



TO: Interested Parties / Applicant

RE: Dow AgroSciences, LLC / F 097-23643-00259

FROM: Felicia A. Robinson  
Administrator

## Notice of Decision: Approval - Effective Immediately

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 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require 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, Room 1049, Indianapolis, IN 46204, **within fifteen (15) calendar days of the receipt 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 Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures



Air Quality Hotline: 317-327-4AIR | [knozone.com](http://knozone.com)

Department of Public Works  
Office of Environmental Services

2700 Belmont Avenue  
Indianapolis, IN 46221

317-327-2234  
Fax 327-2274  
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[indygov.org/dpw](http://indygov.org/dpw)

Certified Mail #: 7007 0220 0002 7444 2494

September 27, 2007

Mr. Norm Smiley  
R & D Building Manager  
Dow AgroSciences, LLC  
9330 Zionsville Road  
Indianapolis, Indiana 46268



Re: FESOP Renewal, F097-23643-00259 to  
FESOP F097-15205-00259.

Dear Mr. Smiley:

Dow AgroSciences, LLC, herein after referred to as "source", was issued a Federally Enforceable State Operating Permit (FESOP) on June 24, 2002, for the site located 9330 Zionsville Road, Indianapolis, Indiana 46268, in regards to operating an office, research and development facility. A permit renewal application was received on September 14, 2006, by the Indianapolis Office of Environmental Services (OES) and Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ).

Pursuant to the provisions of 326 IAC 2-8-7, this FESOP is hereby renewed. Please find attached a copy of the renewed permit, Technical Support Document (TSD), Addendum to TSD, and Appendix A.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Carmen Bugay of my staff via e-mail at [cbugay@indygov.org](mailto:cbugay@indygov.org) or phone at (317) 327-2512.

Sincerely,

Original signed by Amanda Hennessy, for

Felicia A. Robinson  
Administrator

Enclosures: Renewed FESOP Permit  
Technical Support Document (TSD)  
& Appendix A  
Addendum to TSD

FAR/cmb

cc: Mindy Hahn, IDEM, OAQ  
U.S. EPA Region V  
Marion County Health Department  
Matt Mosier, OES, Air Compliance  
OES files (3)



Department of Public Works  
Office of Environmental Services  
2700 Belmont Avenue  
Indianapolis, IN 46221  
317-327-2234  
Fax 327-2274  
TDD 327-5186  
[indygov.org/dpw](http://indygov.org/dpw)



**Federally Enforceable State Operating Permit Renewal**  
**INDIANA DEPARTMENT OF ENVIRONMENTAL**  
**MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**and**  
**INDIANAPOLIS OFFICE OF ENVIRONMENTAL**  
**SERVICES**

**Dow AgroSciences, LLC**  
**9330 Zionsville Road**  
**Indianapolis, Indiana 46268**

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

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F097-23643-00259	
Issued by:  Original signed by Amanda Hennessy, for  Felicia A. Robinson Administrator Indianapolis Office of Environmental Services	Issuance Date: September 27, 2007   Expiration Date: September 28, 2012



Air Quality Hotline: 317-327-4AIR | knozone.com

**Department of Public Works**  
**Office of Environmental Services**  
  
 2700 Belmont Avenue  
 Indianapolis, IN 46221  
  
 317-327-2234  
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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Indianapolis Office of Environmental Services (OES). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-8-3(b)]

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The Permittee owns and operates a stationary office, research and development facility.

Source Address:	9330 Zionsville Road, Indianapolis, Indiana 46268
Mailing Address:	9330 Zionsville Road, Indianapolis, Indiana 46268
General Source Phone Number:	(317) 337-3000
SIC Code:	8731
County Location:	Marion
Source Location Status:	Nonattainment for 8-hour ozone standard Nonattainment for PM 2.5 standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) Emissions Unit ID 5309-01; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 29.3 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (b) Emissions Unit ID 5309-02; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 29.3 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (c) Emissions Unit ID 5309-03; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.

- (d) Emissions Unit ID 5309-04; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (e) Emissions Unit ID 5309-05; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (f) Emissions Unit ID 5309-06; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (g) Emissions Unit ID 5309-07; Stack/Vent ID No. 308-1.  
One (1) natural gas-fired Bryan Steam Corporation Boiler, with a maximum design rated heat input capacity of 10.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (h) Emissions Unit ID 5309-08; Stack/Vent ID No. 308-1.  
One (1) natural gas-fired Bryan Steam Corporation Boiler, with a maximum design rated heat input capacity of 10.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Emissions Unit ID 301-DC.  
Research and development of new plant, animal, and pharmaceutical formulations, pesticides and products. This emission unit includes, but is not limited to, a batch mixer and portable milling equipment. Particulate Matter is controlled by a baghouse identified as control equipment ID 301-DC.

- (b) Emissions Unit ID 5309-09; Stack/Vent ID No. 306-2.  
One (1) diesel fuel fired 1000 kW/hr electrical backup generator, with a maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993.
- (c) Emissions Unit ID 5309-10; Stack/Vent ID No. 308-2.  
One (1) diesel fuel fired 1000 kW/hr electrical backup generator, with a maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993.
- (d) natural gas-fired combustion sources with heat input equal to, or less than, 10 MMBTU per hour.
- (e) storage tanks with capacities less than, or equal to, 1,000 gallons and annual throughputs less than 12,000 gallons.
- (f) closed loop heating and cooling systems.
- (g) noncontact cooling tower systems with forced and induced draft not regulated under a NESHAP.
- (h) replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (i) blowdown for any of the following: sight glass; boiler; compressor; pump; and cooling tower.
- (j) on-site fire and emergency response training approved by the department.
- (k) filter or coalescer media change out.
- (l) a laboratory as defined in 326 IAC 2-7-1(21)(D).
- (m) soil handling associated with greenhouse research and development.

A.4 FESOP Applicability [326 IAC 2-8-2]

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This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), and Indianapolis Office of Environmental Services (OES) to renew a Federally Enforceable State Operating Permit (FESOP).

## **SECTION B GENERAL CONDITIONS**

### **B.1 Definitions [326 IAC 2-8-1]**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

### **B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]**

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- (a) This permit, F097-23643-00259, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ and OES, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

### **B.3 Term of Conditions [326 IAC 2-1.1-9.5]**

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Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### **B.4 Enforceability [326 IAC 2-8-6]**

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- (a) Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM and OES, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.
- (b) Unless otherwise stated, all terms and conditions in this permit that are local requirements, including any provisions designed to limit the source's potential to emit, are enforceable by OES.

### **B.5 Severability [326 IAC 2-8-4(4)]**

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The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### **B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]**

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

### **B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]**

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- (a) The Permittee shall furnish to IDEM, OAQ and OES, within a reasonable time, any information that IDEM, OAQ and OES may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ and OES copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ and OES, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

**B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]**

---

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1)

**B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and OES on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ and OES may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]**

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IDEM, OAQ and OES may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ and OES upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and OES. IDEM, OAQ and OES may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and OES within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality,  
Compliance Section), or  
Telephone Number: 317-233-0178 (ask for Compliance Section)  
Facsimile Number: 317-233-6865

Indianapolis OES:  
Telephone No.: 317-327-2237 (ask for Air Compliance)  
Facsimile No.: 317-327-2274

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ and OES may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
  - (f) Failure to notify IDEM, OAQ and OES by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
  - (g) Operations may continue during an emergency only if the following conditions are met:
    - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
    - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

- (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
- (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

**B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of permits established prior to F097-23643-00259 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted
- (b) All previous registrations and permits are superseded by this permit.

