per MMBtu of heat input.

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Fine Arts	FA-1 boiler	0.40	16.24 ±0.40=16.64	0.52	1985

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Broadcasting	B-1 boiler	0.10	16.64 +0.10=16.74	0.52	1987
Hardacre Hall	HH-1 boiler	0.15	16.74 + 0.15 = 16.89	0.52	
	HH-2 boiler	0.27	16.89 +0.27=17.16	0.52	
	HH-3 boiler	0.15	17.16 + 0.15 = 17.31	0.52	
	HH-4 boiler	0.15	17.31 + 0.15 = 17.46	0.52	
	HH-5 boiler	0.11	17.46 + 0.11 = 17.57	0.52	
	HH-8 water heater	0.03	17.57 + 0.03 = 17.60	0.52	
Decker Hall	DH-1, DH-3, and DH-4 boilers	1.90*3	17.60 + 5.70 = 23.30	0.48	1991
Morrison House	MeH-3 boiler	0.15	23.30 + 0.15 = 23.45	0.48	1992
Smith House	SmH-1 boiler	0.12	23.45 + 0.12 = 23.57	0.48	
	SmH-2 water heater	0.03	23.57 + 0.03 = 23.60	0.48	
Grandstand	G-1, and G-2 water heaters	0.08*2	23.60 + 0.16 = 23.76	0.48	
Decker Hall	DH-2 boiler	1.90	23.76 + 1.90 = 25.66	0.47	1993
South Campus	SC-2 water heater	0.30	25.66 + 0.30 = 25.96	0.47	

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Hartung Hall	HaH-2, HaH-3, HaH-4, and HaH-5 boilers	1.20*4	$25.96 + 4.80 = 30.76$	0.45	1994
South Campus	SC-1 and SC-3 boilers	$0.40 + 0.36$	$30.76 + 0.76 = 31.52$	0.44	
Broadcasting	B-2 water heater	0.04	$31.52 + 0.04 = 31.56$	0.44	
Student Center	StC-2 water heater	0.70	$31.56 + 0.70 = 32.26$	0.44	
Byrum Hall	BH-2 water heater	0.03	$32.26 + 0.03 = 32.29$	0.44	
Hardacre Hall	HH-9 water heater	0.06	$32.29 + 0.06 = 32.35$	0.44	
Rice Hall	RH-2 water heater	0.70	$32.35 + 0.70 = 33.05$	0.44	1995
South Campus	SC-6 water heater and SC-7 boiler	$0.30 + 0.40$	$33.05 + 0.70 = 33.75$	0.44	
Broadcasting	B-4 and B-5 boilers	$0.10 * 2$	$33.75 + 0.20 = 33.95$	0.44	
Bolitho House	BoH-2 water heater	0.03	$33.95 + 0.03 = 33.98$	0.44	1996
Rice Hall	RH-4 water heater	0.70	$33.98 + 0.70 = 34.68$	0.43	
South Campus	SC-8 water heater	0.30	$34.68 + 0.30 = 34.98$	0.43	
South Campus	SC-5 boilers	0.36	$34.98 + 0.36 = 35.34$	0.43	1997
Broadcasting	B-3 boiler	0.10	$35.34 + 0.10 = 35.44$	0.43	
Morrison House	MoH-2 water heater	0.03	$35.44 + 0.03 = 35.47$	0.43	1998
Dunn Hall	DuH-1, DuH-2, DuH-3 boilers	$0.70 * 3$	$35.47 + 2.10 = 37.57$	0.42	
	DuH-4 water heater	0.04	$37.57 + 0.04 = 37.61$	0.42	
South Campus	SC-4 water heater	0.30	$37.61 + 0.30 = 37.91$	0.42	
Myers Hall	MyH-2 water heater	0.75	$37.91 + 0.75 = 38.66$	0.42	
Robold House	RoH-1 water heater	0.04	$38.66 + 0.04 = 38.7$	0.42	1999

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Bolitho House	BoH-1 boiler	0.10	$38.7 + 0.10 = 38.8$	0.42	2000
Mansfield Apartments	MA-1 water heater	0.06	$38.8 + 0.06 = 38.86$	0.42	
Robold House	RoH-2 boiler	0.10	$38.86 + 0.10 = 38.96$	0.42	
Fine Arts	FA-8 boiler	0.05	$38.96 + 0.05 = 39.01$	0.42	
Myers Hall	MyH-3 water heater	0.25	$39.01 + 0.25 = 39.26$	0.42	2001
Wellness Center	WC-1, WC-2, WC-3, WC-4 boilers	5.00*4	$39.26 + 20.00 = 59.26$	0.38	2002
	WC-5, WC-6 water heaters	0.80*2	$59.26 + 1.60 = 60.86$	0.37	
Hardacre Hall	HH-6 and HH-7 boilers	0.28*2	$60.86 + 0.56 = 61.42$	0.37	
Fair Commons	FC-1 water heater	0.20	$61.42 + 0.20 = 61.62$	0.37	2004
	FC-2, FC-3, FC-4, FC-5, FC-6, FC-7	$0.12 + 0.03 + 0.10 + 0.08 + 0.04 + 0.05$	$61.62 + 0.42 = 62.04$	0.37	
School of Theology	ST-1 boiler	1.50	$62.04 + 1.50 = 63.54$	0.37	
Hartung Hall	HaH-1 water heater	0.20	$63.54 + 0.20 = 63.74$	0.37	2006
Fine Arts	FA-7 boiler	0.03	$63.74 + 0.03 = 63.77$	0.37	2007
Morrison Hall	MH-1, MH-2 boilers	2.00*2	$63.77 + 4.00 = 67.77$	0.36	
	MH-3 water heater	0.75	$67.77 + 0.75 = 68.52$	0.36	
Nicholson Library	NL-2 water heater	0.04	$68.52 + 0.04 = 68.56$	0.36	

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Martin Hall	MaH-1, MaH-2 boilers	2.00*2	68.56 + 4.00 = 72.56	0.36	2008
	MaH-3 water heater	0.75	72.56 + 0.75 = 73.31	0.36	
Smith Hall	SH-1, SH-2 boilers	2.00*2	73.31 + 4.00 = 77.31	0.35	
	SH-3 water heater	0.75	77.31 + 0.75 = 78.06	0.35	
Nicholson Library	NL-1 boiler	4.10	78.06 + 4.10 = 82.16	0.35	
Fine Arts	FA-4, FA-6 boilers	0.04 + 0.03	82.16 + 0.07 = 82.23	0.35	
Fine Arts	FA-5 boiler	0.04	82.3 + 0.04 = 82.27	0.35	2009
York Performance Hall	YH-1 boiler	0.39	82.27 + 0.39 = 82.66	0.35	2012
	YH-2 boiler	0.43	82.66 + 0.43 = 83.09	0.35	

Building	Type of Unit	Pt (lb/MMBtu) PM
Fine Arts	FA-1 boiler	0.52
Broadcasting	B-1 boiler	0.52
Hardacre Hall	HH-1 boiler	
	HH-2 boiler	
	HH-3 boiler	
	HH-4 boiler	
	HH-5 boiler	
HH-8 water heater		

Building	Type of Unit	Pt (lb/MMBtu) PM
Decker Hall	DH-1, DH-3, and DH-4 boilers	0.48
Morrison House	MoH-3 boiler	0.47
Smith House	SmH-1 boiler	
	SmH-2 water heater	
Grandstand	G-1, and G-2 water heaters	
Decker Hall	DH-2 boiler	
South Campus	SC-2 water heater	0.47
Hartung Hall	HaH-2, HaH-3, HaH-4, and HaH-5 boilers	0.44
South Campus	SC-1 and SC-3 boilers	
Broadcasting	B-2 water heater	
Student Center	StC-2 water heater	
Byrum Hall	BH-2 water heater	
Hardacre Hall	HH-9 water heater	
Rice Hall	RH-2 water heater	0.44
South Campus	SC-6 water heater and SC-7 boiler	
Broadcasting	B-4 and B-5 boilers	

Building	Type of Unit	Pt (lb/MMBtu) PM
Bolitho House	BoH-2 water heater	0.43
Rice Hall	RH-4 water heater	
South Campus	SC-8 water heater	
South Campus	SC-5 boilers	0.43
Broadcasting	B-3 boiler	0.42
Morrison House	MoH-2 water heater	
Dunn Hall	DuH-1, DuH-2, DuH-3 boilers	
	DuH-4 water heater	
South Campus	SC-4 water heater	
Myers Hall	MyH-2 water heater	
Robold House	RoH-1 water heater	0.42
Bolitho House	BoH-1 boiler	0.42
Mansfield Apartments	MA-1 water heater	
Robold House	RoH-2 boiler	
Fine Arts	FA-8 boiler	
Myers Hall	MyH-3 water heater	0.42
Wellness Center	WC-1, WC-2, WC-3, WC-4 boilers	0.37
	WC-5, WC-6 water heaters	
Hardacre Hall	HH-6 and HH-7 boilers	

Building	Type of Unit	Pt (lb/MMBtu) PM
Fair Commons	FC-1 water heater	0.37
	FC-2, FC-3, FC-4, FC-5, FC-6, FC-7	
School of Theology	ST-1 boiler	
Hartung Hall	HaH-1 water heater	0.37
Fine Arts	FA-7 boiler	
Morrison Hall	MH-1, MH-2 boilers	0.36
	MH-3 water heater	
Nicholson Library	NL-2 water heater	
Martin Hall	MaH-1, MaH-2 boilers	0.35
	MaH-3 water heater	
Smith Hall	SH-1, SH-2 boilers	
	SH-3 water heater	
Nicholson Library	NL-1 boiler	
Fine Arts	FA-4, FA-6 boilers	
Fine Arts	FA-5 boiler	0.35
York Performance Hall	YH-1 boiler	0.35

Additional Changes

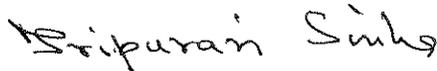
1. Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit (PTE) 100,000 tons per year or more of CO2 equivalent emissions (CO2e). Therefore, CO2e emissions have been calculated for this source. Based on the calculations, the unlimited PTE GHGs from the entire source is less than 100,000 tons of CO2e per year (see Appendix A for the calculations). This did not require any changes to the permit.

