

June 13, 2005

Ron Koberstein  
Marian College  
3200 Cold Spring Road  
Indianapolis, Indiana 46222

VIA CERTIFIED MAIL: 7000 0600 0023 5187 8607

Re: Exempt Operation Status, 097-19969-00551

Dear Mr. Koberstein:

The application from Marian College, received on December 10, 2004, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following, emission units located at 3200 Cold Spring Road, Indianapolis, Indiana 46222 are classified as exempt from air pollution permit requirements:

- (a) One (1) Bryan natural gas fired boiler rated at 7.00 million Btu per hour (MM Btu/hr) identified as emissions unit ID PE Center 1, installed 2003.
- (b) One (1) Bryan natural gas fired boiler rated at 7.00 million Btu per hour (MM Btu/hr) identified as emissions unit ID PE Center 2, installed 2003.
- (c) One (1) IBC natural gas fired boiler rated at 1.3 million Btu per hour (MM Btu/hr) identified as emissions unit ID Clare Hall, installed 1987.
- (d) One (1) Iron Fireman natural gas fired boiler rated at 1.3 million Btu per hour (MM Btu/hr) identified as emissions unit ID Stokely, installed 1970.
- (e) One (1) Weil McClain natural gas fired boiler rated at .95 million Btu per hour (MM Btu/hr) identified as emissions unit ID Allison, installed 1993 .
- (f) One (1) Weil McClain natural gas fired boiler rated at .75 million Btu per hour (MM Btu/hr) identified as emissions unit ID Civic Building, installed 1980.
- (g) One (1) Powermaster natural gas fired boiler rated at 2.00 million Btu per hour (MM Btu/hr) identified as emissions unit ID Kavanaugh, installed 1960.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
  - (a) Opacity shall not exceed an average of thirty percent (30%) 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 15 minutes (60 readings in a 6-hour period 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.
2. Pursuant to 326 IAC 6-2-2 (Particulate Matter Limitations for Sources of Indirect Heating) Boilers emission units Stokely, Civic Building, and Kavanaugh are subject to the provisions of 326 IAC 6-2-1(b) because they are located in Marion County and were constructed before September 21, 1983. Total source maximum operating capacity (Q) is less than 10 million Btu per hour (MMBtu/hr). Pursuant to 326 IAC 6-2-2(a), for Q less than 10 MMBtu/hr, Pt (particulate emitted) shall not exceed 0.6 pounds per MMBtu heat input. Therefore, particulate matter emissions

from each natural gas fired boiler, identified as emissions units ID Stokely, Civic Building, and Kavanaugh shall not exceed 0.6 pounds per million Btu (lbs/MMBtu).

3. Pursuant to 326 IAC 6-2-4 (Particulate emissions from indirect heating facilities constructed after September 21, 1983);
- (a) For total source maximum operating capacity (Q) less than 10 million Btu per hour (MMBtu/hr), Pt shall not exceed 0.6 pounds per MMBtu heat input. Therefore,
- (1) the PM emissions from the Clare Hall, 1.3 MMBtu per hour heat input boiler, shall be limited to 0.6 pounds per MMBtu heat input.
- (2) the PM emissions from the Allison, 0.95 MMBtu per hour heat input boiler, shall be limited to 0.6 pounds per MMBtu heat input.
- (b) For total source maximum operating opacity (Q) greater than 10 MMBtu/hr, particulate emissions shall be limited by the following equation:

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

where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input  
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input.

Therefore, PM emissions from the emission units PE Center 1 and 2, each 7 MMBtu per hour heat input boilers shall be limited to .498 pounds per MMBtu heat input.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Indianapolis Office of Environmental Services (OES) and Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source. If you have any questions, please contact Warner Myron Waters at (317)327-2182 or [wwaters@indygov.org](mailto:wwaters@indygov.org).