**B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]**

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The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

**B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]**

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- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination  
[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ and OES determines any of the following:
- (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ and OES to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ and OES at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ and OES may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and OES and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

and

Indianapolis Office of Environmental Services  
Air Permits  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

- (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and OES on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ and OES takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ and OES any additional information identified as being needed to process the application.

**B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]**

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- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

and

Indianapolis Office of Environmental Services  
Air Permits  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

**B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]**

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ and OES in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, and OES or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
and  
  
Indianapolis Office of Environmental Services  
Air Permits  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221  
  
The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

**B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

**B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]**

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For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
  - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
  - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred and fifty (250) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.2 Opacity [326 IAC 5-1]

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:

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

#### C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

#### C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

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

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
- (A) Asbestos removal or demolition start date;
- (B) Removal or demolition contractor; or
- (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-52 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

Indianapolis Office of Environmental Services  
Enforcement Section  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) Procedures for Asbestos Emission Control  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on

pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) Demolition and Renovation  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Accredited Asbestos Inspector  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

### **Testing Requirements [326 IAC 2-8-4(3)]**

#### **C.7 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ and OES of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and OES not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ and OES if the Permittee submits to IDEM, OAQ and OES a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### **C.8 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the IDEM Commissioner or the U. S. EPA.

## **Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

### **C.9 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]**

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

### **C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

---

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

### **C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]**

---

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ and OES approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

## **Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

### **C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

### **C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]**

---

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the

Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ and OES within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ and OES that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ and OES reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

#### **C.14 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

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- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

#### **C.15 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]**

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

and

Indianapolis Office of Environmental Services  
Air Compliance  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and OES on or before the date it is due.

- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ and OES. The general public may request this information from the IDEM, OAQ and OES under 326 IAC 17.1.

### **Stratospheric Ozone Protection**

#### **C.16 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 EMISSIONS UNIT -- FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

- (a) Emissions Unit ID 5309-01; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 29.3 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (b) Emissions Unit ID 5309-02; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 29.3 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (c) Emissions Unit ID 5309-03; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (d) Emissions Unit ID 5309-04; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (e) Emissions Unit ID 5309-05; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (f) Emissions Unit ID 5309-06; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (table continued)

**Facility Description [326 IAC 2-8-4(10)]: continued**

- (g) Emissions Unit ID 5309-07; Stack/Vent ID No. 308-1.  
One (1) natural gas-fired Bryan Steam Corporation Boiler, with a maximum design rated heat input capacity of 10.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (h) Emissions Unit ID 5309-08; Stack/Vent ID No. 308-1.  
One (1) natural gas-fired Bryan Steam Corporation Boiler, with a maximum design rated heat input capacity of 10.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**New Source Performance Standards (NSPS) Requirements [40 CFR Part 60, Subpart A & Dc] [326 IAC 12]**

D.1.1 General Provisions Relating to New Source Performance Standards [40 CFR Part 60, Subpart A] [326 IAC 12-1]

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for each of the eight boilers (EU 5309-01 through EU-5309-08), except as otherwise specified in 40 CFR Part 60, Subpart Dc.
- (b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

and

Indianapolis OES  
Air Compliance  
2700 South Belmont Ave.  
Indianapolis, IN 46221

D.1.2 New Source Performance Standards for Small-Commercial-Institutional- Steam Generating Units Requirements [40 CFR Part 60, Subpart Dc] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of the NSPS for each of the eight boilers (EU 5309-01 through EU 5309-08). The provisions are as specified below:

#### **§ 60.40c Applicability and delegation of authority.**

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO<sub>2</sub>) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

#### **§ 60.41c Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

*Annual capacity factor* means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

*Coal* means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388-77, 90, 91, 95, or 98a, Standard Specification for Classification of Coals by Rank (IBR--see Sec. 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

*Cogeneration steam generating unit* means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

*Combined cycle system* means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

*Combustion research* means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

*Conventional technology* means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

*Distillate oil* means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396–78, 89, 90, 92, 96, or 98, “Standard Specification for Fuel Oils” (incorporated by reference—see §60.17).

*Dry flue gas desulfurization technology* means a sulfur dioxide (SO<sub>2</sub>) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

*Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

*Emerging technology* means any SO<sub>2</sub> control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

*Federally enforceable* means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR Parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

*Fluidized bed combustion technology* means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

*Fuel pretreatment* means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

*Heat input* means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

*Heat transfer medium* means any material that is used to transfer heat from one point to another point.

*Maximum design heat input capacity* means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

*Natural gas* means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane, or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835–86, 87, 91, or 97, “Standard Specification for Liquefied Petroleum Gases” (incorporated by reference—see §60.17).

*Noncontinental area* means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

*Oil* means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

*Potential sulfur dioxide emission rate* means the theoretical SO<sub>2</sub> emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

*Process heater* means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396–78, 89, 90, 92, 96, or 98, “Standard Specification for Fuel Oils” (incorporated by reference—see §60.17).

*Steam generating unit* means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

*Steam generating unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

*Wet flue gas desulfurization technology* means an SO<sub>2</sub> control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

*Wet scrubber system* means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO<sub>2</sub>.

*Wood* means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

#### **§ 60.48c Reporting and recordkeeping requirements.**

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. The owner or operator of an affected facility that only burns very low sulfur fuel oil or other liquid or gaseous fuels with potential sulfur dioxide emissions rate of 140 ng/J (0.32 lb/MMBtu) heat input or less shall record and maintain records of the fuels combusted during each calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

## Emission Limitations and Standards [326 IAC 2-8-4(1)]

### D.1.3 Oxides of Nitrogen (NO<sub>x</sub>) [326 IAC 2-8-4(1)]

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The Permittee shall comply with the following limits:

- (a) The combined fuel usage for the eight (8) boilers (EU 5309-01 through 5309-08) shall be less than 1,650 million cubic feet of natural gas per 12 month consecutive period, with compliance determined at the end of each month.
- (b) NO<sub>x</sub> emissions from each boiler shall not exceed 100 pounds per million cubic feet of natural gas.

Compliance with the above emission limitations in combination with potential NO<sub>x</sub> emissions from insignificant activities, will enforceably limit source-wide NO<sub>x</sub> emissions to less than 100 tpy; and will render 326 IAC 2-7 (Part 70 Permit Program) not applicable.

### D.1.4 Particulate Matter (PM) [326 IAC 6-2-4]

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Pursuant to 326 IAC 6-2-4 (Emission limitations for facilities specified in 326 IAC 6-2-1(d)), the following limitations apply to each of the eight boilers listed below, as follows:

- (a) PM emissions from each Emissions Unit 5309-01 through 5309-06 boilers shall not exceed 0.28 lb/MMBTU based on a maximum heat input capacity of 192.6 MMBtu (Q), per the following calculation, pursuant to 326 IAC 6-2-4(a):

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

Where:

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

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.

- (b) PM emissions from each Emissions Unit 5309-07 and 5309-08 boilers shall not exceed 0.27 lb/MMBTU based on a maximum heat input capacity of 213.6 MMBtu (Q) per the following calculation, pursuant to 326 IAC 6-2-4(a):

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

Where:

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

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.

