



# 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: March 7, 2014

RE: Edinburgh Correctional Facility / 081-34072-00045

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

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Michael R. Pence  
*Governor*

Thomas W. Easterly  
*Commissioner*

Jeff Meece  
Edinburgh Correctional Facility  
711 Green Road  
Madison, IN 47250

March 7, 2014

Re: Exempt Construction and Operation Status,  
E081-34072-00045

Dear Mr. Meece:

The application from Edinburgh Correctional Facility, received on January 14, 2014, 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 correctional facility located at 703 23rd Street, Edinburgh, IN 46124 is classified as exempt from air pollution permit requirements:

- (a) One (1) natural gas-fired furnace in Building 637 with a heat input capacity of 0.060 MMBtu per hour.
- (b) One (1) natural gas-fired furnace in Building 638 with a heat input capacity of 0.060 MMBtu per hour.
- (c) Two (2) natural gas-fired furnaces in Building 641, each with a heat input capacity of 0.075 MMBtu per hour.
- (d) One (1) natural gas-fired furnace in Building 643 with a heat input capacity of 0.075 MMBtu per hour.
- (e) One (1) natural gas-fired furnace in Building 702 with a heat input capacity of 0.120 MMBtu per hour.
- (f) One (1) natural gas-fired furnace in Building 702 with a heat input capacity of 0.135 MMBtu per hour.
- (g) One (1) natural gas-fired hot water heater in Building 702 with a heat input capacity of 0.076 MMBtu per hour.
- (h) One (1) natural gas-fired tilt skillet in Building 702 with a heat input capacity of 0.091 MMBtu per hour.
- (i) One (1) natural gas-fired oven in Building 702 with a heat input capacity of 0.088 MMBtu per hour.
- (j) One (1) natural gas-fired burner stock pot in Building 702 with a heat input capacity of 0.090 MMBtu per hour.
- (k) One (1) natural gas-fired furnace in Building 703 with a heat input capacity of 0.115 MMBtu per hour.
- (l) Two (2) natural gas-fired furnaces in Building 704, each with a heat input capacity of 0.120 MMBtu per hour.



A State that Works

- (m) One (1) natural gas-fired hot water heater in Building 704 with a heat input capacity of 0.1999 MMBtu per hour.
- (n) Two (2) natural gas-fired furnaces in Building 705, each with a heat input capacity of 0.125 MMBtu per hour.
- (o) One (1) natural gas-fired hot water heater in Building 705 with a heat input capacity of 0.1999 MMBtu per hour.
- (p) One (1) natural gas-fired furnace in Building 714 with a heat input capacity of 0.120 MMBtu per hour.
- (q) Two (2) natural gas-fired furnaces in Building 715, each with a heat input capacity of 0.120 MMBtu per hour.
- (r) Two (2) natural gas-fired furnaces in Building 716, each with a heat input capacity of 0.120 MMBtu per hour.
- (s) Two (2) natural gas-fired furnaces in Building 659, each with a heat input capacity of 0.110 MMBtu per hour.
- (t) Two (2) gasoline-fired emergency generators with a rating of 6.7 hp, each.
- (u) One (1) arc welding station processing a maximum of 0.06 pounds of electrode per hour.
- (v) Paved roads and parking lots with public access

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(s)	Particulate Limitation, (Pt) (lb/MMBtu)
Building 637 Furnace	0.836
Building 638 Furnace	0.836
Building 641 Furnaces (2)	0.836
Building 643 Furnaces	0.836
Building 702 Furnaces (3)	0.836
Building 702 Water Heater	0.836
Building 702 Tilt Skillet	0.836
Building 702 Oven	0.836
Building 702 Burner Stock Pot	0.836
Building 703 Furnace	0.836

Emission Unit(s)	Particulate Limitation, (Pt) (lb/MMBtu)
Building 704 Furnaces (2)	0.836
Building 704 Water Heater	0.836
Building 705 Furnaces (2)	0.836
Building 705 Water Heater	0.836
Building 714 Furnace	0.836
Building 715 Furnaces (2)	0.836
Building 716 Furnaces (2)	0.836
Building 659 Furnaces (2)	0.836

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](http://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 4-4794).

