



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: October 11, 2013

RE: South Bend Community Re-Entry Facility / 141-33615-00586

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.dot 6/13/2013



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

Mr. Tim Andrey
South Bend Community Re-Entry Facility
4650 Old Cleveland Road
South Bend, IN 46228

October 11, 2013

Re: Exempt Construction and Operation Status,
E141-33615-00586

Dear Mr. Andrey:

The application from South Bend Community Re-Entry Facility, received on September 6, 2013, 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 stationary minimum security correctional facility located at 4650 Old Cleveland Road, South Bend, IN 46228 is classified as exempt from air pollution permit requirements:

- (a) Three (3) uncontrolled natural gas-fired boilers, identified as Boiler #1, Boiler #2, and Boiler #3. Boiler #1 and #2 both have a heat input capacity of 0.30 MMBtu per hour. Boiler #3 has a heat input capacity of 0.99 MMBtu per hour.
- (b) One (1) natural gas-fired furnace, identified as RTU/MZU-1, with a heat input rating of 1 MMBtu per hour.
- (c) One (1) natural gas-fired furnace, identified as RTU-1, with a heat input rating of 0.5 MMBtu per hour.
- (d) Two (2) natural gas-fired furnaces, identified as RTU-2 and RTU-3, with a heat input ratings of 0.8 MMBtu per hour, each.
- (e) One (1) natural gas-fired furnace, identified as RTU-4, with a heat input rating of 0.550 MMBtu per hour.
- (f) One (1) natural gas-fired steamer with a heat input rating of 0.090 MMBtu per hour.
- (g) One (1) natural gas-fired tilt skillet with a heat input rating of 0.104 MMBtu per hour.
- (h) One (1) natural gas-fired fryer with a heat input rating of 0.080 MMBtu per hour.
- (i) One (1) natural gas-fired griddle with a heat input rating of 0.120 MMBtu per hour.
- (j) One (1) natural gas-fired oven with a heat input rating of 0.025 MMBtu per hour.
- (k) One (1) diesel-fired emergency generator, installed in 2003, with a heat input rating of 382 hp.

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, unless otherwise stated in this permit:

- (1) 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.
 - (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.
2. Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the following units shall be limited to Pt pounds per MMBtu heat input, as follows:

Emission Unit	Unit ID	Pt (lb/MMBtu)
Natural gas-fired boiler	Boiler #1	0.695
Natural gas-fired boiler	Boiler #2	0.695
Natural gas-fired boiler	Boiler #3	0.695
Natural gas-fired furnace	RTU/MZU-1	0.695
Natural gas-fired furnace	RTU-1	0.695
Natural gas-fired furnace	RTU-2	0.695
Natural gas-fired furnace	RTU-3	0.695
Natural gas-fired furnace	RTU-4	0.695

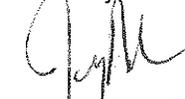
3. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

This exemption is the first air approval issued to this source.

A copy of the Exemption 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

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 Randy Wingerter, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-234-4794 or at 1-800-451-6027 (ext 44794).

Sincerely,



Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

JA/rtw

cc: File - St. Joseph County
St. Joseph County Health Department
Compliance and Enforcement Branch

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Description and Location

Source Name:	South Bend Community Re-Entry Facility
Source Location:	4650 Old Cleveland Road, South Bend, IN 46228
County:	St. Joseph
SIC Code:	9223
Exemption No.:	E141-33615-00586
Permit Reviewer:	Randy Wingerter

On September 6, 2013, the Office of Air Quality (OAQ) received an application from South Bend Community Re-Entry Facility related to the operation of an existing stationary minimum security correctional facility.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in St. Joseph County.

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

¹Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including St. Joseph County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard 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. St. Joseph 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}**
St. Joseph 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}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (c) Other Criteria Pollutants
St. Joseph County has been classified as attainment or unclassifiable in Indiana for SO₂, CO, PM₁₀, NO₂, and Pb. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-1.1-3 (Exemptions) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by South Bend Community Re-Entry Facility on September 6, 2013, relating to stationary minimum security correctional facility. South Bend Community Re-Entry Facility has requested an Exemption.