## **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

### **D.1.5 Record Keeping Requirements**

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To document compliance with preceding conditions D.1.2 and D.1.3, the Permittee shall;

- (a) maintain records of the amount of natural gas consumed each month.
- (b) maintain records of the amount of natural gas consumed per 12 consecutive month period, with compliance determined each month.
- (c) all records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

### **D.1.6 Reporting Requirements**

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- (a) A quarterly summary of the information to document compliance with Condition D.1.3 shall be submitted to the addresses listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The Permittee shall certify, on the form provided (or its equivalent), that natural gas was fired in the boiler at all times during the report period. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
and  
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES  
AIR COMPLIANCE  
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
CERTIFICATION**

Source Name: Dow AgroSciences, LLC  
Source Address: 9330 Zionsville Road, Indianapolis, Indiana 46268  
Mailing Address: 9330 Zionsville Road, Indianapolis, Indiana 46268  
FESOP Permit No.: F097-23643-00259

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) \_\_\_\_\_
- Report (specify) \_\_\_\_\_
- Notification (specify) \_\_\_\_\_
- Affidavit (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OAQ, COMPLIANCE BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865  
and  
INDIANAPOLIS OES  
Air Compliance  
2700 S. Belmont Avenue  
Indianapolis, Indiana 46221  
Phone 317-327-2234  
Fax: 317-327-2274**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: Dow AgroSciences, LLC  
Source Address: 9330 Zionsville Road, Indianapolis, Indiana 46268  
Mailing Address: 9330 Zionsville Road, Indianapolis, Indiana 46268  
FESOP Permit No.: F097-23643-00259

**This form consists of 2 pages**

**Page 1 of 2**

- |  |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none"><li>• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and</li><li>• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16</li></ul> |
|--|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is **not** required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 and  
 CITY OF INDIANAPOLIS  
 OFFICE OF ENVIRONMENTAL SERVICES**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
 Quarterly Report**

Source Name: Dow Agro Sciences, LLC  
 Source Address: 9330 Zionsville Road, Indianapolis, IN 46268  
 Mailing Address: 9330 Zionsville Road, Indianapolis, IN 46268  
 FESOP No.: 097-23643-00259  
 Facility: Emission Units 5309-01 through 5309-08 (Boilers)  
 Parameter: NOx limits  
 Limits: Less than 1650 MMCF per 12 consecutive month period. Compliance determined at the end of each month.

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
and  
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES  
AIR COMPLIANCE**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Dow AgroSciences, LLC  
Source Address: 9330 Zionsville Road, Indianapolis, IN 46268  
Mailing Address: 9330 Zionsville Road, Indianapolis, IN 46268  
FESOP No.: F097-23643-00259

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

<p>This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked <input type="checkbox"/> No deviations occurred this reporting period.</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

Technical Support Document (TSD) for a  
Federally Enforceable State Operating Permit (FESOP) Renewal

**Source Background and Description**

<b>Source Name:</b>	<b>Dow AgroSciences, LLC</b>
<b>Source Location:</b>	<b>9330 Zionsville Road, Indianapolis, IN 46268</b>
<b>County:</b>	<b>Marion</b>
<b>SIC Code:</b>	<b>2879</b>
<b>Operation Permit No.:</b>	<b>F097-23643-00259</b>
<b>Permit Reviewer:</b>	<b>Carmen Bugay</b>

The Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES) have reviewed a FESOP renewal application from Dow AgroSciences, LLC, relating to the operation of an office and research and development facility for formulations of plant and animal herbicide and pesticide products.

**Permitted Emission Units and Pollution Control Equipment**

- (a) Emissions Unit ID 5309-01; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 29.3 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
  
- (b) Emissions Unit ID 5309-02; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 29.3 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
  
- (c) Emissions Unit ID 5309-03; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.

- (d) Emissions Unit ID 5309-04; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (e) Emissions Unit ID 5309-05; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (f) Emissions Unit ID 5309-06; Stack/Vent ID No. 306-1.  
One (1) natural gas-fired Cleaver Brooks Boiler, with a maximum design rated heat input capacity of 33.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1991. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (g) Emissions Unit ID 5309-07; Stack/Vent ID No. 308-1.  
One (1) natural gas-fired Bryan Steam Corporation Boiler, with a maximum design rated heat input capacity of 10.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.
- (h) Emissions Unit ID 5309-08; Stack/Vent ID No. 308-1.  
One (1) natural gas-fired Bryan Steam Corporation Boiler, with a maximum design rated heat input capacity of 10.5 MMBtu/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993. Under New Source Performance Standards (NSPS), 40 CFR 60.40c, Subpart Dc, the boiler is considered a steam generating unit, with construction beginning after June 9, 1989, and with a maximum heat input capacity of 100 Million British thermal units per hour (MMBtu/hr) or less but greater than or equal to 10 MMBtu/hr.

### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

### **Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Emissions Unit ID 301-DC. Research and development of new plant, animal, and pharmaceutical formulations, pesticides and products. This emission unit includes, but is not limited to, a batch mixer and portable milling equipment. Particulate Matter is controlled by a baghouse identified as control equipment ID 301-DC. [326 IAC 6-3-2]
- (b) Emissions Unit ID 5309-09; Stack/Vent ID No. 306-2.  
One (1) diesel fuel fired 1000 kW/hr electrical backup generator, with a maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993.

- (c) Emissions Unit ID 5309-10; Stack/Vent ID No. 308-2.  
One (1) diesel fuel fired 1000 kW/hr electrical backup generator, with a maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr, exhausting to stack/vent mentioned above, and an installation date of December 1993.
- (d) natural gas-fired combustion sources with heat input equal to or less than 10 MMBTU per hour.
- (e) storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (f) closed loop heating and cooling systems.
- (g) noncontact cooling tower systems with forced and induced draft not regulated under a NESHAP.
- (h) replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (i) blowdown for any of the following: sight glass; boiler; compressor; pump; and cooling tower.
- (j) on-site fire and emergency response training approved by the department.
- (k) filter or coalescer media change out.
- (l) a laboratory as defined in 326 IAC 2-7-1(21)(D).
- (m) soil handling associated with greenhouse research and development.

### Existing Approvals

- (a) FESOP Renewal F097-15205-00259 issued in June 24, 2002, and expiring on June 24, 2007;
- (b) Administrative Amendment 097-16544-00259 issued on February 4, 2003; and
- (c) Administrative Amendment 097-18994-00259 issued on August 18, 2004.

All conditions from previous approvals were incorporated into this FESOP, except for the following changes:

- (1) Emission unit (EU) 310-1. One CBT Wearparts Soil Pulverizer, with a maximum operating capacity of 40 tons/hr, installed in 1999. This unit is not being utilized and was removed from service on October, 2004. All references to this unit has been removed.
- (2) EU 5309-01 through 5309-08 (Boilers).
  - (a) Due to the removal of the Soil Pulverizer mentioned above, the limited potential to emit was adjusted to reflect the difference in tons per year once the emergency generators and the insignificant activities were subtracted from the 100 tons per year (tpy) threshold limitation and in order that the facility remain a FESOP. Therefore the limited NOx PTE of these units increased from 70.44 to 82.50 tpy.
  - (b) Recalculated fuel usage limitation based on the new 82.5 tpy limitation for these boilers also increased from 1,408.8 to 1,650 MMCF/yr.
  - (c) In addition, a 100 lb / MMCF of natural gas limit was added in order that source-wide NOx emissions be enforceably limited to less than 100 tpy, so that 326 IAC 2-7 (Part 70 Permit Program) does not apply.

