



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: December 28, 2007

RE: Evansville Vanderburgh School Corp / 163-25524-00177

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

Notice of Decision: Approval - Registration

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

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

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

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

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

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

Enclosures
FN-REGIS.dot12/3/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(317) 232-8603
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Greg Lannert
Evansville Vanderburgh School Corporation
951 Walnut Street
Evansville, IN 47713

December 27, 2007

Re: Registered Construction and Operation Status,
R163-25524-00177

Dear Mr. Lannert:

Based on the application submitted on November 13, 2007 and the provisions in 326 IAC 2-5.5, it has been determined that the following emissions units at Harrison High School located at 511 Fielding Court Road, Evansville, IN 47715 is classified as registered:

- (a) Six (6) natural gas-fired boilers, constructed in October 2007, each with a maximum heat input capacity of 5 MMBtu per hour.

The following conditions shall be applicable:

(1) 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:

- (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.

(2) 326 IAC 6-4 (Fugitive Dust Emissions)

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).

(3) 326 IAC 6-2 (Particulate Emissions Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4 (Emissions for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from the boilers shall be limited to 0.45 pounds per MMBtu. The particulate emissions were based on the following equation:

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

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

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

The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251**

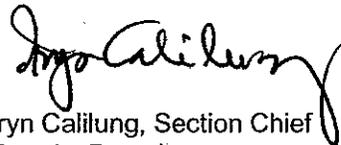
no later than March 1 of each year, with the annual notice being submitted in the format attached.

This registration supersedes PBR No. 163-22050-00177, issued on December 7, 2005.

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

If you have any questions on this matter, please contact Renee Traivaranon, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-234-5615 or at 1-800-451-6027 (ext 4-5615).

Sincerely,



Iryn Calitung, Section Chief
Permits Branch
Office of Air Quality

IC/rt

Enclosures

cc: File - Vanderburgh County
Vanderburgh County Health Department
Air Compliance Section - Derrick Ohning
IDEM Southwest Regional Office
Evansville EPA
Compliance Data Section
Permits Administrative and Development
Billing, Licensing and Training Section

Registration Annual Notification

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

Company Name:	Evansville Vanderburgh School Corporation
Address:	951 Walnut Street, Evansville, IN 47713
Phone #:	(812) 435- 8337
Registration #:	R163-25524-00177

Certification by the Authorized Individual
I hereby certify that Evansville Vanderburgh School Corporation is still in operation and is in compliance with the requirements of Registration R163-25524-00177
Name (typed):
Title:
Signature:
Phone Number:
Date:

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

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Evansville Vanderburgh School Corporation
Source Location: 951 Walnut Street, Evansville, IN 47713
County: Vanderburgh
SIC Code: 8299
Application No.: 163-25524-00177
Reviewer: Renee Traivaranon

On December 7, 2005, Evansville Vanderburgh School Corporation was issued a PBR No. 163-22050-00177 for two boilers at Harrison High School located at 511 Fielding Court Road, Evansville, IN 47715. On November 13, 2007 and December 5, 2007, Evansville Vanderburgh School Corporation submitted an application and additional information requesting the permit be updated to indicate the removal of the two (2) existing boilers and installation of six (6) boilers. These changes result in the potential to emit of Nitrogen Oxides (NOx) greater than ten (10) tons per year. Therefore, the source is subject to the requirements of 326 IAC 2-5.1 (Registration.) Accordingly, Evansville Vanderburgh School Corporation has been issued a registration No. 163-25524-00177 that supersedes PBR No. 163-22050-00177.

New Emission Units and Pollution Control Equipment

The source consists of the following emissions units and pollution control devices:

- (a) Six (6) natural gas-fired boilers, constructed in October 2007, each with a maximum heat input capacity of 5 MMBtu per hour.

There are no new emissions units at the source during this review.

Existing Approvals

The source was issued PBR No. 163-22050-00177 on December 7, 2005 and the registration No. 163-25524-00177 will supersede this existing PBR.

Enforcement Issues

There are no enforcement actions pending.

Recommendation

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

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

An application and additional information for the purposes of this review were received on November 13, 2007 and December 5, 2007.

Emission Calculations

See Appendix A of this TSD for emissions calculations (Appendix A, pages 1 through 2).

Potential To Emit Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit (PTE) 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	1.0
SO ₂	0.1
NO _x	13.1
VOC	0.7
CO	11.0
Worst Single HAP	0.2 (Hexane)
Combined HAPs	0.3

- (a) The PTE (as defined in 326 IAC 2-1.1-1(16)) of regulated criteria pollutants are less than twenty-five (25) tons per year, but the PTE of Nitrogen Oxides (NO_x) is greater than ten (10) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.
- (b) The PTE (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (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 emissions are not counted toward determination of PSD applicability.

County Attainment Status

The source is located in Vanderburgh County.