All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. 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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Daniel W. Pell of my staff, at 317-234-8532 or 1-800-451-6027, and ask for extension 4-8532.

Sincerely,



Tripurari P. Sinha, Ph. D. Section Chief
Permits Branch
Office of Air Quality

Attachments: Updated Permit and Appendix A

TS/dwp

cc: File - Madison County
Madison County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch



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

**New Source Construction and Minor Source Operating
Permit
OFFICE OF AIR QUALITY**

**Anderson University
1100 East 5th Street
Anderson, Indiana 46012-3695**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M095-29609-00134	
Issued by:	Issuance Date: December 17, 2010
Alfred C. Dumauval, Ph. D., Section Chief Permits Branch Office of Air Quality	Expiration Date: December 17, 2015

First Administrative Amendment No.: 095-32805-00134	
Issued by:	Issuance Date: March 22, 2013
<i>Tripurari Sinha</i> Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Expiration Date: December 17, 2015

TABLE OF CONTENTS

A. SOURCE SUMMARY	4
A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]	
A.2 Emission Units and Pollution Control Equipment Summary	
B. GENERAL CONDITIONS	7
B.1 Definitions [326 IAC 2-1.1-1]	
B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]	
B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]	
B.4 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.5 Term of Conditions [326 IAC 2-1.1-9.5]	
B.6 Enforceability	
B.7 Severability	
B.8 Property Rights or Exclusive Privilege	
B.9 Duty to Provide Information	
B.10 Annual Notification [326 IAC 2-6.1-5(a)(5)]	
B.11 Preventive Maintenance Plan [326 IAC 1-6-3]	
B.12 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.13 Termination of Right to Operate [326 IAC 2-6.1-7(a)]	
B.14 Permit Renewal [326 IAC 2-6.1-7]	
B.15 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]	
B.16 Source Modification Requirement	
B.17 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] [IC 13-17-3-2][IC 13-30-3-1]	
B.18 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]	
B.19 Annual Fee Payment [326 IAC 2-1.1-7]	
B.20 Credible Evidence [326 IAC 1-1-6]	
C. SOURCE OPERATION CONDITIONS	12
Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]	
C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2 Permit Revocation [326 IAC 2-1.1-9]	
C.3 Opacity [326 IAC 5-1]	
C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6 Fugitive Dust Emissions [326 IAC 6-4]	
C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
Testing Requirements [326 IAC 2-6.1-5(a)(2)]	
C.8 Performance Testing [326 IAC 3-6]	
Compliance Requirements [326 IAC 2-1.1-11]	
C.9 Compliance Requirements [326 IAC 2-1.1-11]	
Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]	
C.10 Compliance Monitoring [326 IAC 2-1.1-11]	
C.11 Instrument Specifications [326 IAC 2-1.1-11]	
Corrective Actions and Response Steps	
C.12 Response to Excursions or Exceedances	
C.13 Actions Related to Noncompliance Demonstrated by a Stack Test	
Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]	
C.14 Malfunctions Report [326 IAC 1-6-2]	
C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]	
C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]	

D.1. EMISSIONS UNIT OPERATION CONDITIONS.....	18
Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]	
D.1.1 Particulate Emission Limitations [326 IAC 6-2]	
Annual Notification	25
Malfunction Report	26
Affidavit of Construction	28

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 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 a stationary college university.

Source Address: 1100 East 5th Street, Anderson, Indiana 46012-3695
 General Source Phone Number: (765) 641-4247
 SIC Code: 8221
 County Location: Madison
 Source Location Status: Attainment for all criteria pollutants
 Source Status: Minor Source Operating Permit Program
 Minor Source, under PSD and Emission Offset Rules
 Minor Source, Section 112 of the Clean Air Act
 Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) **Ninety-seven (97) natural gas-fired combustion units and one diesel-fired combustion unit**, consisting of the following:

Building	Room No.	Boiler ID	Water Heater ID	Generator ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date
Morrison House	3	MoH-1			3.00	1982
			MoH-2		0.03	1998
		MoH-3			0.15	1992
Bolitho House	Under house	BoH-1			0.10	2000
			BoH-2		0.03	1996
Park Garage	Garage		PG-1		0.07	1975
Smith House	10	SmH-1			0.12	1992
			SmH-2		0.03	
Hartung Hall	055		HaH-1		0.20	1994
			HaH-2		1.20	
			HaH-3		1.20	
			HaH-4		1.20	
			HaH-5		1.20	
Grandstand	Garage		G-1		0.08	1993
			G-2		0.08	
Wellness Center	182	WC-1			5.00	2002
		WC-2			5.00	
		WC-3			5.00	
		WC-4			5.00	
			WC-5		0.80	
			WC-6		0.80	

Building	Room No.	Boiler ID	Water Heater ID	Generator ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date
Camp Ground	Grove		C-1		0.37	1980
Dunn Hall	018	DuH-1			0.70	1998
		DuH-2			0.70	
		DuH-3			0.70	
			DuH-4		0.04	
Rice Hall	01W	RH-1			3.70	1965
			RH-2		0.70	1995
	01E	RH-3			3.70	1965
			RH-4		0.70	1996
Mansfield Apartments	--		MA-1		0.06	2000
Martin Hall	018	MaH-1			2.00	2008
		MaH-2			2.00	
			MaH-3		0.75	
Smith Hall	003	SH-1			2.00	2008
		SH-2			2.00	
			SH-3		0.75	
Fair Commons	102		FC-1		0.20	2004
			FC-2		0.12	
	113	FC-3		0.03		
	C203	FC-4		0.10		
	C203	FC-5		0.08		
	--	FC-6		0.04		
	--	FC-7		0.05		
South Campus	A	SC-1			0.40	1994
			SC-2		0.30	1993
	B	SC-3			0.36	1994
			SC-4		0.30	1998
	C	SC-5			0.36	1997
			SC-6		0.30	1995
	D	SC-7			0.40	1996
			SC-8		0.30	
Robold House	Basement		RoH-1		0.04	1999
			RoH-2		0.10	2000
Broadcasting	Under house	B-1			0.10	1987
			B-2		0.04	1994
		B-3			0.10	1997
	Southside	B-4			0.10	1995
		B-5			0.10	
Nicholson Library	020	NL-1			4.10	2008
			NL-2		0.04	2007
School of Theology	056	ST-1			1.50	2004
Student Center	025	StC-1			1.60	1963
			StC-2		0.70	1994
Byrum Hall	116	BH-1			1.70	1974
			BH-2		0.03	1994
Fine Arts	186	FA-1			0.40	1985
		FA-2			0.40	1983

Building	Room No.	Boiler ID	Water Heater ID	Generator ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	
	193	FA-3			0.10		
		FA-4			0.04	2008	
		FA-5			0.04	2009	
		FA-6			0.03	2008	
		FA-7			0.03	2007	
		FA-8			0.05	2000	
Hardacre Hall	0.24	HH-1			0.15	1987	
		HH-2			0.27		
		HH-3			0.15		
		HH-4			0.15		
		HH-5			0.11		
	242	HH-6			0.28	2002	
		HH-7			0.28		
	024		HH-8		0.03	1987	
044		HH-9		0.06	1994		
Decker Hall	003	DH-1			1.90	1991	
		DH-2			1.90	1993	
		DH-3			1.90	1991	
		DH-4			1.90		
				DH-5		0.01	2009
				DH-6		0.01	2009
Morrison Hall	024	MH-1			2.00	2007	
	025	MH-2			2.00		
		MH-3			0.75		
Myers Hall	004	MyH-1			1.60	1970	
			MyH-2		0.75	1998	
			MyH-3		0.25	2001	
Reardon Auditorium				RA-1	0.01	1985	
York Performance Hall		YH-1			0.39	2012	
		YH-2			0.43	2012	

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 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 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, M095-29609-00134, 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, 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.5 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.6 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, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.7 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.8 Property Rights or Exclusive Privilege

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

B.9 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ 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. Upon request, the Permittee shall also furnish to IDEM, OAQ 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.10 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 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 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.11 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (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.

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

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

The Permittee shall implement the PMPs.

- (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 Permittee 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 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.12 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M095-29609-00134 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.13 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 one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.14 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 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 an affirmation that the statements in the application are true and complete 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue

MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
- (1) Submitted at least one hundred twenty (120) 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 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.
- (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 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, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.15 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.16 Source Modification Requirement

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

B.17 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][IC 13-17-3-2][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, 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.18 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "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.19 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.20 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 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

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

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

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

C.3 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 permit:

- (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.4 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.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.6 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.7 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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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.

- (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 Licensed 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 Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

C.8 Performance Testing [326 IAC 3-6]

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date.
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ 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.9 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.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 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.12 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to 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 excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning 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 normal or usual manner of operation.
- (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; and/or
 - (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 record the reasonable response steps taken.

C.13 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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

C.14 Malfunctions Report [326 IAC 1-6-2]

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

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 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 makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (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 on or before the date it is due.