The following is a list of the emission units:

- (a) Three (3) uncontrolled natural gas-fired boilers, identified as Boiler #1, Boiler #2, and Boiler #3. Boiler #1 and #2 both have a heat input capacity of 0.30 MMBtu per hour. Boiler #3 has a heat input capacity of 0.99 MMBtu per hour.
- (b) One (1) natural gas-fired furnace, identified as RTU/MZU-1, with a heat input rating of 1 MMBtu per hour.
- (c) One (1) natural gas-fired furnace, identified as RTU-1, with a heat input rating of 0.5 MMBtu per hour.
- (d) Two (2) natural gas-fired furnaces, identified as RTU-2 and RTU-3, with a heat input ratings of 0.8 MMBtu per hour, each.
- (e) One (1) natural gas-fired furnace, identified as RTU-4, with a heat input rating of 0.550 MMBtu per hour.
- (f) One (1) natural gas-fired steamer with a heat input rating of 0.090 MMBtu per hour.
- (g) One (1) natural gas-fired tilt skillet with a heat input rating of 0.104 MMBtu per hour.
- (h) One (1) natural gas-fired fryer with a heat input rating of 0.080 MMBtu per hour.
- (i) One (1) natural gas-fired griddle with a heat input rating of 0.120 MMBtu per hour.
- (j) One (1) natural gas-fired oven with a heat input rating of 0.025 MMBtu per hour.
- (k) One (1) diesel-fired emergency generator, installed in 2003, with a heat input rating of 382 hp.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Exemption

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM10*	PM2.5*	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Natural Gas Combustion	0.05	0.18	0.18	0.01	2.43	0.13	2.04	2934	0.05	0.04
Emergency Generator	0.21	0.21	0.21	0.20	2.96	0.24	0.64	110	2.59E-03	negl.
Total PTE of Entire Source	0.26	0.39	0.39	0.21	5.39	0.37	2.68	3044	0.05	0.04
Exemptions Levels**	< 5	< 5	< 5	< 10	< 10	< 10	< 25	< 100,000	< 25	< 10

negl. = negligible
 *Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each 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.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of all regulated criteria pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3 (Exemptions).
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (c) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is 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)

- (a) The requirements for the New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60, Subpart Dc (326 IAC 12)), are not included in the permit. Although construction for the three natural gas-fired boilers commenced after June 9, 1989, each has a maximum design heat input capacity less than 10MMBtu/hr.
- (b) The requirements for the New Source Performance Standard for 40 CFR 60.4200, Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, are not included in the permit, since the diesel-fired emergency generator was installed in 2003.
- (c) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for 40 CFR 63.7480, Subpart DDDDD: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters are not included in the permit, since the source is not a major source of HAPs.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for 40 CFR 63.11193, Subpart JJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources are not included in the permit, because the three boilers combust natural gas only. Boilers combusting natural gas are not subject to this subpart per 63.11195(e).
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for 40 CFR 63.6580, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines are not included in the permit because the emergency diesel-fired generator is an existing institutional emergency stationary RICE located at an area source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that does not operate for the purpose specified in § 63.6640(f)(4)(ii).
- (g) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (h) 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 source:

- (a) 326 IAC 2-1.1-3 (Exemptions)
Exemption applicability is discussed under the Permit Level Determination – Exemption section above.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (e) 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

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

Where:

- Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).
- Q = Total source maximum operating capacity rating in 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.

Pursuant to 326 IAC 6-2-4(a), for Q less than 10 MMBtu/hr, Pt shall not exceed 0.6 lb/MMBtu.

Indirect Heating Units Which Began Operation After September 21, 1983						
Facility	Construction Date	Operating Capacity (MMBtu/hr)	Q (MMBtu/hr)	Calculated Pt (lb/MMBtu)	Particulate Limitation, (Pt) (lb/MMBtu)	PM PTE based on AP-42 (lb/MMBtu)
Boiler #1	2001	0.3	5.659	0.05	0.695	0.002
Boiler #2	2001	0.3	5.659	0.05	0.695	0.002
Boiler #3	2001	0.99	5.659	0.05	0.695	0.002
Furnace RTU/MZU-1	2001	1.0	5.659	0.05	0.695	0.002
Furnace RTU-1	2001	0.5	5.659	0.05	0.695	0.002
Furnace RTU-2	2001	0.8	5.659	0.05	0.695	0.002
Furnace RTU-3	2001	0.8	5.659	0.05	0.695	0.002
Furnace RTU-4	2001	0.55	5.659	0.05	0.695	0.002

Where: Q = Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.

- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

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 September 6, 2013.