Sincerely,



Jenny Acker, Section Chief  
Permits Branch  
Office of Air Quality

JA /rtw

cc: File - Johnson County  
Johnson County Health Department  
Compliance and Enforcement Branch

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

Technical Support Document (TSD) for an Exemption

<b>Source Description and Location</b>
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<b>Source Name:</b>	<b>Edinburgh Correctional Facility</b>
<b>Source Location:</b>	<b>703 23rd Street, Edinburgh, IN 46124</b>
<b>County:</b>	<b>Johnson</b>
<b>SIC Code:</b>	<b>9223</b>
<b>Exemption No.:</b>	<b>E081-34072-00045</b>
<b>Permit Reviewer:</b>	<b>Randy Wingerter</b>

On January 14, 2014, the Office of Air Quality (OAQ) received an application from Edinburgh Correctional Facility related to the operation of an existing correctional facility.

<b>Existing Approvals</b>
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There have been no previous approvals issued to this source.

<b>County Attainment Status</b>
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The source is located in Johnson County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
PM <sub>2.5</sub>	Attainment effective July 11, 2013, for the annual PM <sub>2.5</sub> standard.
PM <sub>2.5</sub>	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM <sub>2.5</sub> standard.
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

- (a) **Ozone Standards**  
Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) 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<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Johnson County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
  
- (b) **PM<sub>2.5</sub>**  
Johnson County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> 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<sub>2.5</sub> significant level at ten (10) tons per year. This rule became effective June 28, 2011. Therefore, direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for

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

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

### **Fugitive Emissions**

The fugitive emissions of criteria pollutants, 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 Edinburgh Correctional Facility on January 14, 2014, relating to a stationary correctional facility.

The source consists of the following existing emission units:

- (a) One (1) natural gas-fired furnace in Building 637 with a heat input capacity of 0.060 MMBtu per hour.
- (b) One (1) natural gas-fired furnace in Building 638 with a heat input capacity of 0.060 MMBtu per hour.
- (c) Two (2) natural gas-fired furnaces in Building 641, each with a heat input capacity of 0.075 MMBtu per hour.
- (d) One (1) natural gas-fired furnace in Building 643 with a heat input capacity of 0.075 MMBtu per hour.
- (e) One (1) natural gas-fired furnace in Building 702 with a heat input capacity of 0.120 MMBtu per hour.
- (f) One (1) natural gas-fired furnace in Building 702 with a heat input capacity of 0.135 MMBtu per hour.
- (g) One (1) natural gas-fired hot water heater in Building 702 with a heat input capacity of 0.076 MMBtu per hour.
- (h) One (1) natural gas-fired tilt skillet in Building 702 with a heat input capacity of 0.091 MMBtu per hour.
- (i) One (1) natural gas-fired oven in Building 702 with a heat input capacity of 0.088 MMBtu per hour.
- (j) One (1) natural gas-fired burner stock pot in Building 702 with a heat input capacity of 0.090 MMBtu per hour.
- (k) One (1) natural gas-fired furnace in Building 703 with a heat input capacity of 0.115 MMBtu per hour.
- (l) Two (2) natural gas-fired furnaces in Building 704, each with a heat input capacity of 0.120 MMBtu per hour.

- (m) One (1) natural gas-fired hot water heater in Building 704 with a heat input capacity of 0.1999 MMBtu per hour.
- (n) Two (2) natural gas-fired furnaces in Building 705, each with a heat input capacity of 0.125 MMBtu per hour.
- (o) One (1) natural gas-fired hot water heater in Building 705 with a heat input capacity of 0.1999 MMBtu per hour.
- (p) One (1) natural gas-fired furnace in Building 714 with a heat input capacity of 0.120 MMBtu per hour.
- (q) Two (2) natural gas-fired furnaces in Building 715, each with a heat input capacity of 0.120 MMBtu per hour.
- (r) Two (2) natural gas-fired furnaces in Building 716, each with a heat input capacity of 0.120 MMBtu per hour.
- (s) Two (2) natural gas-fired furnaces in Building 659, each with a heat input capacity of 0.110 MMBtu per hour.
- (t) Two (2) gasoline-fired emergency generators with a rating of 6.7 hp, each.
- (u) One (1) arc welding station processing a maximum of 0.06 pounds of electrode per hour.
- (v) Paved roads and parking lots with public access.