- (c) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. 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:

- (a) Ninety-seven (97) natural gas-fired combustion units and one (1) diesel-fired combustion unit, consisting of the following:

Building	Room No.	Boiler ID	Water Heater ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date
Morrison House	3	MoH-1		3.00	1982
			MoH-2	0.03	1998
		MoH-3		0.15	1992
Bolitho House	Under house	BoH-1		0.10	2000
			BoH-2	0.03	1996
Park Garage	Garage		PG-1	0.07	1975
Smith House	10	SmH-1		0.12	1992
			SmH-2	0.03	
Hartung Hall	055		HaH-1	0.20	2006
		HaH-2		1.20	1994
		HaH-3		1.20	
		HaH-4		1.20	
		HaH-5		1.20	
Grandstand	Garage		G-1	0.08	1993
Wellness Center	182	WC-1		5.00	2002
		WC-2		5.00	
		WC-3		5.00	
		WC-4		5.00	
			WC-5	0.80	
			WC-6	0.80	
Camp Ground	Grove		C-1	0.37	1980
Dunn Hall	018	DuH-1		0.70	1998
		DuH-2		0.70	
		DuH-3		0.70	
			DuH-4	0.04	
Rice Hall	01W	RH-1		3.70	1965
			RH-2	0.70	1995
	01E	RH-3		3.70	1965
			RH-4	0.70	1996
Mansfield Apartments	--		MA-1	0.06	2000
Martin Hall	018	MaH-1		2.00	2008
		MaH-2		2.00	
			MaH-3	0.75	
Smith Hall	003	SH-1		2.00	2008
		SH-2		2.00	
			SH-3	0.75	

Emissions Unit Description Continued:

Building	Room No.	Boiler ID	Water Heater ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date
Fair Commons	102		FC-1	0.20	2004
		FC-2		0.12	
	113	FC-3		0.03	
	C203	FC-4		0.10	
	C203	FC-5		0.08	
	--	FC-6		0.04	
	--	FC-7		0.05	
South Campus	A	SC-1		0.40	1994
			SC-2	0.30	1993
	B	SC-3		0.36	1994
			SC-4	0.30	1998
	C	SC-5		0.36	1997
			SC-6	0.30	1995
	D	SC-7		0.40	
			SC-8	0.30	1996
Robold House	Basement		RoH-1	0.04	1999
		RoH-2		0.10	2000
Broadcasting	Under house	B-1		0.10	1987
			B-2	0.04	1994
		B-3		0.10	1997
	Southside	B-4		0.10	1995
		B-5		0.10	
Nicholson Library	020	NL-1		4.10	2008
			NL-2	0.04	2007
School of Theology	056	ST-1		1.50	2004
Student Center	025	StC-1		1.60	1963
			StC-2	0.70	1994
Byrum Hall	116	BH-1		1.70	1974
			BH-2	0.03	1994
Fine Arts	186	FA-1		0.40	1985
		FA-2		0.40	1983
		FA-3		0.10	
		FA-4		0.04	2008
	193	FA-5		0.04	2009
		FA-6		0.03	2008
		FA-7		0.03	2007
		FA-8		0.05	2000

Emissions Unit Description Continued:

Building	Room No.	Boiler ID	Water Heater ID	Generator ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date
Hardacre Hall	0.24	HH-1			0.15	1987
		HH-2			0.27	
		HH-3			0.15	
		HH-4			0.15	
		HH-5			0.11	
	242	HH-6			0.28	2002
		HH-7			0.28	
	024		HH-8		0.03	1987
044		HH-9		0.06	1994	
Decker Hall	003	DH-1			1.90	1991
		DH-2			1.90	1993
		DH-3			1.90	1991
		DH-4			1.90	
				DH-5	0.01	2009
				DH-6	0.01	2009
Morrison Hall	024	MH-1			2.00	2007
	025	MH-2			2.00	
			MH-3		0.75	
Myers Hall	004	MyH-1			1.60	1970
			MyH-2		0.75	1998
			MyH-3		0.25	2001
Reardon Auditorium				RA-1	0.01	1985
York Performance Hall		YH-1			0.39	2012
		YH-2			0.43	2012

(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 2-6.1-5(a)(1)]

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

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

- (a) Pursuant to 326 IAC 6-2-3(d) particulate emissions from any facility used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.8 lb/MMBtu heat input.

Building	Type of Unit	Pt (lb/MMBtu)
Rice Hall	RH-1 boiler	0.8
	RH-3 boiler	0.8
Student Center	StC-1 boiler	0.8
Myers hall	MyH-1 boiler	0.8

- (b) The natural gas-fired combustion units listed below are subject to the requirements of 326 IAC 6-2-3 because the source is located in Madison County and each unit began operation after June 8, 1972 and prior to September 21, 1983 and each unit shall be limited by the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

Where:

$$C = 50 \text{ u/m}^3$$

Pt = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)

Q = total source max. operating indirect heating capacity (Q = 12 MMBtu/hr)

N = number of stacks (N = 1)

a = plume rise factor (a = 0.67)

h = stack height (h = 30 ft)

Pursuant to 326 IAC 6-2-3(e), particulate emissions from the following natural gas-fired combustion units shall in no case exceed 0.6 pound per MMBtu heat input.

Building	Type of Unit	Pt Emissions Limit (lb/MMBtu) PM
Morrison House	MoH-1 boiler	0.6
Byrum Hall	BH-1 boiler	0.6
Parking Garage	PG-1 water heater	0.6
Fine Arts	FA-2	0.6
	FA-3	
Camp Ground	C-1 water heater	0.6

- (c) The natural gas-fired combustion units listed below are subject to the requirements of 326 IAC 6-2-4 because each facility began operation after September 21, 1983. Pursuant to 326 IAC 6-2-4(a), particulate emissions from the following indirect heating units shall be limited to the following:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and

Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input in the year all boilers and heaters were operating.

Building	Type of Unit	Pt (lb/MMBtu) PM
Fine Arts	FA-1 boiler	0.52
Broadcasting	B-1 boiler	0.52
Hardacre Hall	HH-1 boiler	
	HH-2 boiler	
	HH-3 boiler	
	HH-4 boiler	
	HH-5 boiler	
	HH-8 water heater	
Decker Hall	DH-1, DH-3, and DH-4 boilers	0.48
Morrison House	MoH-3 boiler	0.47
Smith House	SmH-1 boiler	
	SmH-2 water heater	
Grandstand	G-1, and G-2 water heaters	
Decker Hall	DH-2 boiler	0.47
South Campus	SC-2 water heater	
Hartung Hall	HaH-2, HaH-3, HaH-4, and HaH-5 boilers	0.44
South Campus	SC-1 and SC-3 boilers	
Broadcasting	B-2 water heater	
Student Center	StC-2 water heater	
Byrum Hall	BH-2 water heater	
Hardacre Hall	HH-9 water heater	

Building	Type of Unit	Pt (lb/MMBtu) PM
Rice Hall	RH-2 water heater	0.44
South Campus	SC-6 water heater and SC-7 boiler	
Broadcasting	B-4 and B-5 boilers	
Bolitho House	BoH-2 water heater	0.43
Rice Hall	RH-4 water heater	
South Campus	SC-8 water heater	
South Campus	SC-5 boilers	0.43
Broadcasting	B-3 boiler	
Morrison House	MoH-2 water heater	0.42
Dunn Hall	DuH-1, DuH-2, DuH-3 boilers	
	DuH-4 water heater	
South Campus	SC-4 water heater	
Myers Hall	MyH-2 water heater	
Robold House	RoH-1 water heater	0.42
Bolitho House	BoH-1 boiler	0.42
Mansfield Apartments	MA-1 water heater	
Robold House	RoH-2 boiler	
Fine Arts	FA-8 boiler	0.42
Myers Hall	MyH-3 water heater	
Wellness Center	WC-1, WC-2, WC-3, WC-4 boilers	0.37
	WC-5, WC-6 water heaters	
Hardacre Hall	HH-6 and HH-7 boilers	

Building	Type of Unit	Pt (lb/MMBtu) PM
Fair Commons	FC-1 water heater	0.37
	FC-2, FC-3, FC-4, FC-5, FC-6, FC-7	
School of Theology	ST-1 boiler	
Hartung Hall	HaH-1 water heater	0.37
Fine Arts	FA-7 boiler	0.36
Morrison Hall	MH-1, MH-2 boilers	
	MH-3 water heater	
Nicholson Library	NL-2 water heater	
Martin Hall	MaH-1, MaH-2 boilers	0.35
	MaH-3 water heater	
Smith Hall	SH-1, SH-2 boilers	
	SH-3 water heater	
Nicholson Library	NL-1 boiler	
Fine Arts	FA-4, FA-6 boilers	
Fine Arts	FA-5 boiler	0.35
York Performance Hall	YH-1 boiler	0.35
	YH-2 boiler	

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

**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:	Anderson University
Address:	1100 East 5th Street
City:	Anderson, Indiana 46012-3695
Phone #:	(765) 641-4247
MSOP #:	M095-29609-00134

I hereby certify that Anderson University is :

still in operation.

I hereby certify that Anderson University is :

no longer in operation.

in compliance with the requirements of MSOP M095-29609-00134.

not in compliance with the requirements of MSOP M095-29609-00134.

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 COMPLIANCE AND ENFORCEMENT BRANCH FAX NUMBER: (317) 233-6865

**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 ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ 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:

Mail to: Permit Administration and Support Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Anderson University
1100 East 5th Street
Anderson, Indiana 46012-3695

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that Anderson University, 1100 East 5th Street, Anderson, Indiana 46012-3695, has constructed and will operate boilers and water heaters at the university in conformity with the requirements and intent of the permit application received by the Office of Air Quality on August 30, 2010 and as permitted pursuant to New Source Construction Permit and Minor Source Operating Permit No. M095-29609-00134, Plant ID No. 095-00134 issued on _____.
5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature _____
Date _____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of
Indiana on this _____ day of _____, 20 _____. My Commission expires:

Signature _____
Name _____ (typed or printed)

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

Technical Support Document (TSD) for an Administrative Amendment to a
Minor Source Operating Permit (MSOP)

Source Description and Location

Source Name:	Anderson University
Source Location:	1100 East 5 th Street, Anderson, IN 46012-3495
County:	Madison
SIC Code:	8221
Operation Permit No.:	095-29609-00134
Operation Permit Issuance Date:	December 17, 2010
Minor Permit Revision No.:	095-32805-00134
Permit Reviewer:	Daniel W Pell

On February 5, 2013, the Office of Air Quality (OAQ) received an application from Anderson University requesting an Administrative Amendment to the current MSOP.

