



Mitchell E. Daniels, Jr.  
 Governor

Thomas W. Easterly  
 Commissioner

100 North Senate Avenue  
 Indianapolis, Indiana 46204-2251  
 MC 61-53 IGCN 1003  
 (317) 232-8603  
 (800) 451-6027  
 www.IN.gov/idem

## Part 70 Operating Permit OFFICE OF AIR QUALITY

**Nucor Fastener  
 6730 County Road 60  
 St. Joe, Indiana 46785**

(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. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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 2-7 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.

Operation Permit No.: T033-20219-00038	
Issued by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date:  Expiration Date:



## TABLE OF CONTENTS

<b>A</b>	<b>SOURCE SUMMARY .....</b>	<b>5</b>
A.1	General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]	
A.2	Part 70 Source Definition [326 IAC 2-7-1(22)]	
A.3	Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]	
A.4	Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]	
A.5	Part 70 Permit Applicability [326 IAC 2-7-2]	
<b>B</b>	<b>GENERAL CONDITIONS .....</b>	<b>7</b>
B.1	Definitions [326 IAC 2-7-1]	
B.2	Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3- 6(a)]	
B.3	Term of Conditions [326 IAC 2-1.1-9.5]	
B.4	Enforceability [326 IAC 2-7-7]	
B.5	Severability [326 IAC 2-7-5(5)]	
B.6	Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]	
B.7	Duty to Provide Information [326 IAC 2-7-5(6)(E)]	
B.8	Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]	
B.9	Annual Compliance Certification [326 IAC 2-7-6(5)]	
B.10	Preventive Maintenance Plan [326 IAC 2-7-5(1), (3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]	
B.11	Emergency Provisions [326 IAC 2-7-16]	
B.12	Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]	
B.13	Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]	
B.14	Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]	
B.15	Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]	
B.16	Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]	
B.17	Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]	
B.18	Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12] [40 CFR 72]	
B.19	Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]	
B.20	Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]	
B.21	Source Modification Requirement [326 IAC 2-7-10.5]	
B.22	Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]	
B.23	Transfer of Ownership or Operational Control [326 IAC 2-7-11]	
B.24	Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]	
B.25	Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]	
<b>C</b>	<b>SOURCE OPERATION CONDITIONS.....</b>	<b>18</b>
	<b>Emission Limitations and Standards [326 IAC 2-7-5(1)]</b>	
C.1	Particulate Emission Limitations for Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2	Opacity [326 IAC 5-1]	
C.3	Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.4	Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.5	Fugitive Dust Emissions [326 IAC 6-4]	
C.6	Stack Height [326 IAC 1-7]	
C.7	Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
	<b>Testing Requirements [326 IAC 2-7-6(1)]</b>	
C.8	Performance Testing [326 IAC 3-6]	

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

C.9 Compliance Requirements [326 IAC 2-1.1-11]

**Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

C.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]  
[326 IAC 2-6]

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

**Stratospheric Ozone Protection**

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

**D.1 FACILITY OPERATION CONDITIONS – Two (2) Natural Gas-Fired Boilers ..... 25**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.1.1 Particulate [326 IAC 6-2-4]

**D.2 FACILITY OPERATION CONDITIONS – One (1) Sulfuric Acid Pickling Facility ..... 26**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.2.1 Particulate [326 IAC 6-3-2]

**D.3 FACILITY OPERATION CONDITIONS – Five (5) Bolt Formers ..... 27**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.3.1 Particulate [326 IAC 6-3-2]

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

**Compliance Determination Requirements**

D.3.3 Particulate Control

D.3.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

D.3.5 Visible Emissions Notations

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.3.6 Record Keeping Requirements

**D.4 FACILITY OPERATION CONDITIONS – Twenty-Three (23) Bolt-Making Machines ..... 29**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.4.1 Particulate [326 IAC 6-3-2]