**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 <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e** 11/29/2013	GHGs as CO <sub>2</sub> e** 10/30/2009	Total HAPs
Natural Gas Combustion	0.02	0.09	0.09	0.01	1.19	0.07	1.00	1,436	1,436	0.02
Gasoline Generators	2.4E- 03	2.4E- 03	2.4E- 03	2.4E- 03	0.04	0.07	0.02	3.63	3.63	-
Welding	1.4E- 03	3.3E- 04	-	-	-	-	-	-	-	1.31E- 04
Paved Roads	0.33	0.07	0.02	-	-	-	-	-	-	-

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM10*	PM2.5*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e** 11/29/2013	GHGs as CO <sub>2</sub> e** 10/30/2009	Total HAPs
<b>Total PTE of Entire Source</b>	<b>0.36</b>	<b>0.16</b>	<b>0.11</b>	<b>0.01</b>	<b>1.23</b>	<b>0.14</b>	<b>1.02</b>	<b>1,439</b>	<b>1,440</b>	<b>0.02</b>
Exemptions Levels**	< 5	< 5	< 5	< 10	< 10	10	< 25	< 100,000	< 100,000	< 25
Registration Levels**	< 25	< 25	< 25	< 25	< 25	< 25	< 100	< 100,000	< 100,000	< 25
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 CO <sub>2</sub> 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.										

- (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 CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) 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 of the New Source Performance Standard for 40 CFR 60.4230, Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (326 IAC 12), are not included in the exemption, since the gasoline-powered emergency generators were manufactured before April 1, 2006.
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the exemption.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) 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 (326 IAC 20-82), are not included in the exemption, because they are existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are 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 do not operate for the purpose specified in § 63.6640(f)(4)(ii).
- (d) 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 exemption.

Compliance Assurance Monitoring (CAM)

- (g) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the exemption, 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.

<b>State Rule Applicability Determination</b>
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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 exemption:
- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (e) 326 IAC 6-2-4 (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:

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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.

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)
Building 637 Furnace	*	0.06	2.77	0.836	0.836	0.0019
Building 638 Furnace	*	0.06	2.77	0.836	0.836	0.0019
Building 641 Furnaces	*	0.075*2	2.77	0.836	0.836	0.0019
Building 643 Furnaces	*	0.075	2.77	0.836	0.836	0.0019
Building 702 Furnaces	*	0.075+0.120+0.135	2.77	0.836	0.836	0.0019
Building 702 Water Heater	*	0.076	2.77	0.836	0.836	0.0019
Building 702 Tilt Skillet	*	0.091	2.77	0.836	0.836	0.0019
Building 702 Oven	*	0.088	2.77	0.836	0.836	0.0019
Building 702 Burner Stock Pot	*	0.09	2.77	0.836	0.836	0.0019
Building 703 Furnace	*	0.115	2.77	0.836	0.836	0.0019
Building 704 Furnaces	*	0.12*2	2.77	0.836	0.836	0.0019
Building 704 Water Heater	*	0.1999	2.77	0.836	0.836	0.0019
Building 705 Furnaces	*	0.125*2	2.77	0.836	0.836	0.0019
Building 705 Water Heater	*	0.1999	2.77	0.836	0.836	0.0019
Building 714 Furnace	*	0.120	2.77	0.836	0.836	0.0019
Building 715 Furnaces	*	0.12*2	2.77	0.836	0.836	0.0019
Building 716 Furnaces	*	0.12*2	2.77	0.836	0.836	0.0019
Building 659 Furnaces	*	0.11*2	2.77	0.836	0.836	0.0019

\*For this worst-case analysis, it is assumed that all sources of indirect heating have the same construction date and all space heaters and water heaters are considered sources of indirect heating.

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.
- (h) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
 Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

**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 January 14, 2014.

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 081-34072-00045. The staff recommends to the Commissioner that this Exemption be approved.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed exemption 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 IGCM 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-4794 or toll free at 1-800-451-6027 extension 4-4794
- (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](http://www.in.gov/idem)

**Appendix A: Emission Calculations  
PTE Summary**

TSD App A Page 1 of 5

**Company Name:** Edinburgh Correctional Facility  
**Address City IN Zip:** Edinburgh, IN 46124  
**Permit No./Plt ID:** 081-34072-00045  
**Reviewer:** Randy Wingerter  
**Date:** February, 2014

Uncontrolled Potential to Emit (tons/yr)										
Emission Unit	PM	PM10	PM2.5 *	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	CO <sub>2</sub> e 11/29/2013	CO <sub>2</sub> e 10/30/2009	Total HAPs
Natural Gas Combustion	0.02	0.09	0.09	0.01	1.19	0.07	1.00	1,436	1,436	0.02
Gasoline Generators	2.4E-03	2.4E-03	2.4E-03	2.0E-03	0.04	0.07	0.02	3.63	3.63	-
Welding	1.4E-03	3.3E-04	-	-	-	-	-	-	-	1.31E-04
Paved Roads	0.33	0.07	0.02	-	-	-	-	-	-	-
<b>Total</b>	<b>0.36</b>	<b>0.16</b>	<b>0.11</b>	<b>0.01</b>	<b>1.23</b>	<b>0.14</b>	<b>1.02</b>	<b>1,439.37</b>	<b>1,439.58</b>	<b>0.02</b>