Existing Approvals

The source was issued MSOP No. 095-29609-00134 on December 17, 2010. The source has not received any other approvals.

County Attainment Status

The source is located in Madison County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective October 19, 2007, 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.

¹Unclassifiable 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 PM_{2.5}.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to ozone. Madison County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
Madison County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10)

tons per year. This rule became effective, June 28, 2011. Therefore, direct PM_{2.5} and SO₂ 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.

- (c) **Other Criteria Pollutants**
 Madison 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

- (a) The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.
- (b) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

This PTE table is from the TSD of the last permit, MSOP No. 095-29609-00134, issued on December 17, 2010.

For GHG PTE, refer to Appendix A of this Administrative Amendment.

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Boilers and Water Heaters (93)	0.68	2.74	2.74	0.22	36.03	1.98	30.27	42,651	0.68	Hexane 0.65
Total PTE of Entire Source	0.68	2.74	2.74	0.22	36.03	1.98	30.27	42,651	0.68	Hexane 0.65
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

negl. = negligible
 **The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Anderson University on February 5, 2013, requesting an Administrative Amendment to the current MSOP (M095-29609-00134, issued on December 17, 2010), for the following items:

The following is a list of the unpermitted emission units:

- (a) One (1) natural gas fired generator, identified as DH-5, with maximum heat input of 0.01 MMBtu/hr and constructed in 2009;
- (b) One (1) natural gas fired generator, identified as DH-6, with maximum heat input of 0.01 MMBtu/hr and constructed in 2009;
- (c) One (1) diesel fired generator, identified as RA-1, with maximum heat input of 0.01 MMBtu/hr and constructed in 1985;
- (d) One (1) natural gas fired boiler, identified as YH-1, with maximum heat input of 0.39 MMBtu/hr and constructed in 2012; and
- (e) One (1) natural gas fired boiler, identified as YH-2, with maximum heat input of 0.43 MMBtu/hr and constructed in 2012.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – MSOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-6.1-6. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Uncontrolled PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP
NG Engine DH-5	0.002	0.002	0.002	2.58E-5	0.139	0.005	0.017	6.00	0.003	Formalde- hyde 0.002
NG Engine DH-6	0.002	0.002	0.002	2.58E-5	0.139	0.005	0.017	6.00	0.003	Formalde- hyde 0.002
Diesel Engine RA-1	0.01	0.01	0.01	0.01	0.19	0.02	0.04	7.21	1.7E-4	Formalde- hyde 5.17E-5
NG Boiler YH-1	0.00	0.01	0.01	0.00	0.17	0.01	0.14	202	0.003	Hexane 3.014E-3
NG Boiler YH-2	0.00	0.01	0.01	0.00	0.18	0.01	0.16	223	0.003	Hexane 3.324E-3
Total PTE of Proposed Revision	0.024	0.045	0.045	0.015	0.823	0.046	0.371	444.31	0.014	Hexane 0.006
negl. = negligible										

Pursuant to 326 IAC 2-6.1-6(d)(11), these emission units are subject to 326 IAC 2-1.1-3 at the request of the applicant.

PTE of the Entire Source After Issuance of the MSOP Revision

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this MSOP permit revision, 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 of the Entire Source After Issuance of MSOP Administrative Amendment (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Existing Source Emissions ***	0.68	2.74	2.74	0.22	36.03	1.98	30.27	42,651	0.68	Hexane 0.65
DH-5	0.002	0.002	0.002	2.5E-5	0.139	0.005	0.017	6.00	0.003	Formalde- hyde 0.002
DH-6	0.002	0.002	0.002	2.5E-5	0.139	0.005	0.017	6.00	0.003	Formalde- hyde 0.002
RA-1	0.01	0.01	0.01	0.01	0.19	0.02	0.04	7.21	1.7E-4	Formalde- hyde 5.17E-5
YH-1	0.00	0.01	0.01	0.00	0.17	0.01	0.14	202	0.003	Hexane 3.01E-3
YH-2	0.00	0.01	0.01	0.00	0.18	0.01	0.16	223	0.003	Hexane 3.3E-3
Total PTE of Entire Source	0.69	2.77	2.77	0.23	36.85	2.03	30.95	43,095	0.69	Hexane 0.656
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

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".

**The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

***PTE values are from MSOP 29609. For GHG PTE, refer to Appendix A of this Administrative Amendment.

MSOP Status

- (a) This revision to an existing Minor Source Operating Permit will not change the minor status, because the uncontrolled/unlimited potential to emit criteria pollutants from the entire source are less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-6.1 (MSOP).

- (b) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be 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.

- (c) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit greenhouse gases (GHGs) will still be less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS), 326 IAC 12 & 40 CFR Subpart 60

- (a) The requirements of the New Source Performance Standard for Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart (IIII) (326 IAC 12), are not applicable for the diesel-fired generator, identified as RA-1, as it was installed in 1985 and is not a fire pump engine.
- (b) The natural gas-fired generators are subject to the New Source Performance Standards for Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart (JJJJ)), because both are Spark Ignition Reciprocating Internal Combustion Engines rated for 100 HP, were manufactured in 2008, and installed in 2009.

The units subject to this rule include the following:

DH-5, natural gas-fired generator
DH-6, natural gas-fired generator

Applicable portions of the NSPS are the following:

- (1) 40 CFR 60.4230(a)(4)
- (2) 40 CFR 60.4230(a)(5)
- (3) 40 CFR 60.4230(b)
- (4) 40 CFR 60.4230(e)
- (5) 40 CFR 60.4230(f)
- (6) 40 CFR 60.4233(g)
- (7) 40 CFR 60.4233(a)
- (8) 40 CFR 60.4230(a)(4)(iv)
- (9) 40 CFR 60.4230(a)(4)(iii)
- (10) 40 CFR 60.4230(a)(4)(i)
- (11) 40 CFR 60.4233(b)
- (12) 40 CFR 60.4233(c)
- (13) 40 CFR 60.4233(d)
- (14) 40 CFR 60.4237(c)
- (15) 40 CFR 60.4233(d) - Table 1
- (16) 40 CFR 60.4234
- (17) 40 CFR 60.4243(b)
- (18) 40 CFR 60.4243(d)
- (19) 40 CFR 60.4243(g)
- (20) 40 CFR 60.4246
- (21) 40 CFR 60.4237(c)
- (22) 40 CFR 60.4245(a)(1)
- (23) 40 CFR 60.4245(a)(2)
- (24) 40 CFR 60.4245(b)
- (25) 40 CFR 60.4243(b)(2)
- (26) 40 CFR 60.4243(b)(2)(i)
- (27) 40 CFR 60.4243(f)
- (28) 40 CFR 60.4244(a)
- (29) 40 CFR 60.4244(b)

- (30) 40 CFR 60.4244(c)
- (31) 40 CFR 60.4244(d)
- (32) 40 CFR 60.4245(a)(4)
- (33) 40 CFR 60.4245(d)
- (34) 40 CFR 60.4243(b)(1)
- (35) 40 CFR 60.4243(b)(2)
- (36) 40 CFR 60.4244(e)

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the natural gas-fired generators DH-5 and DH-6 except as otherwise specified in 40 CFR 60, Subpart (JJJJ).

- (c) The requirements of 40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial – Commercial – Institutional Steam Generating Units are not applicable to the boilers identified as YH-1 and YH-2, as both of their maximum heat input capacities are less than 10 MMBtu/hr.
- (d) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20 & 40 CFR Subpart 63

- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart (ZZZZ) (326 IAC 20), are not included for the diesel-fired generator, identified as RA-1, as it was constructed in 1985, is not a major source of HAPS, and is defined as a stationary, institutional, emergency, reciprocating internal combustion engine.
- (f) The natural gas-fired generators are subject to the National Emission Standards for Hazardous Air Pollutants for Hazardous Air Pollutants (NESHAPs) for National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, (40 CFR 63, Subpart (ZZZZ)), because both are Stationary Reciprocating Internal Combustion Engines rated for 100 HP, are located at an area source subject to NESHAP, and were installed in 2009.

The units subject to this rule include the following:

- DH-5, natural gas-fired generator
- DH-6, natural gas-fired generator

Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)
- (4) 40 CFR 63.6585(e)
- (5) 40 CFR 63.6585(b)
- (6) 40 CFR 63.6590(a)(1)(iii)
- (7) 40 CFR 63.6590(c)

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the natural gas-fired generators DH-5 and DH-6 except as otherwise specified in 40 CFR 63, Subpart (ZZZZ).

- (g) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (a) 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

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
 MSOP applicability is discussed under the Permit Level Determination – MSOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
 This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all regulated pollutants from the entire source will continue to be less than the PSD major source threshold level. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Revision Section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
 The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (d) 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.
- (e) The particulate emission limits are being revised as shown. All of the particulate emissions, Pt, for the natural gas-fired boilers used for indirect heating purposes (shown in sub-sections (i) through (iii)), were calculated using the following methods:
 - (i) For boilers which were in existence and in operation on or before June 8, 1972, particulate emissions were not to exceed 0.8 lb/MMBtu heat input pursuant to 326 IAC 6-2-3(d).