- (d) The F097-15205-00259 permit contained a CO limitation based on the NOx MMCF/yr limit. Since the potential to emit (PTE) of CO for these emission units is below 100 tpy, this limitation was not necessary and was not included in this permit renewal.
  - (e) Descriptive information for the eight boilers was revised in condition A.2, and Section D.1 table.
- (3) Emergency Generators EU 5309-09 and 5309-10.
- (a) The F097-15205-00259 permit contained a NOx limit of 15 tons per year, for these emission units. In addition, the permit contained a NOx limitation of 66.1 gallons per hour at 500 hours per year of operation (33,050 gallons per year). Since these units are emergency internal combustion emission units burning only diesel and are already limited to 500 hours of operation per year, a specific NOx limitation, PMP requirement, reporting and recordkeeping requirements, with associated forms, were not needed in this permit renewal, and not included.
  - (b) Descriptive information for the two generators was revised and taken out of condition A.2 (not significant units as described previously based on potential to emit) and placed in condition A.3 (Insignificant Activities). In addition, since there were no applicable requirements to these units, they were deleted from the Section D.2 table.

#### **Enforcement Issue**

There are no enforcement actions pending.

#### **Recommendation**

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

An administratively complete FESOP Renewal application for the purposes of this review was received on September 14, 2006. Subsequent information was received on October 18, 2006 (site visit) and on November 2, 2006.

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

#### **Emission Calculations**

See Appendix A of this document for detailed emissions calculations (pages 1 through 10).

#### **Unrestricted Potential Emissions**

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	5.813
PM-10	10.841
SO <sub>2</sub>	2.456
VOC	5.503
CO	82.159
NO <sub>x</sub>	108.077

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

Hazardous Air Pollutant	Unrestricted Potential Emissions (tons/yr)
Any single HAP	1.651
Combined HAPs	1.731

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of NO<sub>x</sub> is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 (total heat input capacity of fossil fired boilers is 213.6 MMBtu per hour) 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 and Emission Offset applicability.

**Actual Emissions**

The following table shows the actual emissions from the source. This information reflects the OES emission data by years.

Actual Emissions per years (tons/year)				
Pollutant	2000	2001	2002	2003
PM	0.70	0.68	0.73	0.68
PM-10	0.29	0.27	0.30	0.27
SO <sub>2</sub>	0.07	0.08	0.08	0.08
VOC	0.51	0.49	0.53	0.49
CO	6.86	7.47	8.05	7.47
NO <sub>x</sub>	9.27	9.04	9.71	9.04

**Potential to Emit After Issuance**

The source was issued a FESOP Renewal, F097-15205-00259, and has opted to remain a FESOP source, rather than apply for a Part 70 Operating Permit. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of this Federally Enforceable State Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/emission unit	Potential to Emit After Issuance (tons/year)							
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAP comb.	HAP single
Boilers (emission units 5309-01 through 5309-08) <sup>1</sup>	1.743	6.971	0.550	5.045	81.04	82.50	1.731	1.651
Emergency Generators (5309-09 and 5309-10)	0.469	0.269	1.896	0.384	3.989	15.02	Negligible	Negligible
Insignificant Activities	3.601	3.601	0.010	0.074	1.122	1.335	Negligible	Negligible
<b>Total PTE After Issuance</b>	<b>5.813</b>	<b>10.84</b>	<b>2.456</b>	<b>5.503</b>	<b>86.15</b>	<b>98.85</b>	<b>1.731</b>	<b>1.651</b>

<sup>1</sup> Boilers Limited PTE based on NO<sub>x</sub> limitations of 82.50 tpy (fuel usage limit of 1,650 MMCF, per consecutive 12 month period), to keep source-wide NO<sub>x</sub> emissions ≤ 100 tpy.

### County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-2.5	nonattainment
PM-10	attainment
SO <sub>2</sub>	maintenance attainment
NO <sub>2</sub>	attainment
8-hour Ozone	basic nonattainment
CO	attainment
Lead	attainment

- (a) 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 the ozone standards. Marion County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability - Entire Source section.
- (b) Marion County has been classified as nonattainment for PM-2.5 in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM-2.5 emissions, it has directed states to regulate PM-10 emissions as a surrogate for PM-2.5 emissions, pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability - Entire Source section.
- (c) Marion County has been classified as attainment or unclassifiable in Indiana for PM-10, SO<sub>2</sub>, NO<sub>2</sub>, CO, and Lead. 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) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

- (e) **Fugitive Emissions**  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited), are as shown in the table below:

Pollutant	Emissions (tons/yr)
PM	Less than 250
PM-10	Less than 100
SO <sub>2</sub>	Less than 100
VOC	Less than 100
CO	Less than 100
NO <sub>x</sub>	Less than 100
Single HAP	Less than 10
Combination HAPs	Less than 25

- (a) This existing source is not a major stationary source for PSD, because no attainment regulated 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.
- (b) This existing source is not a major stationary source for Emission Offset, because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater, and is not one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (c) These emissions are based on the information provided in the source's operating permit application.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

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

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

### Federal Rule Applicability

- (a) Each of the eight boilers (EU 5309-01 through EU 5309-08) are subject to the New Source Performance Standard (NSPS), 40 CFR 60.40c, Subpart Dc (Standards of Performance for Small-Commercial-Institution Steam Generating Units), which is incorporated by reference as 326 IAC 12. Under NSPS Subpart Dc, the boilers are steam generating units, with construction beginning after June 9, 1989 and with a maximum heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.

Nonapplicable portions of the NSPS will not be included in the permit. The boilers are subject to the following portions of Subpart Dc.

- (1) 40 CFR 60.40c
  - (2) 40 CFR 60.41c
  - (3) 40 CFR 60.48c (a)
  - (4) 40 CFR 60.48c (a)(1)
  - (5) 40 CFR 60.48c (a)(3)
  - (6) 40 CFR 60.48c (g)
  - (7) 40 CFR 60.48c (i)
  - (8) 40 CFR 60.48c (j)
- (b) Each of the eight boilers (EU 5309-01 through 5309-08) is subject to the provisions of 40 CFR 60, Subpart A - General Provisions, except when otherwise specified in 40 CFR 60 Subpart Dc.
- (c) No other NSPS (40 CFR Part 60 and 326 IAC 12), are being included in this FESOP Renewal.
- (d) Each of the eight boilers (EU 5309-01 through 5309-08) is not subject to 40 CFR Part 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters), because the source is not a major source of Hazardous Air Pollutants (HAPs). Therefore, this subpart is not included in this permit.
- (e) Each of the emergency generators (EU 5309-09 and 5309-10) is not subject to the provisions of 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Stationary Reciprocating Internal Combustion Engines (RICE)). The source does not own or operate a stationary RICE which is located at a major source of HAP emissions (defined as a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year, or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year)). Therefore, 40 CFR Part 63, Subpart ZZZZ is not included in this permit.
- (f) No other National Emission Standards for Hazardous Air Pollutants (326 IAC 14, 20, and 40 CFR Part 61, 63) are being included in this FESOP Renewal.