<b>D.5</b>	<b>FACILITY OPERATION CONDITIONS – One (1) Nut-Forming Machine.....</b>	<b>30</b>
	<b>Emission Limitations and Standards [326 IAC 2-7-5(1)]</b>	
	D.5.1 Particulate [326 IAC 6-3-2]	
<b>D.6</b>	<b>FACILITY OPERATION CONDITIONS – One (1) Tumble Blaster.....</b>	<b>31</b>
	<b>Emission Limitations and Standards [326 IAC 2-7-5(1)]</b>	
	D.6.1 Particulate [326 IAC 6-3-2]	
	<b>Certification .....</b>	<b>32</b>
	<b>Emergency Occurrence Report .....</b>	<b>33</b>
	<b>Quarterly Deviation and Compliance Monitoring Report .....</b>	<b>35</b>

## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1, A.3, and A.4 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 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

---

The Permittee owns and operates a stationary nut and bolt manufacturing operation

Source Address:	6730 County Road 60, St. Joe, Indiana 46785
Mailing Address:	P.O. Box 6100, St. Joe, Indiana 46785
General Source Phone Number:	(219) 337-1600
SIC Code:	3452
County Location:	DeKalb
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act

### A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

---

This source consists of two (2) plants:

- (a) Nucor Fastener is located at 6730 County Road 60, St. Joe, Indiana 46785; and
- (b) NUCOR Vulcraft Group – St. Joe Division is located at 6610 County Road 60, St. Joe, Indiana 46785.

IDEM has determined that Nucor Fastener and NUCOR Vulcraft Group – St. Joe Division are under the common control of Nucor Corporation. These two plants are considered one source because they are located on adjacent properties, are under common ownership, and belong to the same industrial grouping. Therefore, the term “source” in the Part 70 documents refers to both Nucor Fastener and NUCOR Vulcraft Group – St. Joe Division as one major source, effective from the date of issuance of this Part 70 permit.

Separate Part 70 permits will be issued to Nucor Fastener with Permit No.: T033-20219-00038 and NUCOR Vulcraft Group – St. Joe Division with Permit No.: T033-15749-00027 (issued on July 22, 2003) solely for administrative purposes.

### A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

---

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

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

- (a) One (1) natural gas-fired boiler, constructed in 1994, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 9.807 million British thermal units per hour (mmBtu/hr);
- (b) One (1) natural gas-fired belt heat treat furnace, including one (1) hardening furnace and one (1) draw furnace, with a total maximum heat input capacity of 18.35 mmBtu/hr;

- (c) One (1) sulfuric acid pickling facility, exhausting to stack EP63, with an acid recovery system, with a maximum capacity of 32.4 tons of steel per hour;
- (d) Twenty-three (23) bolt-making machines, including coolant and oil lubricant usage, with emissions from bolt-making machines controlled by three (3) wet Venturi scrubbers, with a total maximum capacity of 27.2 tons of steel per hour;
- (e) One (1) nut-forming machine, including coolant usage, with a total maximum capacity of 1.27 tons of steel per hour;
- (f) One (1) tumble blaster, exhausting to a baghouse, with a maximum capacity of 1.27 tons of steel per hour;
- (g) Five (5) bolt formers, using lubricant and cooling oil, equipped with oil mist collection systems, with a total maximum usage of 37,500 gallons of oil per year; and
- (h) One (1) natural gas-fired boiler, identified as EP54, constructed May 26, 2000, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 8.37 mmBtu/hr.

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

---

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21) that have applicable requirements.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

---

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 – Applicability).

## **SECTION B GENERAL CONDITIONS**

### **B.1 Definitions [326 IAC 2-7-1]**

---

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 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]**

- (a) This permit, 033-20219-00038, 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, 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, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

---

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 2-7-7]**

---

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, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### **B.5 Severability [326 IAC 2-7-5(5)]**

---

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 2-7-5(6)(D)]**

---

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

### **B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]**

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ 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 the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, 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 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]**

---

- (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 the "responsible official" 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) the "responsible official" is defined at 326 IAC 2-7-1(34).

**B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]**

---

- (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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 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

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch – Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (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, 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 2-7-5(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]**

---

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, 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.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date 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

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ 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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.11 Emergency Provisions [326 IAC 2-7-16]**

---

- (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 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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 Northern Regional Office 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

Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

- (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

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 2-7-5(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 the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

- (f) Failure to notify IDEM, OAQ 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 2-7 and any other applicable rules.
- (g) 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.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced 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 Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.  