Sincerely,

ORIGINAL SIGNED BY:

Felicia A. Robinson,  
Manager of Environmental Planning

wmw

cc: Files 2 copies  
Marion County Health Department  
Air Compliance, Matt Mosier  
IDEM, Mindy Hahn

**Indiana Department of Environmental Management  
Office of Air Quality  
and  
Indianapolis Office of Environmental Services**

**Technical Support Document (TSD) for Exemption**

**Source Background and Description**

**Source Name:** Marian College  
**Source Location:** 3200 Cold Spring Road, Indianapolis, Indiana 46222  
**County:** Marion  
**SIC Code:** 8221  
**Operation Permit No.:** 097-19969-00551  
**Permit Reviewer:** Warner Myron Waters

The Indianapolis Office of Environmental Services (OES) and Office of Air Quality (OAQ) have reviewed an application from Marian College relating to the construction and operation of the following facilities/units:

- (a) One (1) Bryan natural gas fired boiler rated at 7.00 million Btu per hour (MM Btu/hr) identified as emissions unit ID PE Center 1, installed 2003.
- (b) One (1) Bryan natural gas fired boiler rated at 7.00 million Btu per hour (MM Btu/hr) identified as emissions unit ID PE Center 2, installed 2003.
- (c) One (1) IBC natural gas fired boiler rated at 1.3 million Btu per hour (MM Btu/hr) identified as emissions unit ID Clare Hall, installed 1987.
- (d) One (1) Iron Fireman natural gas fired boiler rated at 1.3 million Btu per hour (MM Btu/hr) identified as emissions unit ID Stokely, installed 1970.
- (e) One (1) Weil McClain natural gas fired boiler rated at .95 million Btu per hour (MM Btu/hr) identified as emissions unit ID Allison, installed 1993.
- (f) One (1) Weil McClain natural gas fired boiler rated at .75 million Btu per hour (MM Btu/hr) identified as emissions unit ID Civic Building, installed 1980.
- (g) One (1) Powermaster natural gas fired boiler rated at 2.00 million Btu per hour (MM Btu/hr) identified as emissions unit ID Kavanaugh, installed 1960.

**Existing Approvals**

There are no existing approvals.

**Enforcement Issue**

There are no enforcement actions pending.

**Recommendation**

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

Unless otherwise stated, information used in this review was derived from the application submitted by the applicant.

A complete application for the purposes of this review was received on December 10, 2004.

### Emission Calculations

See Appendix A, page 1 and 2, of this document for detailed emissions calculations.

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	0.2
PM-10	0.7
SO <sub>2</sub>	0.1
VOC	0.5
CO	7.5
NO <sub>x</sub>	8.9

- (a) Fugitive Emissions  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.
- (b) 326 IAC 2-1.1-3(d) specifically exempts registering or permitting sources who have potential to emit PM and/or PM10 of less than 5 tons per year, less than 10 tons per year of NO<sub>x</sub>, VOC and SO<sub>2</sub> and less than 25 tons per year of CO. As a result, this source is exempt from any Registration or Permitting requirements under 326 IAC 2.

### County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	Attainment
PM 2.5	Nonattainment
SO <sub>2</sub>	Maintenance
NO <sub>2</sub>	Attainment
1-hour Ozone	Maintenance
8-hour Ozone	Basic Nonattainment
CO	Maintenance
Lead	Maintenance

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

- (b) Marion County has been classified as nonattainment for PM<sub>2.5</sub> in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as surrogate for PM<sub>2.5</sub> emissions, pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability for the source section.
- (c) Marion County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.2
PM <sub>10</sub>	0.7
SO <sub>2</sub>	0.1
VOC	0.5
CO	7.5
NO <sub>x</sub>	8.9

This source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. This source is not a major stationary source because no non attainment pollutant is emitted at a rate of 100 tons per year or greater. Therefore, pursuant to the PSD and Emission Offset requirements do not apply.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (40 CFR 60 and 326 IAC 12) applicable to this source. The source is not subject to 40 CFR 60 Subpart Dc because each boiler has a maximum design heat input capacity less than ten (10) million Btu per hour (MMBTU/hr.).
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR 61, 40 CFR 63, 326 IAC 14 and 326 IAC 20) applicable to this source.

### **State Rule Applicability - Entire Source**

#### **326 IAC 1-6 (Preventive Maintenance Plan)**

The source is not subject to 326 IAC 1-6, because the source is not required to obtain a permit under 326 IAC 2.

#### **326 IAC 2-2 (Prevention of Significant Deterioration - PSD)**

This source is not one (1) of the twenty-eight (28) listed source categories and has potential emissions less than 250 tons per year (tpy) of PSD regulated pollutants. Therefore, this source is not major for PSD.