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

##### **326 IAC 1-7 (Stack Height Provisions)**

This source does not have potential or actual PM or SO<sub>2</sub> emissions greater than twenty-five (25) tons per year. Therefore, this regulation is not included in this permit.

##### **326 IAC 2-1.1-5 (Air Quality Requirements)**

Marion County has been designated as nonattainment for PM-2.5. According to an EPA guidance memo dated April 5, 2005, PM-10 is to be utilized as a surrogate for PM-2.5 until the EPA can promulgate the PM-2.5 implementation rule. PM-10 emissions, and therefore PM-2.5 emissions, from this source are less than one hundred (100) tons per twelve consecutive month period. There have been no modifications to this source such that it is a major source of PM-10 emissions. Therefore, this source is not subject to nonattainment New Source Review (NSR) requirements for PM-2.5 emissions.

##### **326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) and 326 IAC 2-3 (Emission Offset)**

This existing source is not a major stationary source because no attainment regulated pollutant emissions are equal to or greater than two hundred fifty (250) tons per year, this source is not one of the 28 listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and no nonattainment regulated pollutant emissions are equal to or greater than one hundred (100) tons per year.

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

This source is not a major source of HAPs, and will emit less than ten (10) tons per year of a single HAP or twenty-five (25) tons per year of a combination of HAPs, and construction occurred before July 27, 1997. Therefore, 326 IAC 2-4.1 is not included in this permit.

326 IAC 2-6 (Emission Reporting)

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

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

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

326 IAC 6-2 (Particulate Emission Limitations for Manufacturing Processes)

See discussion under State Rule Applicability – Individual Facilities of this TSD.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

Pursuant to 326 IAC 6-4, 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 this regulation.

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

Although the source is located in Marion 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. In addition, the source is not one of the sources listed in 326 IAC 6.5-6 (formerly 326 IAC 6-1-12), therefore 326 IAC 6.5-1-1 (formerly 326 IAC 6-1), is not included in this permit.

326 IAC 6-5 (Fugitive Particulate Matter Emissions)

This source does not have the potential to emit fugitive particulate matter equal to or greater than twenty five (25) tons per year. Therefore, this source is not subject to 326 IAC 6-5 (Fugitive Particulate Matter Emissions).

326 IAC 7 (Sulfur Dioxide Rules)

Neither the source or any specific emission unit at this source has the potential to emit twenty five (25) tons per year or ten (10) pounds per hour of sulfur dioxide (SO<sub>2</sub>). Therefore, this rule is not included in this permit.

326 IAC 7-4-2 (Marion County Sulfur Dioxide Emission Limitations)

Neither the source or any specific emission unit at this source is specifically identified in 326 IAC 7-4-2. Therefore, 326 IAC 7-4-2 is not incorporated in this permit.

326 IAC 8 (Volatile Organic Compound Rules)

This source does not have any emission units with VOC emissions before add-on controls of 15 pounds or more per day. Therefore, this rule is not included in this permit.

326 IAC 9 (Carbon Monoxide Emission Rules)

There are no provisions under 326 IAC 9 (Carbon Monoxide Emission Rules) applicable to any specific

emission unit or operation at this source. Therefore, this source is not subject to 326 IAC 9 (Carbon Monoxide Emission Rules).

**326 IAC 10 (Nitrogen Oxide Rules)**

There are no provisions under 326 IAC 10 (Nitrogen Oxide Rules) applicable to any specific emission unit or operation at this source. This source has not opted in to 326 IAC 10 (Nitrogen Oxide Rules). Therefore, this regulation is not included in this permit.

**326 IAC 11 (Emission Limitations for Specific Types of Operations)**

This source does not perform any specific type of operation identified in 326 IAC 11 (Emission Limitations for Specific Types of Operations). Therefore, this regulation is not included in this permit.

**326 IAC 12 (New Source Performance Standards (NSPS))**

See discussion under State Rule Applicability – Individual Facilities of this TSD.

**326 IAC 14 (Emission Standards for Hazardous Air Pollutants)**

There are no provisions under 326 IAC 14 (Emission Standards for Hazardous Air Pollutants) and 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants) applicable to any specific emission unit or operation at this source. Therefore, this source is not subject to the provisions of 326 IAC 14 (Emission Standards for Hazardous Air Pollutants) and 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants), and this rule is not included in this permit.

**326 IAC 15 (Lead Rules)**

This source is not specifically identified in 326 IAC 15 (Lead Rules) and there are no provisions under 326 IAC 15 (Lead Rules) applicable to any specific emission unit or operation at this source. Therefore, this regulation is not included in this permit.

**326 IAC 17 (Public Records; Confidential Information; Confidentiality Agreements)**

This source has not filed or claimed any application, source or permit information as confidential, pursuant to 326 IAC 17-1-6 (Public Records: Confidentiality Claims), for this FESOP Renewal issuance, F097-23643-00259. Therefore, this regulation is not included in this permit.

**326 IAC 20 (Hazardous Air Pollutants)**

This source is not a major source of hazardous air pollutants (HAP) and does not perform operations specifically identified in 326 IAC 20. Therefore, this rule is not included in this permit.

**326 IAC 21 (Acid Deposition Control)**

This source's operations are not subject to the Acid Rain Program Provisions of Title IV of the 1990 Clean Air Act Amendments as listed in 40 CFR Part 72 through 78 and are, therefore, not subject to 326 IAC 21 (Acid Deposition Control). Therefore, these regulations are not incorporated in this permit.

**State Rule Applicability - Individual Facilities**

**Eight Boilers (Emission Units 5309-01 through 5309-08) – Significant units:**

**(a) 326 IAC 2-8-4(1) - FESOP Limits:**

The Permittee shall comply with the following limitations:

- (1) The combined fuel usage for the eight (8) boilers shall be less than 1,650 million cubic feet (MMCF) of natural gas per 12 month consecutive period, with compliance determined at the end of each month. The following calculation was used to determine fuel usage based upon the limit of 82.50 tons per 12 consecutive month period, with compliance determined at the end of each month.

$$\frac{82.50 \text{ tons NO}_x}{\text{yr}} \times \frac{2,000 \text{ lbs NO}_x}{\text{tons NO}_x} \times \frac{\text{MMCF}}{100 \text{ lbs NO}_x} = \frac{1,650 \text{ MMCF}}{\text{yr}}$$

- (2) NOx emissions from each boiler shall not exceed 100 lb per million cubic feet of natural gas input.

Compliance with the above limitations in combination with the potential NOx emissions from the insignificant activities, will limit source-wide NOx emissions to less than 100 tpy and will render 326 IAC 2-7 (Part 70 Permit Program) not applicable.

**(b) 326 IAC 6-2-4 Limits:**

Pursuant to 326 IAC 6-2-4 and this permit renewal, F097-23643-00259, particulate matter from each of the eight indirect heating sources (boilers) constructed after September 21, 1983, shall be limited by the following:

- (1) PM emissions from EU 5309-01 through 5309-06 boilers shall each not exceed 0.28 lb/MMBTU heat input, per the following calculation, pursuant to 326 IAC 6-2-4(a):

$$Pt = \frac{1.09}{Q^{0.26}} = \frac{1.09}{192.6 \text{ MMBtu}^{0.26}} = \frac{0.28 \text{ lbs}}{\text{MMBtu}}$$

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.