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.
- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
  - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ has issued the modification. [326 IAC 2-7-12(b)(8)]

**B.13** Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

- (a) All terms and conditions of permits established prior to T033-20219-00038 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised under 326 IAC 2-7-10.5, or
  - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

**B.14** Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

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 2-7-3 and 326 IAC 2-7-4(a).

**B.15** Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (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

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 the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ 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 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ 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 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(c), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. 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 the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-50 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (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 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 2-7 until IDEM, OAQ 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 any additional information identified as being needed to process the application.

**B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12] [40 CFR 72]**

---

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 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 61-50 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
  
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]**

---

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
  
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by U.S. EPA.

**B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]**

---

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) 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 preconstruction approval required by 326 IAC 2-7-10.5 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 61-50 IGCN 1003  
Indianapolis, Indiana 46204-2251

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 2-7-20(b), (c), or (e). 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 in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(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 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(c)]  
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 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

- (e) 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.21 Source Modification Requirement [326 IAC 2-7-10.5]**

---

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

**B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]**

---

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, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 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 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 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 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.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]**

---

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 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 61-50 IGCN 1003  
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

- (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) Except as provided in 326 IAC 2-7-19(e), 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.25 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

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 2-7-5(1)]

**C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

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

**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. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

**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]**

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 Stack Height [326 IAC 1-7]**

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

**C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

- (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 regulated 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 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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 the "responsible official" as defined by 326 IAC 2-7-1(34).

- (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. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

### **Testing Requirements [326 IAC 2-7-6(1)]**

#### **C.8 Performance Testing [326 IAC 3-6]**

---

- (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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ 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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ, 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.9 Compliance Requirements [326 IAC 2-1.1-11]**

---

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 commissioner or U.S. EPA.

### **Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

#### **C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

---

Unless otherwise specified in this permit, all monitoring 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

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 the "responsible official" as defined by 326 IAC 2-7-1(34).

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

**C.11 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.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(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 IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

**C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

---

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval 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

within one hundred eighty (180) days after the date of issuance of this permit.

The ERP does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records;
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (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 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 that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ 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 the "responsible official" as defined by 326 IAC 2-7-1(34).

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]**

- (a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
  - (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
  - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The emission statement 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 on or before the date it is due.

#### **C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]**

- (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.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]**

---

- (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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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
- (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 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 the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. 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.

**Stratospheric Ozone Protection**

**C.20 Compliance with 40 CFR 82 and 326 IAC 22-1**

---

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 OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) natural gas-fired boiler, constructed in 1994, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 9.807 million British thermal units per hour (mmBtu/hr); and
- (b) One (1) natural gas-fired boiler, identified as EP54, constructed May 26, 2000, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 8.37 mmBtu/hr.

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

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Particulate [326 IAC 6-2-4]

- (a) Pursuant to 326 IAC 6-2-4(a) (Particulate Emission Limitations for Sources of Indirect Heating), the PM from the one (1) boiler constructed in 1994, with a heat input capacity of 9.807 mmBtu/hr, shall be limited to 0.60 pounds per mmBtu heat input.
- (b) Pursuant to 326 IAC 6-2-4(a) (Particulate Emission Limitations for Sources of Indirect Heating), the PM from the one (1) boiler EP54 constructed May 26, 2000, and with a heat input capacity of 8.37 mmBtu/hr, shall be limited to 0.51 pounds per mmBtu heat input. This limitation is based on the following equation:

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

Where:

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

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. As each new indirect heating facility is added to a plant Q will increase. As a result, the emission limitation for each progressively newer facility will be more stringent until the total plant capacity reaches 10,000 mmBtu/hr. For Q less than 10 mmBtu/hr, Pt shall not exceed 0.6.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

One (1) sulfuric acid pickling facility, exhausting to stack EP63, with an acid recovery system, with a maximum capacity of 32.4 tons of steel per hour.

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

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the sulfuric acid pickling facility shall not exceed 40.6 pounds per hour when operating at a process weight rate of 32.4 tons of steel per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

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

## SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

Five (5) bolt formers, using lubricant and cooling oil, equipped with oil mist collection systems, with a total maximum usage of 37,500 gallons of oil per year.

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

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.3.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the combined five (5) bolt formers shall not exceed 12.49 pounds per hour when operating at a process weight rate of 5.27 tons per hour. The pounds per hour limitation was calculated using the following equation:

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

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

#### D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B – Preventive Maintenance Plan, of this permit, is required for the five (5) bolt forming line and the oil mist collection systems.