#### **326 IAC 2-3 (Emission Offset)**

The source is not subject to the requirements of 326 IAC 2-3 (Emission Offset), since the source does not have the potential to emit 100 or more tons per year of volatile organic compounds (VOC), nitrogen oxides (NOx) or PM 2.5.

#### **326 IAC 2-4.1 (Hazardous Air Pollutants)**

The source is not subject to 326 IAC 2-4.1, because the source is not a major source of hazardous air pollutants, as defined in 40 CFR 63.

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

Pursuant to 326 IAC 2-6-1(a)(1), (2), and (3), this source is not subject to 326 IAC 2-6 (Emission Reporting) because, as an Exempt source, it is not required to have an operating permit under 326 IAC 2-7, and it does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year, and it is not located in Lake or Porter Counties.

#### **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:

- (a) Opacity shall not exceed an average of thirty percent (30%) 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.

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

Boilers emission units identified as Stokely, Civic Building, and Kavanaugh are subject to the provisions of 326 IAC 6-2-1(b) because they are located in Marion County and were constructed before September 21, 1983.

Total source maximum operating capacity is less than 10 million Btu per hour (MMBtu/hr). Pursuant to 326 IAC 6-2-2(a), for Q less than 10 MMBtu/hr, Pt shall not exceed 0.6 pounds per million Btu (lbs/MMBtu). Therefore, particulate matter emissions from each natural gas fired boiler, identified as emissions units ID Stokely, Civic Building, and Kavanaugh shall not exceed 0.6 pounds per million Btu (lbs/MMBtu).

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

Boilers emission units PE Center 1, PE Center 2, Clare Hall, and Allison are subject to the provisions of 326 IAC 6-2-1(d) because they are located in Marion County and were constructed after September 21, 1983.

Pursuant to 326 IAC 6-2-4, for Q less than 10 mm Btu per hour (MMBtu/hr), Pt shall not exceed 0.6 pounds per million Btu (lbs/MMBtu).

Total source maximum operating capacity for Clare Hall( Q= 5.35) and Allison( Q=6.3) is less than 10 million Btu per hour (MMBtu/hr). Therefore, particulate matter emissions from each of these natural gas fired boilers, identified as emissions units Clare Hall( Q= 5.35) and Allison( Q=6.3) shall not exceed 0.6 pounds per million Btu (lbs/MMBtu).

Total source maximum operating capacity (Q) for emission units PE Center 1 and PE Center 2 is equal to 20.3 mm Btu per hour (MMBtu/hr). Therefore, Pt shall not exceed 0.498 pounds per million Btu (lbs/MMBtu). This is calculated as follows:

$$Pt = 1.09/Q^{0.26} = 1.09/ 20.3^{0.26} = .498$$

#### 326 IAC 7-1 (Sulfur Dioxide Emission Limitations)

This rule does not apply to this source because the potential to emit of each individual unit is less than 25 tons per year or 10 pounds per hour of Sulfur Dioxide.

#### **Conclusion**

The operation of the existing natural gas fired boilers, identified as emission units: ID PE Center 1, ID PE Center 2, Clare Hall, Stokely, Allison, Civic Building, and Kavanaugh, shall be exempt from air pollution control permit requirements.

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

**Company Name:** Marian College  
**Address City IN Zip:** 3200 Cold Spring Rd  
**Permit Number:** 097-19969-00551  
**Reviewer:** Warner Waters  
**Date:** 12/17/2004

Total Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
20.3	177.8

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.2	0.7	0.1	8.9	0.5	7.5

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

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu  
 Emission Factors are from AP 42, Chapter 1.4, 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  
 (SUPPLEMENT D 3/98)  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

gasc99.xls 9/95

See page 2 for HAPs emissions calculations.

updated 4/99



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

**Company Name:** Marian College  
**Address City IN Zip:** 3200 Cold Spring Rd  
**Permit Number:** 097-19969-00551  
**Reviewer:** Warner Waters  
**Date:** 12/17/2004

	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	1.867E-04	1.067E-04	6.669E-03	1.600E-01	3.023E-04

	HAPs - Metals				
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	4.446E-05	9.781E-05	1.245E-04	3.379E-05	1.867E-04

Methodology is the same as page 1.

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