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	Pt (lb/MMBtu)
Rice Hall	RH-1 boiler	3.70 (each)	1965	0.8
	RH-3 boiler			
Student Center	StC-1 boiler	1.60	1963	0.8
Myers hall	MyH-1 boiler	1.60	1970	0.8

- (ii) For boilers which were in operation after June 8, 1972 and prior to September 21, 1983, particulate emissions were calculated and limited using the following equation pursuant to 326 IAC 6-2-3:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

Where:

C = 50 u/m³

Pt = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)

Q = total source max. operating indirect heating capacity (Q = 12 MMBtu/hr)

N = number of stacks (N = 1)

a = plume rise factor (a = 0.67)

h = stack height (h = 30 ft)

Pursuant to 326 IAC 6-2-3(e), particulate emissions from the following natural gas-fired combustion units shall in no case exceed 0.6 pound per MMBtu heat input.

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	Pt Emissions Limit (lb/MMBtu) PM
Morrison House	MoH-1 boiler	3.00	1982	0.6
Byrum Hall	BH-1 boiler	1.70	1974	0.6
Parking Garage	PG-1 water heater	0.07	1975	0.6
Fine Arts	FA-2	0.40	1983	0.6
	FA-3	0.10		
Camp Ground	C-1 water heater	0.37	1980	0.6

- (iii) For boilers which were in operation after September 21, 1983, particulate emissions were calculated and limited using the following equation pursuant to 326 IAC 6-2-4(a):

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and

Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input in the year all boilers and heaters were operating.

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Fine Arts	FA-1 boiler	0.40	16.64	0.52	1985

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Broadcasting	B-1 boiler	0.10	17.60	0.52	1987
Hardacre Hall	HH-1 boiler	0.15		0.52	
	HH-2 boiler	0.27		0.52	
	HH-3 boiler	0.15		0.52	
	HH-4 boiler	0.15		0.52	
	HH-5 boiler	0.11		0.52	
	HH-8 water heater	0.03		0.52	
Decker Hall	DH-1, DH-3, and DH-4 boilers	1.90*3	23.30	0.48	1991
Morrison House	MoH-3 boiler	0.15	25.66	0.47	1992
Smith House	SmH-1 boiler	0.12		0.47	
	SmH-2 water heater	0.03		0.47	
Grandstand	G-1, and G-2 water heaters	0.08*2		0.47	
Decker Hall	DH-2 boiler	1.90		0.47	
South Campus	SC-2 water heater	0.30	25.96	0.47	1993
Hartung Hall	HaH-2, HaH-3, HaH-4, and HaH-5 boilers	1.20*4	32.35	0.44	1994
South Campus	SC-1 and SC-3 boilers	0.40 + 0.36		0.44	
Broadcasting	B-2 water heater	0.04		0.44	
Student Center	StC-2 water heater	0.70		0.44	
Byrum Hall	BH-2 water heater	0.03		0.44	
Hardacre Hall	HH-9 water heater	0.06		0.44	
Rice Hall	RH-2 water heater	0.70		33.95	
South Campus	SC-6 water heater and SC-7 boiler	0.30 + 0.40	0.44		
Broadcasting	B-4 and B-5 boilers	0.10*2	0.44		

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Bolitho House	BoH-2 water heater	0.03	34.98	0.43	1996
Rice Hall	RH-4 water heater	0.70		0.43	
South Campus	SC-8 water heater	0.30		0.43	
South Campus	SC-5 boilers	0.36	35.44	0.43	1997
Broadcasting	B-3 boiler	0.10		0.43	
Morrison House	MoH-2 water heater	0.03	38.66	0.42	1998
Dunn Hall	DuH-1, DuH-2, DuH-3 boilers	0.70*3		0.42	
	DuH-4 water heater	0.04		0.42	
South Campus	SC-4 water heater	0.30		0.42	
Myers Hall	MyH-2 water heater	0.75		0.42	
Robold House	RoH-1 water heater	0.04	38.7	0.42	1999
Bolitho House	BoH-1 boiler	0.10	39.01	0.42	2000
Mansfield Apartments	MA-1 water heater	0.06		0.42	
Robold House	RoH-2 boiler	0.10		0.42	
Fine Arts	FA-8 boiler	0.05		0.42	
Myers Hall	MyH-3 water heater	0.25	39.26	0.42	2001
Wellness Center	WC-1, WC-2, WC-3, WC-4 boilers	5.00*4	61.42	0.37	2002
	WC-5, WC-6 water heaters	0.80*2		0.37	
Hardacre Hall	HH-6 and HH-7 boilers	0.28*2		0.37	
Fair Commons	FC-1 water heater	0.20	63.54	0.37	2004
	FC-2, FC-3, FC-4, FC-5, FC-6, FC-7	0.12 + 0.03 + 0.10 + 0.08 + 0.04 + 0.05		0.37	
School of Theology	ST-1 boiler	1.50		0.37	
Hartung Hall	HaH-1 water heater	0.20	63.74	0.37	2006

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Fine Arts	FA-7 boiler	0.03	68.56	0.36	2007
Morrison Hall	MH-1, MH-2 boilers	2.00*2		0.36	
	MH-3 water heater	0.75		0.36	
Nicholson Library	NL-2 water heater	0.04		0.36	
Martin Hall	MaH-1, MaH-2 boilers	2.00*2	82.23	0.35	2008
	MaH-3 water heater	0.75		0.35	
Smith Hall	SH-1, SH-2 boilers	2.00*2		0.35	
	SH-3 water heater	0.75		0.35	
Nicholson Library	NL-1 boiler	4.10		0.35	
Fine Arts	FA-4, FA-6 boilers	0.04 + 0.03		0.35	
Fine Arts	FA-5 boiler	0.04	82.27	0.35	2009
York Performance Hall	YH-1 boiler	0.39	83.09	0.35	2012
	YH-2 boiler	0.43		0.35	

- (f) 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.
- (g) 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.

Compliance Determination, Monitoring and Testing Requirements

- (a) The existing compliance requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in MSOP No: 095-29609-00134, issued on December 17, 2010.

Proposed Changes

- (a) The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) ~~Ninety-three-seven (937)~~ natural gas-fired combustion units **and one (1) diesel-fired combustion unit**, consisting of the following:

Building	Room No.	Boiler ID	Water Heater ID	Generator ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	
...							
Decker Hall	003	DH-1			1.90	1991	
		DH-2			1.90	1993	
		DH-3			1.90	1991	
		DH-4			1.90		
					DH-5	0.01	2009
					DH-6	0.01	2009
...							
Reardon Auditorium				RA-1	0.01	1985	
York Performance Hall		YH-1			0.39	2012	
		YH-2			0.43	2012	

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:							
Building	Room No.	Boiler ID	Water Heater ID	Generator ID	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	
...							
Decker Hall	003	DH-1			1.90	1991	
		DH-2			1.90	1993	
		DH-3			1.90	1991	
		DH-4			1.90		
					DH-5	0.01	2009
					DH-6	0.01	2009
...							
Reardon Auditorium				RA-1	0.01	1985	
York Performance Hall		YH-1			0.39	2012	
		YH-2			0.43	2012	

(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 2-6.1-5(a)(1)]

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

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

- (a) ~~The natural gas-fired combustion units listed below are subject to the requirements of 326 IAC 6-2-3 because the source is located in Madison County and each unit was existing and in operation before September 21, 1983.~~

Pursuant to 326 IAC 6-2-3(d) particulate emissions from any facility used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.8 lb/MMBtu heat input.

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	Pt (lb/MMBtu)
Rice Hall	RH-1 boiler	3.70 (each)	1965	0.8
	RH-3 boiler			0.8
Student Center	StC-1 boiler	1.60	1963	0.8
Myers hall	MyH-1 boiler	1.60	1970	0.8

- (b) The natural gas-fired combustion units listed below are subject to the requirements of 326 IAC 6-23-32 because the source is located in Madison County and each unit began operation after June 8, 1972 and prior to September 21, 1983 and each unit shall be limited by the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

Where:

C = 50 u/m³

Pt = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)

Q = total source max. operating indirect heating capacity (Q = 12 MMBtu/hr)

N = number of stacks (N = 1)

a = plume rise factor (a = 0.67)

h = stack height (h = 30 ft)

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Construction Date	Pt Emissions Limit (lb/MMBtu) PM
Morrison House	MoH-1 boiler	3.00	1982	0.6
Byrum Hall	BH-1 boiler	1.70	1974	0.6
Parking Garage	PG-1 water heater	0.07	1975	0.6
Fine Arts	FA-2	0.40	1983	0.6
	FA-3	0.10		
Camp Ground	C-1 water heater	0.37	1980	0.6

- (c) ...

For a total source maximum operating capacity rating (Q) less than 10 MMBtu/hr, particulate emissions (Pt) shall not exceed 0.6 pound per MMBtu of heat input. For Q greater than or equal to 10,000 MMBtu/hr, Pt shall not exceed 0.1 pound per MMBtu of heat input.