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 141-33615-00586. The staff recommends to the Commissioner that this Exemption be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Randy Wingerter 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) 234-4794 or toll free at 1-800-451-6027 extension 44794.
- (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: Emissions Calculations
Emissions Summary**

Company Name: South Bend Community Re-Entry Facility
Address City IN Zip: 4650 Old Cleveland Road
Permit Number: E141-33615-00586
Reviewer: Randy Wingerter
Date: September 2013

Emission Unit	Uncontrolled Potential to Emit (tons/yr)								
	PM	PM10	PM2.5	SOx	NOx	VOC	CO	CO2e	Total HAPs
Natural Gas Combustion	0.05	0.18	0.18	0.01	2.43	0.13	2.04	2934	0.05
Emergency Generator	0.21	0.21	0.21	0.20	2.96	0.24	0.64	110	2.59E-03
Total	0.26	0.39	0.39	0.21	5.39	0.37	2.68	3044	0.05

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

**Company Name: South Bend Community Re-Entry Facility
Address City IN Zip: 4650 Old Cleveland Road
Permit Number: E141-33615-00586
Reviewer: Randy Wingerter
Date: September 2013**

Heat Input Capacity	HHV	Potential Throughput
MMBtu/hr	$\frac{\text{mmBtu}}{\text{mmscf}}$	MMCF/yr

0.300	Boiler #1
0.300	Boiler #2
0.990	Boiler #3
1.000	Furnace RTU/MZU-1
0.500	Furnace RTU-1
0.800	Furnace RTU-2
0.800	Furnace RTU-3
0.550	Furnace RTU-4
0.090	Steamer
0.104	Tilt Skillet
0.080	Fryer
0.120	Griddle
0.025	Oven

5.659	1020	48.6
-------	------	------

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	0.05	0.18	0.18	0.01	2.43	0.13	2.04

*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

HAPS Calculations

Emission Factor in lb/MMcf	HAPs - Organics					Total - Organics
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	5.103E-05	2.916E-05	1.823E-03	4.374E-02	8.262E-05	4.573E-02

Emission Factor in lb/MMcf	HAPs - Metals					Total - Metals
	Lead	Cadmium	Chromium	Manganese	Nickel	
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.215E-05	2.673E-05	3.402E-05	9.234E-06	5.103E-05	1.332E-04
						Total HAPs
						4.586E-02
						Worst HAP
						4.374E-02

Methodology is the same as above.

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

Greenhouse Gas Calculations

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	2,916	0.1	0.1
Summed Potential Emissions in tons/yr	2,916		
CO2e Total in tons/yr	2,934		

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: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: South Bend Community Re-Entry Facility
Address City IN Zip: 4650 Old Cleveland Road
Permit Number: E141-33615-00586
Reviewer: Randy Wingerter
Date: September 2013

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	382.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	191,000

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.21	0.21	0.21	0.20	2.96	0.24	0.64

*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							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	6.24E-04	2.73E-04	1.91E-04	2.61E-05	7.89E-04	5.13E-04	6.18E-05	1.12E-04

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

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	2.59E-03
---	-----------------

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15	4.63E-05	9.26E-06
Potential Emission in tons/yr	109.83	4.42E-03	8.84E-04

Summed Potential Emissions in tons/yr	1.10E+02
CO2e Total in tons/yr	1.10E+02

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.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Mr. Tim Andrey
South Bend Community Re-Entry Facility
4650 Old Cleveland Road
South Bend, IN 46228

DATE: October 11, 2013

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

SUBJECT: Final Decision
Exemption
141-33615-00586

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:
Greg Cress, Superintendent Responsible Official
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 6/13/2013

Mail Code 61-53

IDEM Staff	DPABST 10/11/2013 South Bend Community Re-entry Facility 141-33615-00586 (Final)		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	Type of Mail: CERTIFICATE OF MAILING ONLY	

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		Tim Andrey South Bend Community Re-entry Facility 4650 Old Cleveland Rd South Bend IN 46628 (Source CAATS) (CONFIRM DELIVERY)										
2		Greg Cress Superintendent South Bend Community Re-entry Facility 4650 Old Cleveland Rd South Bend IN 46628 (RO CAATS)										
3		Mr. Wayne Falda South Bend Tribune 255 W Colfax Ave South Bend IN 46626 (Affected Party)										
4		St. Joseph County Board of Commissioners 227 West Jefferson Blvd, South Bend IN 46601 (Local Official)										
5		St. Joseph County Health Department 227 W Jefferson Blvd, Room 825 South Bend IN 46601-1870 (Health Department)										
6		Megan Wenzel 1302 N Meridian Street Suite 300 Indianapolis IN 46202 (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.
---	--	--	--