### Compliance Determination Requirements

#### D.3.3 Particulate Control

Pursuant to MSOP 033-11203-00038, issued on April 4, 2000, and in order to comply with Condition D.3.1, the oil mist collection systems for particulate control shall be in operation and control emissions from the bolt forming line at all times that the facility is in operation.

#### D.3.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

During the period between 30 and 36 months after issuance of this permit, in order to demonstrate compliance with Condition D.3.1, the Permittee shall perform PM testing for the five (5) bolt formers utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C – Performance Testing.

### Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

#### D.3.5 Visible Emissions Notations

- (a) Visible emission notations of the five (5) bolt formers' exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances shall be considered a deviation from this permit.

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**D.3.6 Record Keeping Requirements**

---

- (a) To document compliance with Condition D.3.5, the Permittee shall maintain records of daily visible emission notations of the five (5) bolt formers' exhaust when exhausting to the atmosphere.
- (b) All records shall be maintained in accordance with Section C – General Record Keeping Requirements, of this permit.

## SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

Twenty-three (23) bolt-making machines, including coolant and oil lubricant usage, with emissions from bolt-making machines controlled by three (3) wet Venturi scrubbers, with a total maximum capacity of 27.2 tons of steel per hour.

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

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.4.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the combined twenty-three (23) bolt-making machines shall not exceed 37.5 pounds per hour when operating at a process weight rate of 27.2 tons of steel per hour. The pounds per hour limitation was calculated using the following equation:

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

**SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

One (1) nut-forming machine, including coolant usage, with a total maximum capacity of 1.27 tons of steel per hour.

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

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.5.1 Particulate [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the one (1) nut-forming machine shall not exceed 4.81 pounds per hour when operating at a process weight rate of 1.27 tons of steel per hour. The pounds per hour limitation was calculated using the following equation:

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

## SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

One (1) tumble blaster, exhausting to a baghouse, with a maximum capacity of 1.27 tons of steel per hour.

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

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.6.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the tumble blaster shall not exceed 4.81 pounds per hour when operating at a process weight rate of 1.27 tons of steel per hour. The pounds per hour limitation was calculated using the following equation:

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

---

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

**PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: Nucor Fastener  
Source Address: 6730 County Road 60, St. Joe, Indiana 46785  
Mailing Address: P.O. Box 6100, St. Joe, Indiana 46785  
Part 70 Permit No.: T033-20219-00038

**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:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204  
Phone: 317-233-0178  
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Nucor Fastener  
Source Address: 6730 County Road 60, St. Joe, Indiana 46785  
Mailing Address: P.O. Box 6100, St. Joe, Indiana 46785  
Part 70 Permit No.: T033-20219-00038

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- C 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
  - C 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.

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
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**

**PART 70 OPERATING PERMIT  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Nucor Fastener  
 Source Address: 6730 County Road 60, St. Joe, Indiana 46785  
 Mailing Address: P.O. Box 6100, St. Joe, Indiana 46785  
 Part 70 Permit No.: T033-20219-00038

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

<p>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. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does 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 "No deviations occurred this reporting period".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<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>	
<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

## Addendum to the Technical Support Document for a Part 70 Operating Permit Renewal

Source Name: Nucor Fastener  
Source Location: 6730 County Road 60, St. Joe, Indiana 46785  
County: DeKalb  
SIC Code: 3452  
Operation Permit No.: T033-20219-00038  
Permit Reviewer: Stephanie Wilkerson

On July 31, 2006, the Office of Air Quality (OAQ) had a notice published in the Auburn Evening Star in Auburn, Indiana, stating that Nucor Fastener had applied for a Part 70 Operating Permit renewal for a stationary nut and bolt manufacturing operation. The notice also stated that OAQ proposed to issue a permit renewal for this operation and provided information on how the public could review the proposed permit renewal 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 renewal should be issued as proposed.

Comments on the proposed Part 70 permit renewal were received on August 17, 2006 from Mr. John Harden, representing Nucor Fastener.