\* PM2.5 listed is direct PM2.5

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

**Company Name:** Edinburgh Correctional Facility  
**Address City IN Zip:** Edinburgh, IN 46124  
**Permit Number:** 081-34072-00045  
**Reviewer:** Randy Wingenter  
**Date:** February, 2014

Location	Equipment Name	Heat Input Capacity	HHV	Potential Throughput
		MMBtu/hr	mmBtu mmscf	
Building 637	One (1) Furnace @ 0.06 MMBtu/hr	0.060		
Building 638	One (1) Furnace @ 0.06 Mbtu/hr	0.060		
Building 641	Two (2) Furnaces @ 0.075 MMBtu/hr, each	0.150		
Building 643	One (1) Furnace @ 0.075 MMBtu/hr	0.075		
Building 702	One (1) Furnace @ 0.120 MMBtu/hr	0.120		
	One (1) Furnaces @ 0.135 Mbtu/hr	0.135		
	One (1) Water Heater @ 0.076 MMBtu/hr	0.076		
	One (1) Tilt Skillet @ 0.091 MMBtu/hr	0.091		
	One (1) Oven @ 0.088 MMBtu/hr	0.088		
Building 703	One (1) Burner Stock Pot @ 0.09 MMBtu/hr	0.090		
Building 703	One (1) Furnace @ 0.115 MMBtu/hr	0.115		
Building 704	Two (2) Furnaces @ 0.12 MMBtu/hr, each	0.240		
	One (1) Water Heater @ 0.1999 MMBtu/hr	0.1999		
Building 705	Two Furnaces @ 0.125 MMBtu/hr	0.250		
	Water Heater @ 0.1999 MMBtu/hr	0.1999		
Building 714	One (1) Furnace @ 0.12 MMBtu/hr	0.120		
Building 715	Two (2) Furnaces @ 0.12 MMBtu/hr, each	0.240		
Building 716	Two (2) Furnaces @ 0.12 MMBtu/hr, each	0.240		
Building 659	Two (2) Furnaces @ 0.11 MMBtu/hr, each	0.220		
<b>Total</b>		<b>2.77</b>	<b>1020</b>	<b>23.8</b>

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tons/yr	0.0	0.1	0.1	0.0	1.2	0.1	1.0

\*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 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	
Potential Emission in tons/yr	2.498E-05	1.427E-05	8.920E-04	2.141E-02	4.044E-05	<b>2.238E-02</b>

Emission Factor in lb/MMcf	HAPs - Metals					Total - Metals
	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	
Potential Emission in tons/yr	5.947E-06	1.308E-05	1.665E-05	4.520E-06	2.498E-05	<b>6.518E-05</b>
	<b>Total HAPs</b>					<b>2.245E-02</b>
	<b>Worst HAP</b>					<b>2.141E-02</b>

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 120,000	CH4 2.3	N2O 2.2
Potential Emission in tons/yr	1,427	2.74E-02	2.62E-02
Summed Potential Emissions in tons/yr	1,427		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	1,436		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	1,436		

**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) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).  
 CO2e (tons/yr) based on 10/30/2009 federal GWPs = 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  
Gasoline Generators**

**Company Name:** Edinburgh Correctional Facility  
**Address City IN Zip:** Edinburgh, IN 46124  
**Permit Number:** 081-34072-00045  
**Reviewer:** Randy Wingerter  
**Date:** February, 2014

**Emissions calculated based on output rating (hp)**

ID	Location	hp
Gas Generator	Maintenance	6.7
Gas Generator	Maintenance	6.7

Output Horsepower Rating (hp)	13.4
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	6,700

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.21E-04	7.21E-04	7.21E-04	5.91E-04	1.10E-02	2.16E-02	6.96E-03
Potential Emission in tons/yr	0.002	0.002	0.002	0.002	0.037	0.072	0.023

\*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

\*\*NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.08E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	3.6	0.000	0.000
Summed Potential Emissions in tons/yr	3.6		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	3.6		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	3.6		

**Methodology**

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.