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Fine Arts	FA-1 boiler	0.40	16.24 +0.40=16.64	0.52	1985

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Broadcasting	B-1 boiler	0.10	16.64 +0.10=16.74	0.52	1987
Hardacre Hall	HH-1 boiler	0.15	16.74 + 0.15 = 16.89	0.52	
	HH-2 boiler	0.27	16.89 +0.27=17.16	0.52	
	HH-3 boiler	0.15	17.16 + 0.15 = 17.31	0.52	
	HH-4 boiler	0.15	17.31 + 0.15 = 17.46	0.52	
	HH-5 boiler	0.11	17.46 + 0.11 = 17.57	0.52	
	HH-8 water heater	0.03	17.57 + 0.03 = 17.60	0.52	
Decker Hall	DH-1, DH-3, and DH-4 boilers	1.90*3	17.60 + 5.70 = 23.30	0.48	1991
Morrison House	MoH-3 boiler	0.15	23.30 + 0.15 = 23.45	0.48	1992
Smith House	SmH-1 boiler	0.12	23.45 + 0.12 = 23.57	0.48	
	SmH-2 water heater	0.03	23.57 + 0.03 = 23.60	0.48	
Grandstand	G-1, and G-2 water heaters	0.08*2	23.60 + 0.16 = 23.76	0.48	1993
Decker Hall	DH-2 boiler	1.90	23.76 + 1.90 = 25.66	0.47	
South Campus	SC-2 water heater	0.30	25.66 + 0.30 = 25.96	0.47	

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Hartung Hall	HaH-2, HaH-3, HaH-4, and HaH-5 boilers	1.20*4	25.96 + 4.80 = 30.76	0.45	1994
South Campus	SC-1 and SC-3 boilers	0.40 + 0.36	30.76 + 0.76 = 31.52	0.44	
Broadcasting	B-2 water heater	0.04	31.52 + 0.04 = 31.56	0.44	
Student Center	StC-2 water heater	0.70	31.56 + 0.70 = 32.26	0.44	
Byrum Hall	BH-2 water heater	0.03	32.26 + 0.03 = 32.29	0.44	
Hardacre Hall	HH-9 water heater	0.06	32.29 + 0.06 = 32.35	0.44	
Rice Hall	RH-2 water heater	0.70	32.35 + 0.70 = 33.05	0.44	1995
South Campus	SC-6 water heater and SC-7 boiler	0.30 + 0.40	33.05 + 0.70 = 33.75	0.44	
Broadcasting	B-4 and B-5 boilers	0.10*2	33.75 + 0.20 = 33.95	0.44	
Bolitho House	BoH-2 water heater	0.03	33.95 + 0.03 = 33.98	0.44	1996
Rice Hall	RH-4 water heater	0.70	33.98 + 0.70 = 34.68	0.43	
South Campus	SC-8 water heater	0.30	34.68 + 0.30 = 34.98	0.43	
South Campus	SC-5 boilers	0.36	34.98 + 0.36 = 35.34	0.43	1997
Broadcasting	B-3 boiler	0.10	35.34 + 0.10 = 35.44	0.43	
Morrison House	MoH-2 water heater	0.03	35.44 + 0.03 = 35.47	0.43	1998
Dunn Hall	DuH-1, DuH-2, DuH-3 boilers	0.70*3	35.47 + 2.10 = 37.57	0.42	
	DuH-4 water heater	0.04	37.57 + 0.04 = 37.61	0.42	
South Campus	SC-4 water heater	0.30	37.61 + 0.30 = 37.91	0.42	
Myers Hall	MyH-2 water heater	0.75	37.91 + 0.75 = 38.66	0.42	
Rebold House	RoH-1 water heater	0.04	38.66 + 0.04 = 38.7	0.42	1999

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Bolithe House	BoH-1 boiler	0.10	$38.7 + 0.10 = 38.8$	0.42	2000
Mansfield Apartments	MA-1 water heater	0.06	$38.8 + 0.06 = 38.86$	0.42	
Robold House	RoH-2 boiler	0.10	$38.86 + 0.10 = 38.96$	0.42	
Fine Arts	FA-8 boiler	0.05	$38.96 + 0.05 = 39.01$	0.42	
Myers Hall	MyH-3 water heater	0.25	$39.01 + 0.25 = 39.26$	0.42	2001
Wellness Center	WC-1, WC-2, WC-3, WC-4 boilers	5.00*4	$39.26 + 20.00 = 59.26$	0.38	2002
	WC-5, WC-6 water heaters	0.80*2	$59.26 + 1.60 = 60.86$	0.37	
Hardacre Hall	HH-6 and HH-7 boilers	0.28*2	$60.86 + 0.56 = 61.42$	0.37	
Fair Commons	FC-1 water heater	0.20	$61.42 + 0.20 = 61.62$	0.37	2004
	FC-2, FC-3, FC-4, FC-5, FC-6, FC-7	$0.12 + 0.03 + 0.10 + 0.08 + 0.04 + 0.05$	$61.62 + 0.42 = 62.04$	0.37	
School of Theology	ST-1 boiler	1.50	$62.04 + 1.50 = 63.54$	0.37	
Hartung Hall	HaH-1 water heater	0.20	$63.54 + 0.20 = 63.74$	0.37	2006
Fine Arts	FA-7 boiler	0.03	$63.74 + 0.03 = 63.77$	0.37	2007
Morrison Hall	MH-1, MH-2 boilers	2.00*2	$63.77 + 4.00 = 67.77$	0.36	
	MH-3 water heater	0.75	$67.77 + 0.75 = 68.52$	0.36	
Nicholson Library	NL-2 water heater	0.04	$68.52 + 0.04 = 68.56$	0.36	

Building	Type of Unit	Maximum Heat Input Capacity (MMBtu/hr)	Q (MMBtu/hr)	Pt (lb/MMBtu) PM	Construction Date
Martin Hall	MaH-1, MaH-2 boilers	2.00*2	68.56 + 4.00 = 72.56	0.36	2008
	MaH-3 water heater	0.75	72.56 + 0.75 = 73.31	0.36	
Smith Hall	SH-1, SH-2 boilers	2.00*2	73.31 + 4.00 = 77.31	0.35	
	SH-3 water heater	0.75	77.31 + 0.75 = 78.06	0.35	
Nicholson Library	NL-1 boiler	4.10	78.06 + 4.10 = 82.16	0.35	
Fine Arts	FA-4, FA-6 boilers	0.04 + 0.03	82.16 + 0.07 = 82.23	0.35	
Fine Arts	FA-5 boiler	0.04	82.23 + 0.04 = 82.27	0.35	2009
York Performance Hall	YH-1 boiler	0.39	82.27 + 0.39 = 82.66	0.35	2012
	YH-2 boiler	0.43	82.66 + 0.43 = 83.09	0.35	

Building	Type of Unit	Pt (lb/MMBtu) PM
Fine Arts	FA-1 boiler	0.52
Broadcasting	B-1 boiler	0.52
Hardacre Hall	HH-1 boiler	
	HH-2 boiler	
	HH-3 boiler	
	HH-4 boiler	
	HH-5 boiler	
HH-8 water heater		

Building	Type of Unit	Pt (lb/MMBtu) PM
Decker Hall	DH-1, DH-3, and DH-4 boilers	0.48
Morrison House	MoH-3 boiler	0.47
Smith House	SmH-1 boiler	
	SmH-2 water heater	
Grandstand	G-1, and G-2 water heaters	
Decker Hall	DH-2 boiler	
South Campus	SC-2 water heater	0.47
Hartung Hall	HaH-2, HaH-3, HaH-4, and HaH-5 boilers	0.44
South Campus	SC-1 and SC-3 boilers	
Broadcasting	B-2 water heater	
Student Center	StC-2 water heater	
Byrum Hall	BH-2 water heater	
Hardacre Hall	HH-9 water heater	
Rice Hall	RH-2 water heater	0.44
South Campus	SC-6 water heater and SC-7 boiler	
Broadcasting	B-4 and B-5 boilers	

Building	Type of Unit	Pt (lb/MMBtu) PM
Bolitho House	BoH-2 water heater	0.43
Rice Hall	RH-4 water heater	
South Campus	SC-8 water heater	
South Campus	SC-5 boilers	0.43
Broadcasting	B-3 boiler	
Morrison House	MoH-2 water heater	0.42
Dunn Hall	DuH-1, DuH-2, DuH-3 boilers	
	DuH-4 water heater	
South Campus	SC-4 water heater	
Myers Hall	MyH-2 water heater	
Robold House	RoH-1 water heater	0.42
Bolitho House	BoH-1 boiler	0.42
Mansfield Apartments	MA-1 water heater	
Robold House	RoH-2 boiler	
Fine Arts	FA-8 boiler	
Myers Hall	MyH-3 water heater	0.42
Wellness Center	WC-1, WC-2, WC-3, WC-4 boilers	0.37
	WC-5, WC-6 water heaters	
Hardacre Hall	HH-6 and HH-7 boilers	

Building	Type of Unit	Pt (lb/MMBtu) PM
Fair Commons	FC-1 water heater	0.37
	FC-2, FC-3, FC-4, FC-5, FC-6, FC-7	
School of Theology	ST-1 boiler	
Hartung Hall	HaH-1 water heater	0.37
Fine Arts	FA-7 boiler	0.36
Morrison Hall	MH-1, MH-2 boilers	
	MH-3 water heater	
Nicholson Library	NL-2 water heater	
Martin Hall	MaH-1, MaH-2 boilers	0.35
	MaH-3 water heater	
Smith Hall	SH-1, SH-2 boilers	
	SH-3 water heater	
Nicholson Library	NL-1 boiler	
Fine Arts	FA-4, FA-6 boilers	
Fine Arts	FA-5 boiler	0.35
York Performance Hall	YH-1 boiler	0.35
	YH-2 boiler	

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 5, 2013.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed MSOP Permit Revision No. 095-32805-00134. The staff recommends to the Commissioner that this MSOP Minor Permit Revision be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Daniel W Pell 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) 234-8532 or toll free at 1-800-451-6027 extension 4-8532.
- (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.in.gov/idem

Appendix A: Emission Calculations**Heat Input Capacity Comparison by Year of Construction - Before and After AA**

Company Name: Anderson University
Source Address: 1100 E. 5th Street, Anderson, IN 46012
Permit Number: 095-32805-00134
Reviewer: Daniel W. Pell