Changes to the permit are noted as follows: ~~struck~~ language has been deleted; **bold** language has been added. The Table of Contents has been modified to reflect these changes.

### **General Comment**

As explained in the draft Title V Permit and Technical Support Document (TSD), Nucor Fastener and Nucor Vulcraft are considered a single "source" for air permit purposes. As a result, IDEM examined the combined potential to emit (PTE) of both facilities when determining whether the source was a major source of hazardous air pollutants (HAPs). Page 4 of the TSD contains a table outlining the unrestricted PTE of the source as a whole. This table shows that Nucor Vulcraft's PTE for HAP includes 512.70 tons per year of "glycol ethers." This value was calculated when Nucor Vulcraft was in the process of obtaining its Title V permit (number 033-15749-00027) in 2003. Since that time, EPA has delisted ethylene glycol monobutyl ether (EGBE) from its list of HAP. IDEM defines HAPs by referencing those substances on the federal HAP list and specifically recognizes the delisting of EGBE. See 326 IAC 1-2-33.5 (defining HAPs as "any air pollutant listed pursuant to Section 112(b) of the Clean Air Act and not delisted from that list or redefined under 40 CFR Part 63, Subpart C, as amended at 69 FR 69325, November 29, 2004"). As a result, EGBE is no longer a HAP under IDEM and EPA regulations for purposes of determining whether a source is a "major source" of air pollutants.

The Nucor Vulcraft facility recently applied for a prevention of significant deterioration permit to modify certain processes at the facility. The permit application, received by IDEM on March 15, 2006, also reflects that the source (i.e., Nucor Vulcraft and Nucor Fastener) is a minor source of HAP. As a result, IDEM should revise the HAP emissions in the TSD to this permit to reflect those in the previously accepted application.

Under EPA's "once in, always in" policy, a source that qualifies as a "major source" of HAP emissions on the "first compliance date" of an applicable National Emissions Standards for Hazardous Air Pollutants (NESHAP) is required to comply permanently with the MACT standard

of the NESHAP. EPA Memorandum, *Potential to Emit for MACT Standards - Guidance on Timing Issues* (May 16, 1995). Conversely, if a source was at one time a "major source" of HAP but reduced its HAP emissions to the point that it no longer qualified as a major source before the first compliance date, the MACT standards are inapplicable. See *id.* In this case, the source, (i.e., Nucor Vulcraft and Nucor Fastener) has fallen below the HAP applicability threshold as a result of the EGBE delisting. As stated, the permit application submitted by Nucor Vulcraft explicitly reflects that the source is no longer a major source of HAP. The first compliance deadline for the NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63 Subpart DDDDD, for existing sources is September 13, 2007. 40 CFR §63.7495(b). As a result, the Nucor Fastener-Vulcraft "source" will not qualify as a major source as of the first compliance deadline and Nucor's boilers and heat treat furnaces are not subject to the NESHAP regulations. The draft Title V Permit references 40 CFR 63 Subpart DDDDD in Section D.1, governing two natural gas-fired boilers, and in Section D.7, governing two natural gas-fired heat treat furnaces. As the NESHAP regulations are not applicable to Nucor, reference to them should be removed from these two sections. Additionally, the conditions that arose from these NESHAP regulations should be removed from D.7.

**Response to General Comment:**

Pursuant to the delisting of EGBE from EPA's list of HAPs, the potential to emit HAPs from the source has decreased to minor source levels, as determined in the Significant Permit Modification 033-22929-00027 for the Nucor Vulcraft facility on October 11, 2006. Therefore, the NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63, Subpart DDDDD) will not apply to this source. References to this regulation have been removed as follows with each related comment below. The TSD will not be changed to reflect the changes that will be made, instead relying on this Addendum to state all changes. In addition, the change to HAP minor source status requires changes to the following portions of the permit: A.1 General Information.

Pursuant to the issuance of the Significant Permit Modification 033-22929-00027 for the Nucor Vulcraft facility, both sources have become minor sources under 326 IAC 2-2, Prevention of Significant Deterioration. Thus, the permit has been changed to reflect the new PSD status in section A.1 General Information. Additionally, this change reduces the reporting requirement under 326 IAC 2-6, and has been changed in section C.17 Emission Statement as shown below.