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 (hp-hr/yr) = [Output Horsepower Rating (hp)] \* [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] \* [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

CO2e (tons/yr) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

CO2e (tons/yr) based on 10/30/2009 federal GWPs = 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  
Gasoline Generators**

**Company Name:** Edinburgh Correctional Facility  
**Address City IN Zip:** Edinburgh, IN 46124  
**Permit Number:** 081-34072-00045  
**Reviewer:** Randy Wingerter  
**Date:** February, 2014

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS
			PM = PM <sub>10</sub>	Mn	Ni	Cr	PM = PM <sub>10</sub>	Mn	Ni	Cr	
<b>WELDING</b>											
Arc Welder	1	0.06	0.0055	0.0005			0.000	0.000	0	0	0.000
<b>EMISSION TOTALS</b>											
Potential Emissions lbs/hr							0.00	0.00	0	0	0.00
Potential Emissions lbs/day							0.01	0.00	0	0	0.00
Potential Emissions tons/year							1.45E-03	1.31E-04	0	0	0.00

**METHODOLOGY**

\*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.  
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)  
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day  
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.  
PM=PM<sub>10</sub>=PM<sub>2.5</sub>

**Appendix A: Emission Calculations  
Fugitive Dust Emissions  
Paved Roads**

**Company Name:** Edinburgh Correctional Facility  
**Address City IN Zip:** Edinburgh, IN 46124  
**Permit Number:** 081-34072-00045  
**Reviewer:** Randy Wingerter  
**Date:** February, 2014

NOTE: The following emissions estimate is a conservative estimate based on similar sources and information from this source.

**Paved Roads at Industrial Site**

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Information (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Tractor Trailers (entering facility) (one-way trip)	3.0	3.0	9.0	30.0	270.0	2600	0.492	4.4	1617.6
Tractor Trailers (leaving facility) (one-way trip)	3.0	3.0	9.0	30.0	270.0	2600	0.492	4.4	1617.6
<b>Totals</b>			<b>18.0</b>		<b>540.0</b>			<b>8.9</b>	<b>3235.2</b>

Average Vehicle Weight Per Trip = 30.0 tons/trip  
 Average Miles Per Trip = 0.49 miles/trip

Unmitigated Emission Factor, Ef =  $[k * (sL)^{0.91} * (W)^{1.02}]$  (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
sL =	0.6	0.6	0.6	g/m <sup>2</sup> = silt loading value for paved roads at iron and steel production facilities
W =	30.0	30.0	30.0	tons = average vehicle weight (provided by source)

- Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext =  $E * [1 - (p/4N)]$  (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, Eext = Ef \* [1 - (p/4N)]  
 where p = 120 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)  
 N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.222	0.044	0.011	lb/mile
Mitigated Emission Factor, Eext =	0.204	0.041	0.010	lb/mile
Dust Control Efficiency =	0%	0%	0%	

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Tractor Trailers (entering facility) (one-way trip)	0.18	0.04	0.01	0.16	0.03	0.01	0.16	0.03	0.01
Tractor Trailers (leaving facility) (one-way trip)	0.18	0.04	0.01	0.16	0.03	0.01	0.16	0.03	0.01
<b>Totals</b>	<b>0.36</b>	<b>0.07</b>	<b>0.02</b>	<b>0.33</b>	<b>0.07</b>	<b>0.02</b>	<b>0.33</b>	<b>0.07</b>	<b>0.02</b>

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
 Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Unmitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
 Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] \* [Mitigated Emission Factor (lb/mile)] \* (ton/2000 lbs)  
 Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] \* [1 - Dust Control Efficiency]

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PM2.5 = Particle Matter (<2.5 um)  
 PTE = Potential to Emit



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

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

TO: Jeff Meece  
Edinburgh Correctional Facility  
711 Green Road  
Madison, IN 47250

DATE: March 7, 2014

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

SUBJECT: Final Decision  
Exempt Construction and Operation Status  
081-34072-00045

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:  
Fran Osburn, Superintendent  
Alic Bent, August Mack Environmental, Inc.  
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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 6/13/2013

# Mail Code 61-53

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5		Frederick & Iva Moore 6019 W 650 N Ligonier IN 46767 (Affected Party)									
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7		Greenwood City Council and Mayors Office 2 N. Madison Ave. Greenwood IN 46142 (Local Official)									
8		Mr. Alic Bent August Mack Environmental, Inc. 1302 N Meridian St, Suite 300 Indianapolis IN 46202 (Consultant)									
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