EMISSION UNITS BEFORE MODIFICATION

BUILDING	TYPE OF UNIT	MAX. HEAT INPUT CAP. (MMBtu/hr)	YEAR OF CONSTRUCTION
Student Center	StC-1	1.60	1963
Rice Hall	RH-1 Boiler	3.70	1965
Rice Hall	RH-3 Boiler	3.70	1965
Myers Hall	MyH-1 Boiler	1.60	1970
Byrum Hall	BH-1 Boiler	1.70	1974
Parking Garage	PG-1 Water Heater	0.07	1975
Camp Ground	C-1 Water Heater	0.37	1980
Morrison House	MoH-1 Boiler	3.00	1982
Fine Arts	FA-2	0.40	1983
Fine Arts	FA-3	0.10	1983
Fine Arts	FA-1	0.40	1985
Broadcasting	B-1 Boiler	0.10	1985
Hardacre Hall	HH-1 Boiler	0.15	1987
Hardacre Hall	HH-2 Boiler	0.27	1987
Hardacre Hall	HH-3 Boiler	0.15	1987
Hardacre Hall	HH-4 Boiler	0.15	1987
Hardacre Hall	HH-5 Boiler	0.11	1987
Hardacre Hall	HH-8 Water Heater	0.03	1987
Decker Hall	DH-1	1.90	1991
Decker Hall	DH-3	1.90	1991
Decker Hall	DH-4	1.90	1991
Morrison House	MoH-3 Boiler	0.15	1992
Smith House	SmH-1 Boiler	0.12	1992
Smith House	SmH-2 Water Heater	0.03	1992
Grandstand	G-1 Water Heater	0.08	1992
Grandstand	G-2 Water Heater	0.08	1992
Decker Hall	DH-2 Boiler	1.90	1992
South Campus	SC-2 Water Heater	0.30	1993
Hartung Hall	HaH-2	1.20	1994
Hartung Hall	HaH-3	1.20	1994
Hartung Hall	HaH-4	1.20	1994
Hartung Hall	HaH-5	1.20	1994
South Campus	SC-1 Boiler	0.40	1994

Appendix A: Emission Calculations**Heat Input Capacity Comparison by Year of Construction - Before and After AA****Company Name:** Anderson University**Source Address:** 1100 E. 5th Street, Anderson, IN 46012**Permit Number:** 095-32805-00134**Reviewer:** Daniel W. Pell

EMISSION UNITS BEFORE MODIFICATION

BUILDING	TYPE OF UNIT	MAX. HEAT INPUT CAP. (MMBtu/hr)	YEAR OF CONSTRUCTION
South Campus	SC-3 Boiler	0.36	1994
Broadcasting	B-2 Water Heater	0.04	1994
Student Center	StC-2 Water Heater	0.70	1994
Byrum Hall	BH-1 Water Heater	0.03	1994
Hardacre Hall	HH-9 Water Heater	0.06	1994
Rice Hall	RH-2 Water Heater	0.70	1995
South Campus	SC-6 Water Heater	0.30	1995
South Campus	SC-7 Boiler	0.40	1995
Broadcasting	B-4 Boiler	0.10	1995
Broadcasting	B-5 Boiler	0.10	1995
Bolitho House	BoH-2 Water Heater	0.03	1996
Rice Hall	RH-4 Water Heater	0.70	1996
South Campus	SC-8 Water Heater	0.30	1996
South Campus	SC-5 Boiler	0.36	1997
Broadcasting	B-3 Boiler	0.10	1997
Morrison House	MoH-2 Water Heater	0.03	1998
Dunn Hall	DuH-1 Boilers	0.70	1998
Dunn Hall	DuH-2 Boilers	0.70	1998
Dunn Hall	DuH-3 Boilers	0.70	1998
Dunn Hall	DuH-4 Water Heater	0.04	1998
South Campus	SC-4 Water Heater	0.30	1998
Myers Hall	MyH-2 Water Heater	0.75	1998
Robold House	RoH-1 Water Heater	0.04	1999
Bolitho House	BoH-1 Boiler	0.10	2000
Mansfield Apartments	MA-1 Water Heater	0.06	2000
Robold House	RoH-2 Boiler	0.10	2000
Fine Arts	FA-8 Boiler	0.05	2000
Myers Hall	MyH-3 Water Heater	0.25	2001
Wellness Center	WC-1 Boiler	5.00	2002
Wellness Center	WC-2 Boiler	5.00	2002
Wellness Center	WC-3 Boiler	5.00	2002
Wellness Center	WC-4 Boiler	5.00	2002
Wellness Center	WC-5 Water Heater	0.80	2002
Wellness Center	WC-6 Water Heater	0.80	2002
Hardacre Hall	HH-6 Boiler	0.28	2002
Hardacre Hall	HH-7 Boiler	0.28	2002

Appendix A: Emission Calculations**Heat Input Capacity Comparison by Year of Construction - Before and After AA****Company Name:** Anderson University**Source Address:** 1100 E. 5th Street, Anderson, IN 46012**Permit Number:** 095-32805-00134**Reviewer:** Daniel W. Pell

EMISSION UNITS BEFORE MODIFICATION

BUILDING	TYPE OF UNIT	MAX. HEAT INPUT CAP. (MMBtu/hr)	YEAR OF CONSTRUCTION
Fair Commons	FC-1 Water Heater	0.20	2004
Fair Commons	FC-2 Boiler	0.12	2004
Fair Commons	FC-3 Boiler	0.03	2004
Fair Commons	FC-4 Boiler	0.10	2004
Fair Commons	FC-5 Boiler	0.08	2004
Fair Commons	FC-6 Boiler	0.04	2004
Fair Commons	FC-7 Boiler	0.05	2004
School of Theology	ST-1 Boiler	1.50	2004
Hartung Hall	HaH-1 Water Heater	0.20	2006
Fine Arts	FA-7 Boiler	0.03	2007
Morrison Hall	MH-1 Boiler	2.00	2007
Morrison Hall	MH-2 Boiler	2.00	2007
Morrison Hall	MH-3 Water Heater	0.75	2007
Nicholson Library	NL-2 Water Heater	0.04	2007
Martin Hall	MaH-1 Boiler	2.00	2008
Martin Hall	MaH-2 Boiler	2.00	2008
Martin Hall	MaH-3 Water Heater	0.75	2008
Smith Hall	SH-1 Boiler	2.00	2008
Smith Hall	SH-2 Boiler	2.00	2008
Smith Hall	SH-3 Water Heater	0.75	2008
Nicholson Library	NL-1 Boiler	4.10	2008
Fine Arts	FA-4 Boiler	0.04	2008
Fine Arts	FA-6 Boiler	0.03	2008
Fine Arts	FA-5 Boiler	0.04	2009

EMISSION UNITS OF MODIFICATION

Reardon Auditorium	RA-1 Diesel Gen.	0.01	1985
Decker Hall	DH-5 NG Gen.	0.01	2009
Decker Hall	DH-6 NG Gen.	0.01	2009
York Performance Hall	YH-1 NG Boiler	0.39	2012
York Performance Hall	YH-2 NG Boiler	0.43	2012
TOTAL		0.85	

Appendix A: Emission Calculations
PTE of added units through AA (OWOP)

Company Name: Anderson University
Source Address: 1100 E. 5th Street, Anderson, IN 46012
Permit Number: 095-32805-00134
Reviewer: Daniel W. Pell

	Heat Input Capacity MMBtu/hr	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHG total (tons/yr.)	Worst HAP (tons/yr.)	Total HAP (tons/yr.)
NG Engine DH-5	0.01	0.002	0.002	0.002	2.58E-05	0.139	0.005	0.017	6.00	Formaldehyde 0.002	0.003
NG Engine DH-6	0.01	0.002	0.002	0.002	2.58E-05	0.139	0.005	0.017	6.00	Formaldehyde 0.002	0.003
Diesel Engine RA-1	0.01	0.01	0.01	0.01	0.01	0.19	0.02	0.04	7.21	Formaldehyde 5.17E-05	1.70E-04
NG Boiler YH-1	0.39	0.00	0.01	0.01	0.00	0.17	0.01	0.14	202	Hexane 3.014E-03	0.003
NG Boiler YH-2	0.43	0.00	0.01	0.01	0.00	0.18	0.01	0.16	223	Hexane 3.324E-03	0.003
Total		0.024	0.045	0.045	0.015	0.823	0.046	0.371	444.31	Hexane 0.006	0.014

Uncontrolled Emissions of entire source

Emission Units	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO	NOx	GHG (tons/yr)	Total HAPs (tons/yr)	Worst Case HAPs (tons/yr)
Boilers and Water Heaters (93) before AA	0.68	2.74	2.74	0.22	1.98	30.27	36.03	42,651	0.68	Hexane 0.65
NG Engines (DH-5, DH-6)	0.004	0.004	0.004	5.16E-05	0.010	0.340	0.278	12.00	0.006	Formaldehyde 0.004
Diesel Engine (RA-1)	0.01	0.01	0.01	0.01	0.02	0.04	0.19	7.21	1.70E-04	Formaldehyde 5.17E-05
NG Boilers (YH-1, YH-2)	0.00	0.02	0.02	0.00	0.02	0.30	0.35	425	0.006	Hexane 6.33E-03
Total	0.69	2.77	2.77	0.23	2.03	30.95	36.85	43095	0.69	Hexane 0.656

**Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas, DH-5
2-Stroke Lean-Burn (2SLB) Engines**

Company Name: Anderson University
Source Address: 1100 E. 5th Street, Anderson, IN 46012
Permit Number: 095-32805-00134
Reviewer: Daniel W. Pell

Maximum Heat Input Capacity (MMBtu/hr)	0.01
Maximum Hours Operated per Year (hr/yr)	8760
Potential Fuel Usage (MMBtu/yr)	87.6
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	0.09

Criteria Pollutants	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	3.84E-02	4.83E-02	4.83E-02	5.88E-04	3.17E+00	1.20E-01	3.86E-01
Potential Emissions (tons/yr)	0.002	0.002	0.002	0.000	0.139	0.005	0.017

*PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.
 PM2.5 emission factor is filterable PM2.5 + condensable PM.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	7.76E-03	0.000
Acrolein	7.78E-03	0.000
Benzene	1.94E-03	0.000
1,3-Butadiene	8.20E-04	0.000
Ethylbenzene	1.08E-04	0.000
Formaldehyde	5.52E-02	0.002
Methanol	2.48E-03	0.000
Methylene Chloride	1.47E-04	0.000
Hexane	4.45E-04	0.000
Toluene	9.63E-04	0.000
2,2,4-Trimethylpentane	8.46E-04	0.000
Total PAH**	1.34E-04	0.000
Total		0.003

HAP pollutants consist of the twelve highest HAPs included in AP-42 Table 3.2-1.

**PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1

Potential Fuel Usage (MMBtu/yr) = [Maximum Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operating per Year (hr/yr)]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Greenhouse Gases (GHGs)	Greenhouse Gas (GHG)		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu*	110	1.25	
Emission Factor in lb/MMcf**			2.2
Potential Emission in tons/yr	4.82	0.05	0.00
Summed Potential Emissions in tons/yr	4.87		
CO2e Total in tons/yr	6.00		

Methodology

*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

**The N2O emission factor is from AP 42, Table 1.4-2. The N2O Emission Factor for uncontrolled is 2.2;

the N2O Emission Factor for low Nox burner is 0.64.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) +
 N2O Potential Emission ton/yr x N2O GWP (310).

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 SO2 = Sulfur Dioxide

NOx = Nitrous Oxides
 VOC - Volatile Organic Compounds
 CO = Carbon Monoxide

CO2 = Carbon Dioxide
 CH4 = Methane
 N2O = Nitrous Oxide
 CO2e = CO2 equivalent emissions

**Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas, DH-6
2-Stroke Lean-Burn (2SLB) Engines**

Company Name: Anderson University
Source Address: 1100 E. 5th Street, Anderson, IN 46012
Permit Number: 095-32805-00134
Reviewer: Daniel W. Pell

Maximum Heat Input Capacity (MMBtu/hr)	0.01
Maximum Hours Operated per Year (hr/yr)	8760
Potential Fuel Usage (MMBtu/yr)	87.6
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	0.09

Criteria Pollutants	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	3.84E-02	4.83E-02	4.83E-02	5.88E-04	3.17E+00	1.20E-01	3.86E-01
Potential Emissions (tons/yr)	0.002	0.002	0.002	0.000	0.139	0.005	0.017

*PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.
 PM2.5 emission factor is filterable PM2.5 + condensable PM.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	7.76E-03	0.000
Acrolein	7.78E-03	0.000
Benzene	1.94E-03	0.000
1,3-Butadiene	8.20E-04	0.000
Ethylbenzene	1.08E-04	0.000
Formaldehyde	5.52E-02	0.002
Methanol	2.48E-03	0.000
Methylene Chloride	1.47E-04	0.000
Hexane	4.45E-04	0.000
Toluene	9.63E-04	0.000
2,2,4-Trimethylpentane	8.46E-04	0.000
Total PAH**	1.34E-04	0.000
Total		0.003

HAP pollutants consist of the twelve highest HAPs included in AP-42 Table 3.2-1.

**PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1

Potential Fuel Usage (MMBtu/yr) = [Maximum Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operating per Year (hr/yr)]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Greenhouse Gases (GHGs)	Greenhouse Gas (GHG)		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu*	110	1.25	
Emission Factor in lb/MMcf**			2.2
Potential Emission in tons/yr	4.82	0.05	0.00
Summed Potential Emissions in tons/yr	4.87		
CO2e Total in tons/yr	6.00		

Methodology

*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

**The N2O emission factor is from AP 42, Table 1.4-2. The N2O Emission Factor for uncontrolled is 2.2;

the N2O Emission Factor for low NOx burner is 0.64.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) +
 N2O Potential Emission ton/yr x N2O GWP (310).

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 SO2 = Sulfur Dioxide

NOx = Nitrous Oxides
 VOC - Volatile Organic Compounds
 CO = Carbon Monoxide

CO2 = Carbon Dioxide
 CH4 = Methane
 N2O = Nitrous Oxide
 CO2e = CO2 equivalent emissions

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Diesel Generator RA-1

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/19/2013

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

Heat Input Capacity (MMBtu/hr)	0.01
Maximum Hours Operated per Year	8760
Potential Throughput (MMBtu/yr)	88

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.31	0.29	4.41	0.36	0.95
Potential Emission in tons/yr	0.01	0.01	0.01	0.01	0.19	0.02	0.04

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							Total PAH HAPs***
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Potential Emission in tons/yr	4.09E-05	1.79E-05	1.25E-05	1.71E-06	5.17E-05	3.36E-05	4.05E-06	7.36E-06

Potential Emission of Total HAPs (tons/yr)	1.70E-04
---	-----------------

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	1.64E+02	6.61E-03	1.32E-03
Potential Emission in tons/yr	7.18E+00	2.90E-04	5.79E-05

Summed Potential Emissions in tons/yr	7.18E+00
CO2e Total in tons/yr	7.21E+00

Methodology

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
 CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operated per Year]
 Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
NG Boiler YH-1**

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/19/2013

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
0.39	1020	3.3

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tons/yr	1.9	7.6	7.6	0.6	5.5	84	
	0.00	0.01	0.01	0.00	0.17	0.01	0.14

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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/1,020 MMBtu

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

See page 9 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
NG Boiler YH-1
HAPs Emissions**

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/19/2013

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	3.517E-06	2.010E-06	1.256E-04	3.014E-03	5.694E-06	Total <u>3.151E-03</u>

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	8.374E-07	1.842E-06	2.345E-06	6.364E-07	3.517E-06	<u>9.177E-06</u>

Methodology is the same as page 1.

Grand Total 3.160E-03

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See Page 10 for Greenhouse Gas calculations.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
NG Boiler YH-1
Greenhouse Gas Emissions**

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/19/2013

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	201	0.00385	0.00
Summed Potential Emissions in tons/yr	201		
CO2e Total in tons/yr	202		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

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

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
NG Boiler YH-2**

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/19/2013

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
0.43	1020	3.7

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.00	0.01	0.01	0.00	0.18	0.01	0.16

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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/1,020 MMBtu

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

See page 12 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
 Natural Gas Combustion Only
 NG Boiler YH-2
 HAPs Emissions**

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/19/2013

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	3.878E-06	2.216E-06	1.385E-04	3.324E-03	6.278E-06	3.475E-03

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	9.232E-07	2.031E-06	2.585E-06	7.017E-07	3.878E-06	1.012E-05

Methodology is the same as page 1.

Total 3.485E-03

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See Page 13 for Greenhouse Gas calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
NG Boiler YH-2
Greenhouse Gas Emissions

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/19/2013

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	222	0.00425	0.00
Summed Potential Emissions in tons/yr	222		
CO2e Total in tons/yr	223		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

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

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Heat Input Capacity of Existing Emission Units**

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/8/2013

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
82.27	1020	706.6

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.67	2.68	2.68	0.21	35.33	1.94	29.68

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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/1,020 MMBtu

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

See page 15 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
 Natural Gas Combustion Only
 MM BTU/HR <100
 Heat Input Capacity in Original MSOP
 HAPs Emissions**

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/8/2013

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	7.419E-04	4.239E-04	2.650E-02	6.359E-01	1.201E-03	6.648E-01

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	1.766E-04	3.886E-04	4.946E-04	1.342E-04	7.419E-04	1.936E-03

Methodology is the same as page 1.

Total 6.667E-01

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See Page 16 for Greenhouse Gas calculations.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Heat Input Capacity in Original MSOP
Greenhouse Gas Emissions**

Company Name: Anderson University
Address City IN Zip: 1100 East 5th Street, Anderson, IN 46012
Permit Number: 32805
Plt ID: 095-00134
Reviewer: Daniel W. Pell
Date: 2/8/2013

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	42,393	0.81254	0.78
Summed Potential Emissions in tons/yr	42,395		
CO2e Total in tons/yr	42,651		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

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

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
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: Diana Conrad
Assistant Director Physical Plant
Anderson University
1100 East 5th Street
Anderson, IN 46012

DATE: March 22, 2013

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

SUBJECT: Final Decision
Administrative Amendment
095-32805-00134

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:
Joseph M Royer – Exec. Director Facilities & Property Management
Jennifer Aselage – Engineering & 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 3/22/2013 Anderson University 095-32805-00134 Final		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		Dianna Conrad Anderson University 1100 E 5th St Anderson IN 46012-3495 (Source CAATS) via confirmed delivery									
2		Joseph M Royer Exec Dir Facilities & Property Mgmt Anderson University 1100 E 5th St Anderson IN 46012-3495 (RO CAATS)									
3		Madison County Commissioners 16 E. 9th Suite 104 Anderson IN 46016 (Local Official)									
4		Anderson Town Council & Mayors Office P.O. Box 2100 Anderson IN 46018 (Local Official)									
5		Madison County Health Department 206 E 9th St Anderson IN 46016-1512 (Health Department)									
6		Mrs. Jennifer Aselage Engineering & Environmental Consultant 7811 Honeywell Drive Fort Wayne IN 46825 (Consultant)									
7											
8											
9											
10											
11											
12											
13											
14											
15											

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.
5			