IDEM has also determined that it is no longer necessary to list the name or title of the responsible official in the permit. This has also been removed from the permit is section A.1 General Information as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary nut and bolt manufacturing operation

<del>Responsible Official:</del>	<del>General Manager</del>
Source Address:	6730 County Road 60, St. Joe, Indiana 46785
Mailing Address:	P.O. Box 6100, St. Joe, Indiana 46785
General Source Phone Number:	(219) 337-1600
SIC Code:	3452
County Location:	DeKalb
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program <del>Major</del> <b>Minor</b> Source, under PSD <del>Major</del> <b>Minor</b> Source, Section 112 of the Clean Air Act

~~C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]~~

---

- ~~(a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:~~

**C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]**

---

- (a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:**

**Section A**

**Comment 1 - Re: Condition A.3 (a), (b), (h):**

Each of these Conditions references 40 CFR 63 Subpart DDDDD. As explained in the General Comments, 40 CFR 63 Subpart DDDDD does not apply to Nucor because the source is not a major source of HAP. As a result, reference to the NESHAP should be removed in each condition.

**Response to Comment 1:**

The references to 40 CFR 63, Subpart DDDDD have been removed from A.3, parts (a), (b), and (h).

**A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]**

---

...

- (a) One (1) natural gas-fired boiler, constructed in 1994, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 9.807 million British thermal units per hour (mmBtu/hr). ~~Under NESHAP Subpart DDDDD this is considered an existing unit in the small gaseous fuel subcategory;~~
- (b) One (1) natural gas-fired belt heat treat furnace, including one (1) hardening furnace and one (1) draw furnace, with a total maximum heat input capacity of 18.35 mmBtu/hr. ~~Under NESHAP Subpart DDDDD this is considered an existing unit in the large gaseous fuel subcategory;~~

...

- (h) One (1) natural gas-fired boiler, identified as EP54, constructed May 26, 2000, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 8.37 mmBtu/hr. ~~Under NESHAP Subpart DDDDD this is considered an existing unit in the small gaseous fuel subcategory.~~

**Section B**

**Comment 2 - Re: Condition B.10(a)**

Nucor proposes that IDEM replace the word "facility" with "designated piece of equipment" in the second sentence of this condition. A preventative maintenance plan is specific to a piece of equipment and not the facility as a whole. Consequently, to avoid confusion, this condition should specify the PMP applies to specific pieces of equipment.

### **Response to Comment 2**

Pursuant to 326 IAC 1-2-27, a facility is: *"Any one (1) structure, piece of equipment, installation or operation which emits or has the potential to emit any air contaminant. Single pieces of equipment or installations with multiple emission points shall be considered a facility for the purpose of this rule (326 IAC 1-2)."* Therefore, the language meets the request of the comment without a change in the wording.

### **Comment 3 - Re: Condition B.10(c)**

As with condition B.10(a) above, "unit" should be replaced with "designated piece of equipment" in this condition. This clarifies that the PMP applies to individual pieces of equipment.

### **Response to Comment 3**

In order to remain consistent with the federal requirements referenced in B.10(c), the word "unit" shall remain unchanged in this permit.

### **Comment 4 - Re: Condition B.11(a)**

Nucor proposes that IDEM include the phrase "except as provided in 326 IAC 2-7-16" to the end of this condition. Section 2-7-16 of the Indiana Administrative Code provides that an emergency is not an affirmative defense for action brought for noncompliance with a federal or state health-based emission limitation, "except as provided in this section" (i.e., 326 IAC 2-7-16). Thus, this phrase should be included within the condition to clarify those exceptions in which emergencies may be used as an affirmative defense.

### **Response to Comment 4**

The phrase "except as provided in 326 IAC 2-7-16" has been added to Condition B.11(a).

#### **B.11 Emergency Provisions [326 IAC 2-7-16]**

---

- (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 2-7-16.**

### **Comment 5 - Re: Condition B.12(b)**

Nucor objects to proposed condition B.12(b) because issuance of a compliance order based on an underlying applicable requirement by itself violates the permit shield. Instead, the permit shield remains in effect until IDEM finalizes the revised permit condition and the revised permit becomes effective, at which time the source transitions seamlessly from one compliance regime to another and the permit shield remains intact at all times. The Clean Air Act, Part 70 and the IDEM regulations do not authorize IDEM to violate the permit shield. Reopening is the regulatorily prescribed mechanism for correcting inadvertent errors in permit conditions.