- (2) PM emissions from EU 5309-07 through 5309-08 boilers shall each not exceed 0.27 lb/MMBTU heat input:

$$Pt = \frac{1.09}{Q^{0.26}} = \frac{1.09}{213.6 \text{ MMBtu}^{0.26}} = \frac{0.27 \text{ lbs}}{\text{MMBtu}}$$

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.

Compliance Determination:

Compliance with 326 IAC 6-2-4 is shown for boilers, using emissions factors from AP-42, Chapter 1.4, Table 1.4-1:

$$\frac{7.6 \text{ lbs}}{\text{MMCF}} \times \frac{\text{CF}}{940 \text{ Btu}} \times \frac{\text{MMCF}}{1,000,000 \text{ CF}} \times \frac{1,000,000 \text{ Btu}}{\text{MMBtu}} = \frac{0.0081 \text{ lbs}}{\text{MMBtu}}$$

### **Emission Unit ID 301-DC - Insignificant Activity**

#### 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the PM emission rate from Emission Unit ID 301-DC, shall not exceed 2.02 pound per hour (lb/hr), when P = 0.35 tons per hour, established as E in the following formula:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

Compliance Determination:

PTE for Emission Unit ID 301-DC is 3.5 tpy (See Appendix A of this TSD, Summary, page 10 of 10.)

Therefore,

3.5 tons/year x 1 year / 365 days x 2,000 lbs / 1 ton x 1 day / 24 hours = 0.792 lbs/hr.

Since 0.792 is below the 2.02 lb/hr limitation, this emission unit will be able to comply with 326 IAC 6-3-2.

### **Emergency Generators (Emission Units 5309-9 and 5309-10)**

#### 326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Although this source is located in Marion County, these units are not subject to 326 IAC 6.5-1-1, since the source has potential emissions less than 100 tons per year and actual emissions less than 10 tons per year of particulate matter.

#### 326 IAC 7 (Sulfur Dioxide)

The potential to emit of each emergency generator is less than 25 tons per year and less than 10 lb/hr, therefore 326 IAC 7-1.1 is not included in this permit.

The potential to emit of sulfur dioxide for each generator is 0.948 tpy or 3.76 lb/hr. See Appendix A of this TSD for more detailed calculations.

### **Compliance Determination and Monitoring Requirements**

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There are no compliance monitoring requirements included in this FESOP renewal.

**Conclusion**

The operation of this facility shall be subject to the conditions of the attached proposed FESOP Renewal No.: F097-23643-00259.

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

Addendum to the Technical Support Document  
Federally Enforceable State Operating Permit (FESOP) Renewal

<b>Source Name:</b>	<b>Dow AgroSciences, LLC</b>
<b>Source Location:</b>	<b>9330 Zionsville Road, Indianapolis, IN 46268</b>
<b>County:</b>	<b>Marion</b>
<b>SIC Code:</b>	<b>8731</b>
<b>Operation Permit No.:</b>	<b>F097-23643-00259</b>
<b>Permit Reviewer:</b>	<b>Carmen Bugay</b>

On June 28, 2007, the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and the Indianapolis Office of Environmental Services (OES) had a notice published in the Indianapolis Star, Indianapolis, Indiana, stating that Dow AgroSciences, LLC, hereby referred to as "source", located at 9330 Zionsville Road, Indianapolis, IN 46268, had applied for a Federally Enforceable State Operating Permit (FESOP) renewal relating to the operation of an office and research and development facility for formulations of plant and animal herbicide and pesticide products. The notice also stated that OAQ and OES proposed to issue a permit renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On July 30, 2007, Dow AgroSciences, LLC comments were received on the draft FESOP renewal. Upon further review, the OAQ and OES have decided to make the following revisions to the draft documents. The TSD will remain as it originally appeared when published. Changes to the permit or technical support material that occur after the permit has published for public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. **Bolded** language has been added and the language with ~~strikeout~~ has been deleted. The Table of Contents has been modified to reflect these changes.

The comments and responses, including changes to the FESOP renewal, are as follows:

Comment #1:

The source maintains that 326 IAC 6-3-2 is not applicable in regards to Insignificant Activity Emissions Unit 301-DC, since this unit falls under research and development, therefore it is not a manufacturing process. Consequently Section A.3(a) needs to be revised and D.2 should be removed.

Response #1:

OES and IDEM agree with the source's comments. Under 326 IAC 6-3-1.5 (2), manufacturing process is defined as "...any single or series of actions, operations, or treatments in which a mechanical, physical, or chemical transformation of material occurs that emits, or has the potential to emit, particulate in the production of the product. The term includes transference, conveyance, or repair of a product." Since Emissions Unit ID 301-DC is utilized for research and

development and does not produce a product, 326 IAC 6-3-2 is not applicable. Therefore Condition A.3(a) has been revised and Section D.2 has been deleted from the permit as follows:

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Emissions Unit ID 301-DC.  
Research and development of new plant, animal, and pharmaceutical formulations, pesticides and products. This emission unit includes, but is not limited to, a batch mixer and portable milling equipment. Particulate Matter is controlled by a baghouse identified as control equipment ID 301-DC. ~~[326 IAC 6-3-2]~~

**~~SECTION D.2 FACILITY OPERATION CONDITIONS~~**

**~~Facility Description [326 IAC 2-8-4(10)]: Insignificant Activity~~**

- ~~(a) Emissions Unit ID 301-DC.  
Research and development of new plant, animal, and pharmaceutical formulations, pesticides and products. This emission unit includes, but is not limited to, a batch mixer and portable milling equipment. Particulate Matter is controlled by a baghouse identified as control equipment ID 301-DC. [326 IAC 6-3-2]~~

~~(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)~~

**~~Emission Limitations and Standards [326 IAC 2-8-4(1)]~~**

~~D.2.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]~~

~~Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the PM emission rate from Emissions Unit ID 301-DC shall not exceed the 2.02 pound per hour emission rate, when P = 0.35 tons per hour, established as E in the following formula:~~

~~Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:~~

$$~~E = 4.10 P^{0.67} \text{ where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}~~$$

Comment #2:

The source notes a Standard Industrial Classification (SIC) code discrepancy between the TSD, draft FESOP renewal and existing FESOP. The source maintains that the existing FESOP's SIC code of 8731 (Commercial Physical and Biological Research) and corresponding NAICS code of 541710 (Research and Development in the Physical, Engineering and Life Sciences) has not changed, and is still applicable. Consequently this TSD addendum should reflect the corrected SIC code of the TSD from 2879 to 8731.