Pollutant	Status
PM _{2.5}	Non-Attainment
PM ₁₀	Attainment
SO ₂	Attainment
NO _x	Attainment
8-Hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) U.S.EPA in Federal Register Notice 70 FR.943 dated January 5, 2005 has designated Vanderburgh County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Nonattainment New Source Review requirements.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone. Vanderburgh County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx emissions were reviewed pursuant to requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (c) Vanderburgh 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. See the State Rule Applicability – Entire Source section.
- (d) Fugitive Emissions
Since this type of operation is not one of the 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 emissions are not counted toward determination of PSD applicability.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	0.2
PM-10	1.0
SO ₂	0.1
NO _x	13.1
VOC	0.7
CO	11.0
Worst Single HAP	0.2 (Hexane)
Combination HAPs	0.3

This source is not a major stationary source under 326 IAC 2-2 (PSD) 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. Therefore, pursuant to 326 IAC 2-2, the PSD 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 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.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit for this source.

The boilers are not subject to the requirements of 40 CFR 60 Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. Although each boiler was installed after 1989 but each unit has a heat input capacity less than 10 million British thermal units per hour (MMBtu/hr.)

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit for this source.

State Rule Applicability - Entire Source

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

This source is not one of the 28 listed source categories defined in 326 IAC 2-2-1(gg)(1), and no attainment pollutant is emitted at a rate of 250 tons per year or greater. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The requirements of 326 IAC 2-4.1 are not applicable to this source, since the potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year.

326 IAC 2-6 (Emission Reporting)

This source is located in Vanderburgh County, has the potential to emit of each criteria pollutant of less than hundred (100) tons per year and the potential to emit lead of less than five (5) tons per year. Therefore, the requirements of 326 IAC 2-6 do not apply.

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:

- (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.

326 IAC 6-4 (Fugitive Dust Emissions)

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).

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable, since each of the emission units at this source does not have the potential to emit greater than twenty-five (25) tons of VOCs per year.

326 IAC 7-1.1-1 (Sulfur dioxide emission limitations: applicability)

The source is not subject to the requirements of 326 IAC 7-1.1, because the potential to emit of all emission units are less than twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide.

326 IAC 10-1 (Nitrogen Oxides Control)

The source is not subject to 326 IAC 10 (Nitrogen Oxides Control) because the source is not located in Clark or Floyd Counties.

State Rule Applicability - Individual Facilities

326 IAC 6-5.1-1 (Particulate Matter Limitations except Lake County)

Although the source is located in Vanderburgh County, it does not have the potential to emit 100 tons per year or greater of particulate matter, and/or actual emissions of 10 tons or more per year of particulate matter. Therefore, the requirements of 326 IAC 6.5-1-1 do not apply.

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

Pursuant to 326 IAC 6-2-1(d), the boilers are subject to the provisions of 326 IAC 6-2-4 because they are sources of indirect heating and were constructed after September 21, 1983.

Pursuant to 326 IAC 6-2-4 (Emissions for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from each boiler shall be limited to 0.45 pounds per MMBtu. The particulate emissions were based on the following equation:

$$\begin{aligned} Pt &= 1.09 / Q^{0.26} \\ &= 1.09/30^{0.26} \\ &= 0.45 \quad \text{lb/MMBtu} \end{aligned}$$

Where:

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

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

Based on the emission factors provided for natural gas combustion in AP 42, chapter 1.4-1 Table 1.4-2 and heating valued provided, the PM emissions, for each boiler, are calculated as follows:

$$\begin{aligned} \text{PM emissions} &= 1.9 \text{ lb/MMCF} * 1 \text{ MMCF}/1000 \text{ MMBtu} \\ &= 0.0019 \text{ lb/MMBtu} \end{aligned}$$

Therefore, each boiler is able to comply with 326 IAC 6-2-4 limit requirement.

Conclusion

The operation of this source shall be subject to the conditions of the attached Registration No 163-25524-00177.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Boilers

Company Name: Evansville Vanderburgh School Corporation
Address City IN Zip: 951 Walnut Street, Evansville, IN 47713
Permit Number: R163-25524-00177
Reviewer: Renee Traivaranon
Date: December 12, 2007

Heat Input Capacity
 MMBtu/hr

300.0

Potential Throughput
 MMCF/yr

262.8

		Pollutant					
		PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF		1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr		0.2	1.0	0.1	13.1	0.7	11.0

*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

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
 Natural Gas Combustion Only
 Boilers
 HAPs Emissions

Company Name: Evansville Vanderburgh School Corporation
 Address City IN Zip: 951 Walnut Street, Evansville, IN 47713
 Permit Number: R163-25524-00177
 Reviewer: Renee Traivaranon
 Date: December 12, 2007

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.759E-04	1.577E-04	9.855E-03	2.365E-01	4.468E-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	6.570E-05	1.445E-04	1.840E-04	4.993E-05	2.759E-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.