### **Response to Comment 5**

The issuance of a compliance order to the source when a permit is reopened is a means in which to get to compliance in the most expeditious manner with the revised applicable requirement. Pursuant to 326 IAC 2-7-15(d), the permit shield "shall continue in effect so long as the source is in compliance with the compliance order", meeting the request of the comment. As such, Condition B.12(b) stands as written.

**Comment 6 - Re: Condition B.20(a)(2)**

Nucor proposes that IDEM remove this condition. The regulation upon which Condition B.20(a) is based allows a Permittee to make a change or changes at the source that are described in 326 IAC 2-7-20(b), (c) or (e) without a permit revision if four conditions are met. See 326 IAC 2-7-20(a). These four conditions are reflected in the Title V permit as condition 20.B(a)(1), (3), (4), and (5). IDEM has added an additional condition, 20.B(a)(2) that is not required by the underlying regulation. As a result, this condition is unnecessary and should be removed.

**Response to Comment 6**

The requirement for preconstruction approval, as described by 326 IAC 2-7-10.5, is required to prevent sources from adding to or modifying the source's emission units in such a manner that additional pollutants, potentially above and beyond the limits described in the operating permit, are not released into the environment without prior approval from the agency. This, indeed, is different than operational flexibility, and the Condition stands as written.

**Section C**

**Comment 7 - Re: Condition C.7(b)(1)**

Nucor proposes that IDEM replace the word "affected" with "regulated" in this condition. The asbestos notification regulations require the Permittee to update its notice if the amount of "RACM," i.e., regulated asbestos containing material, increases or decrease by at least twenty percent. 326 IAC 14-10-3(1)(a). Nucor proposes that IDEM mirror the regulatory language and use the word "regulated" rather than "affected." In this way, there will not be any confusion as to what asbestos containing material is "affected."

**Response to Comment 7**

To be consistent with the wording of 326 IAC 14-10-3(1)(A), the word "regulated" has been added to the permit. The word "affected" will remain in the permit, as it is stated in the aforementioned regulatory text.

**C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

---

- ...
- (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 **regulated** asbestos containing material increases or decreases by at least twenty percent (20%); or
- ...

**Comment 8 - Re: Condition C.18(b)**

Nucor proposes that IDEM remove this condition. This same requirement is found in Condition C.10 and is thus redundant and unnecessary.

**Response to Comment 8**

The Condition in C.10 is specific to monitoring requirements. As such, the words "and record keeping" are removed from C.10. Condition C.18 then covers record keeping and is no longer redundant. Condition C.18 stands as written.

**C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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:

**Section D**

**Comment 9 - Re: D.1, Emission Unit Description**

Each of these descriptions reference 40 CFR 63 Subpart DDDDD. As explained in the General Comments, 40 CFR 63 Subpart DDDDD does not apply to Nucor because the source is not a major source of HAP. As a result, reference to the NESHAP should be removed in the description.

**Response to Comment 9**

The references to the NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63, Subpart DDDDD) are removed from the Emission Unit Description in D.1.

**SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

- (a) One (1) natural gas-fired boiler, constructed in 1994, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 9.807 million British thermal units per hour (mmBtu/hr). ~~Under NESHAP Subpart DDDDD this is considered an existing unit in the small gaseous fuel subcategory;~~ and
- (b) One (1) natural gas-fired boiler, identified as EP54, constructed May 26, 2000, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 8.37 mmBtu/hr. ~~Under NESHAP Subpart DDDDD this is considered an existing unit in the small gaseous fuel subcategory.~~

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

**Comment 10 - Re: Condition D.3.2**

Nucor proposes that IDEM remove the language "five (5) bolt forming line and the" from this condition. The PMP is required for the control device and not the underlying piece of equipment. As the oil mist collection system is the control device for the bolt and nut forming line, it is the piece of equipment that must have a PMP.