Response #2:

OES and IDEM agree and note that this TSD addendum will reflect the corrected SIC code of the TSD from 2879 to 8731. No change was needed in Section A.1 of the permit.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only  
10 < MM BTU/HR <100  
Small Industrial Boiler**

**Company Name: Dow AgroSciences, LLC  
Address City IN Zip: 9330 Zionsville Road, Indianapolis, Indiana 46268  
Permit No.: F097-23643-00259  
Reviewer: Carmen Bugay  
Date: 12/4/2006**

Plt ID: Building 306  
Emission Units: Each Boiler 5309-01 & 5309-02

Heat Input Capacity	Heat Content	Fuel Throughput	Potential Throughput					
MMBtu/hr 29.3	Btu/CF 1020	MMCF/Yr 251.64	MMCF/yr <b>251.64</b>					
				Pollutant				
Emission Factor in lb/MMCF			PM 1.9	PM10 7.6	SO2 0.6	NOx 100.0	VOC 5.5	CO 84.0
<b>Potential Emission in tons/yr each boiler</b>			<b>0.24</b>	<b>0.96</b>	<b>0.08</b>	<b>12.58</b>	<b>0.69</b>	<b>10.57</b>

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

**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/1,020 MMBtu**  
**Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton**

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)

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

HAPs Emissions

Company Name: Dow AgroSciences, LLC

Address City IN Zip: 9330 Zionsville Road, Indianapolis, Indiana 46268

Permit Number: F097-23643-00259

Reviewer: Carmen Bugay

Date: 12/4/2006

Ptn ID: Building 306

Emission Units: Boilers 5309-01 & 5309-02

HAPs - Organics					
Emission Factor in lb	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in	<b>2.642E-04</b>	<b>1.510E-04</b>	<b>9.437E-03</b>	<b>2.265E-01</b>	<b>4.278E-04</b>

HAPs - Metals					
Emission Factor in lb	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in	<b>6.291E-05</b>	<b>1.384E-04</b>	<b>1.761E-04</b>	<b>4.781E-05</b>	<b>2.642E-04</b>

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.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**10 < MM BTU/HR <100**

**Small Industrial Boiler**

**Company Name:** Dow AgroSciences, LLC  
**Address City IN Zip:** 9330 Zionsville Road, Indianapolis, Indiana 46268  
**Permit Number:** F097-23643-00259  
**Reviewer:** Carmen Bugay  
**Date:** 12/4/2006

Plt ID: Building 306-2

**Emission Units: Each Boiler 5309-03 through -06**

Heat Input Capacity MMBtu/hr 33.5	Heat Content Btu/CF 1020	Fuel Throughput MMCF/Yr 287.71	<b>Potential Throughput</b> MMCF/yr <b>287.71</b>					
				Pollutant				
Emission Factor in lb/MMCF			<b>PM</b> 1.9	<b>PM10</b> 7.6	<b>SO2</b> 0.6	<b>NOx</b> 100.0	<b>VOC</b> 5.5	<b>CO</b> 84.0
Potential Emission in tons/yr each boiler			<b>0.27</b>	<b>1.09</b>	<b>0.09</b>	<b>14.39</b>	<b>0.79</b>	<b>12.08</b>

\*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/1,020 MMBtu**

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

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 1-03-006-0: (SUPPLEMENT D 3/98)

See page 4 for HAPs emissions calculations.

## Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

HAPs Emissions

**Company Name:** Dow AgroSciences, LLC  
**Address City IN Zip:** 9330 Zionsville Road, Indianapolis, Indiana 46268  
**Permit Number:** F097-23643-00259  
**Reviewer:** Carmen Bugay  
**Date:** 12/4/2006

Ptn ID: Building 306

**Emission Units: For Each Boilers 5309-03 through 5309-06**

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/y	<b>3.021E-04</b>	<b>1.726E-04</b>	<b>1.079E-02</b>	<b>2.589E-01</b>	<b>4.891E-04</b>

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/y	<b>7.193E-05</b>	<b>1.582E-04</b>	<b>2.014E-04</b>	<b>5.466E-05</b>	<b>3.021E-04</b>

Methodology is the same as page 3.

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

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only  
10 < MM BTU/HR <100  
Small Industrial Boiler**

**Company Name: Dow AgroSciences, LLC  
Address City IN Zip: 9330 Zionsville Road  
Permit No.: F097-23643-00259  
Reviewer: Carmen Bugay  
Date: 12/4/2006**

Plt ID: Building 308

**Emission Units: Each Boiler 5309-07 & 5309-08**

Heat Input Capacity MMBtu/hr 10.5	Heat Content Btu/CF 1020	Fuel Throughput MMCF/Yr 90.18	<b>Potential Throughput</b> MMCF/yr <b>90.18</b>					
			Pollutant					
Emission Factor in lb/MMCF			PM 1.9	PM10 7.6	SO2 0.6	NOx 100.0	VOC 5.5	CO 84.0
<b>Potential Emission in tons/yr</b> each boiler			<b>0.09</b>	<b>0.34</b>	<b>0.03</b>	<b>4.5</b>	<b>0.25</b>	<b>3.8</b>

\*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**

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/1,020 MMBtu

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

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

See page 6 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**MM BTU/HR <100**

**Small Industrial Boiler**

**HAPs Emissions**

**Company Name: Dow AgroSciences, LLC**  
**Address City IN Zip: 9330 Zionsville Road, Indianapolis, Indiana 46268**  
**Permit Number: F097-23643-00259**  
**Reviewer: Carmen Bugay**  
**Date: 12/4/2006**

Ptn ID: Building 308

**Emission Units: For Each Boilers 5309-07 & 5309-08**

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	<b>9.469E-05</b>	<b>5.411E-05</b>	<b>3.382E-03</b>	<b>8.116E-02</b>	<b>1.533E-04</b>

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	<b>2.255E-05</b>	<b>4.960E-05</b>	<b>6.313E-05</b>	<b>1.713E-05</b>	<b>9.469E-05</b>

Methodology is the same as page 5.

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

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**10 < MM BTU/HR <100**

**Small Industrial Boiler**

**Company Name: Dow AgroSciences, LLC**  
**Address City IN Zip: 9330 Zionsville Rd, Indianapolis, IN 46268**  
**Permit No.: F097-23643-00259**  
**Permit Reviewer: Carmen Bugay**  
**Date: 12/4/2006**

**All Boiler EU: Nos.: 5309-01 thru 5309-08**  
**Fuel input limit**

Heat Input Capacity (MMBtu/hr)	Heat Content (Btu/CF)	Fuel Throughput (MMCF/Yr)	Limited Throughput (MMCF/yr)	Pollutant					
	1020	0.00	<b>1650.00</b>						
Emission Factor in lb/MMCF				PM 1.9	PM10 7.6	SO2 0.6	NOx 100.0	VOC 5.5	CO 84.0
Potential Emission in tons/yr (tpy)				1.57	6.27	0.50	<b>82.50</b>	4.54	69.30

**Methodology**

MMBtu = 1,000,000 Btu  
 MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32  
 Emission Factors for CO: Uncontrolled = 84, Low NOx Burner = 84, Flue gas recirculation = 84

**Limited Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu**  
**Emission (tons/yr) = Limited Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton**  
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

**Appendix A: Emission Calculations**

**Internal Combustion Engines - Diesel Fuel  
Large Stationary Engine  
Operating 500 Hours/yr**

**Company Name: Dow AgroSciences, LLC  
City, Indiana: 9330 Zionsville Rd, Indianapolis, IN 46268  
Permit No.: F097-23643-00259  
Reviewer: Carmen Bugay  
Date: 12/4/2006**

Plt ID: Building 308 Generator

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

Heat Input Capacity      Gallons/hr      Btu/gallon      S=  = WEIGHT % SULFUR  
MM Btu/hr                  input                    
  
                                    HP/hr input=

Emission Factor in lb/MMBtu	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	0.1	0.0573	0.4 (1.01S)	3.2	0.1	0.85
Potential Emission in tons/yr (based upon 500 hrs)	<b>0.2</b>	<b>0.1</b>	<b>0.9</b>	<b>7.5</b>	<b>0.2</b>	<b>2.0</b>

**Methodology**

**Potential Througput (hp-hr/yr) = hp \* 500 hr/yr**

Emission Factors are from AP 42 Table 3.4-2 and Table 3.4-5

PM emissions calculated from AP42 (Fifth edition, January 1995), Table 3.4-5, Footnotes c and d.

1 hp-hr = 7000 Btu, AP42 (Fifth edition, January 1995), Table 3.3-2, Footnote a.

**Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] \* 500 hr/yr / (2,000 lb/ton )**  
**Emission (tons/yr) = [Potential Througput (hp-/500hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton )**

Conversion factor of 3.9275 x 10-4 for BTU to Horsepower/hr from AP-42 (Fifth edition, January 1995), Pg A-12

## Appendix A: Emission Calculations

### Internal Combustion Engines - Diesel Fuel

#### Large Stationary Engine

#### Operating 500 Hours/yr

Company Name: Dow AgroSciences, LLC

City, Indiana: 9330 Zionsville Rd, Indianapolis, IN 46268

Permit No.: F097-23643-00259

Reviewer: Carmen Bugay

Date: 12/4/2006

Plt ID: Building 308 Generator

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

Heat Input Capacity MM Btu/hr	Gallons/hr input	Btu/gallon 142000	S= 0.4 = WEIGHT % SULFUR
9.4	66.1	HP/hr input= 3686.4	

Emission Factor in lb/MMBtu	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	0.1	0.0573	0.4 <i>(1.01S)</i>	3.2	0.1	0.85
Potential Emission in tons/yr (based upon 500 hrs)	<b>0.2</b>	<b>0.1</b>	<b>0.9</b>	<b>7.5</b>	<b>0.2</b>	<b>2.0</b>

### Methodology

**Potential Throughput (hp-hr/yr) = hp \* 500 hr/yr**

Emission Factors are from AP 42 Table 3.4-2 and Table 3.4-5

PM emissions calculated from AP42 (Fifth edition, January 1995), Table 3.4-5, Footnotes c and d.

1 hp-hr = 7000 Btu, AP42 (Fifth edition, January 1995), Table 3.3-2, Footnote a.

**Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] \* 500 hr/yr / (2,000 lb/ton )**

**Emission (tons/yr) = [Potential Throughput (hp-/500hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton )**

Conversion factor of 3.9275 x 10<sup>-4</sup> for BTU to Horsepower/hr from AP-42 (Fifth edition, January 1995), Pg A-12

**Appendix A: Emissions Calculations Summary**

Company Name: Dow AgroSciences, LLC  
 Address City IN Zip: 9330 Zionsville Road, Indianapolis, IN 46268  
 Permit No.: F097-23643-00259  
 Permit Reviewer: Carmen Bugay  
 Date: 12/4/2006

<b>Table 1.: Summary of PTE From Significant Activities With FESOP Limitations and Insignificant Activities</b>								
Maximum Potential Emissions w/FESOP Limit, Tons/Yr								
Activities	PM	PM10	SOx	NOx	VOC	CO	HAP comb.	HAP single (Hexane)
Significant Activities Boilers >10 MMBtu/hr heat input Limit: 1650 mmcf/yr	1.743	6.971	0.550	<b>82.50</b>	5.045	77.048	1.731	1.651
Insignificant Activities	4.070	3.870	1.906	16.353	0.458	5.111	negligible	negligible
<b>Total</b>	<b>5.813</b>	<b>14.711</b>	<b>4.362</b>	<b>98.85</b>	<b>5.962</b>	<b>87.27</b>	<b>1.731</b>	<b>1.651</b>

FESOP Limit for NOx (tpy) = 100 tpy (limitation threshold) - 15.02 tpy (emergency generators) - 1.335 tpy (insignificant activities) = 82.5 tpy  
 FESOP Fuel Limit for Nox (MMCF/yr) = 1 ton/2,000 lb x 100 lb of NOx / MMCF x (X) MMCF/yr = 82.5 tpy; X = 1,650 MMCF/yr

<b>Table 2.: Summary of PTE From Significant Activities (Before FESOP Limitations)</b>								
Maximum Potential Emissions, Tons/Yr								
Significant Activities	PM	PM10	SOx	NOx	VOC	CO	HAP comb.	HAP single (Hexane)
Building 306 Boiler 5309-01	0.239	0.956	0.075	12.582	0.692	10.57	0.2374	0.2265
Building 306 Boiler 5309-02	0.239	0.956	0.075	12.582	0.692	10.57	0.2374	0.2265
Building 306 Boiler 5309-03	0.273	1.093	0.086	14.386	0.791	12.08	0.2715	0.2589
Building 306 Boiler 5309-04	0.273	1.093	0.086	14.386	0.791	12.08	0.2715	0.2589
Building 306 Boiler 5309-05	0.273	1.093	0.086	14.386	0.791	12.08	0.2715	0.2589
Building 306 Boiler 5309-06	0.273	1.093	0.086	14.386	0.791	12.08	0.2715	0.2589
Building 308 Boiler 5309-07	0.086	0.343	0.027	4.509	0.248	3.788	0.0851	0.0812
Building 308 Boiler 5309-08	0.086	0.343	0.027	4.509	0.248	3.788	0.0851	0.0812
<b>Total</b>	<b>1.743</b>	<b>6.971</b>	<b>0.550</b>	<b>91.724</b>	<b>5.045</b>	<b>77.048</b>	<b>1.731</b>	<b>1.651</b>

<b>Table 3.: Summary of PTE From Insignificant Activities</b>								
Maximum Potential Emissions, Tons/Yr								
Insignificant Activities	PM	PM10	SOx	NOx	VOC	CO	HAP comb.	HAP single
Building 302, 303, 305, 310 Furn/Heaters	0.008	0.008	0.001	0.107	0.006	0.090	negligible	negligible
Building 301 Boiler	0.011	0.011	0.001	0.150	0.008	0.126	negligible	negligible
Building 304 Boiler A	0.009	0.009	0.001	0.120	0.007	0.101	negligible	negligible
Building 304 Boiler B	0.009	0.009	0.001	0.120	0.007	0.101	negligible	negligible
Building 307 Boiler A	0.032	0.032	0.003	0.419	0.023	0.352	negligible	negligible
Building 307 Boiler B	0.032	0.032	0.003	0.419	0.023	0.352	negligible	negligible
Research & Development	3.500	3.500	0.000	0.000	0.000	0.000	negligible	negligible
Building 306 Generator	0.235	0.134	0.948	7.509	0.192	1.995	negligible	negligible
Building 308 Generator	0.235	0.134	0.948	7.509	0.192	1.995	negligible	negligible
<b>Total</b>	<b>4.070</b>	<b>3.870</b>	<b>1.906</b>	<b>16.353</b>	<b>0.458</b>	<b>5.111</b>	<b>negligible</b>	<b>negligible</b>

<b>Totals: Table 2 and Table 3:</b>	<b>5.813</b>	<b>10.841</b>	<b>2.456</b>	<b>108.1</b>	<b>5.503</b>	<b>82.16</b>	<b>1.731</b>	<b>1.651</b>
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