**Response to Comment 10**

The Preventive Maintenance Plan requirement must be included in every applicable Title V permit pursuant to 326 IAC 2-7-5(13). This rule refers to the Preventive Maintenance Plan requirement as described in 326 IAC 1-6-3. This Preventive Maintenance Plan rule sets out the requirements for:

- (1) Identification of the individuals responsible for inspecting, maintaining, and repairing the emission control equipment (326 IAC 1-6-3(a)(1)),

- (2) The description of the items or conditions in the facility that will be inspected and the inspection schedule for said items or conditions (326 IAC 1-6-3(a)(2)), and
- (3) The identification and quantification of the replacement parts for the facility which the Permittee will maintain in inventory for quick replacement (326 IAC 1-6-3(a)(3)).

It is clear from the structure of the wording in 326 IAC 1-6-3 that the PMP requirement affects the entirety of the applicable facilities. Only 326 IAC 1-6-3(a)(1) is limited, in that it requires identification of the personnel in charge of only the emission control equipment, and not any other facility equipment. 326 IAC 1-6-3(b) provides that "...as deemed necessary by the commissioner, any person operating a facility shall comply with the requirements of subsection (a) of this section."

Many types of facilities require maintenance to prevent excess emissions. In addition to preventive maintenance performed on the control devices, preventive maintenance should be performed on the bolt and nut forming lines. This will help prevent improper settings and equipment failures that can result in increased emissions.

Therefore, Condition D.3.2 will remain unchanged.

#### **Comment 11 - Re: Condition D.3.3**

Nucor proposes that IDEM replace the word "facility" with "designated piece of equipment" in this condition. These pieces of equipment may not operate when other portions of the facility are in operation.

#### **Response to Comment 11**

Pursuant to 326 IAC 1-2-27, a facility is: *"Any one (1) structure, piece of equipment, installation or operation which emits or has the potential to emit any air contaminant. Single pieces of equipment or installations with multiple emission points shall be considered a facility for the purpose of this rule (326 IAC 1-2)."* Therefore, the language meets the request of the comment without a change in the wording.

#### **Comment 12 - Re: Condition D.3.5**

Nucor requests that IDEM eliminate Condition D.3.5. The opacity for this equipment is governed by Condition C.2.

#### **Response to Comment 12**

The visible emissions notations are to monitor emissions that may or may not be related to opacity, and are required as compliance monitoring to maintain records of continuous compliance with the emissions requirements. As such, Condition D.3.5 stands as written.

#### **Comment 13 - Re: D.7, Emission Unit Description**

The Conditions in this section incorporate provisions of 40 CFR 63 Subpart DDDDD. However, as explained in the General Comments, this NESHAP provision is inapplicable to Nucor. As a result, the Conditions of this section should be removed.

Nucor recognizes that this unit will become subject to the emissions limits for sources of indirect heat, 326 IAC 6-2-4. Nucor proposes that IDEM incorporate this emissions unit into Section D.1. In this way, all the regulated sources of indirect heat will be governed by the same permit section.

### Response to Comment 13

The requirements of 326 IAC 6-2-4 (Particulate Emission Limitations for Source of Indirect Heating) do not apply to the belt heat treat furnace. The requirements and references to the NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63, Subpart DDDDD) have been removed. Therefore, Section D.7 shall be removed from the permit.

#### **SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS**

##### **Emissions Unit Description:**

~~One (1) natural gas-fired belt heat treat furnace, including one (1) hardening furnace and one (1) draw furnace, with a total maximum heat input capacity of 18.35 mmBtu/hr. Under NESHAP Subpart DDDDD this is considered an existing unit in the large gaseous fuel subcategory;~~

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

##### **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

###### **D.7.1 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

~~A Preventive Maintenance Plan, in accordance with Section B – Preventive Maintenance Plan, of this permit, is required for the one (1) natural gas-fired belt heat treat furnace.~~

##### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]**

###### **D.7.2 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [326 IAC 20-1] [40 CFR 63, Subpart A]**

~~Pursuant to 40 CFR 63.7565, the Permittee shall comply with the applicable provisions of 40 CFR 63, Subpart A – General Provisions, that are incorporated by reference as 326 IAC 20-1-1, for the affected source as specified in Appendix A of 40 CFR 63, Subpart DDDDD in accordance with the schedule in 40 CFR 63, Subpart DDDDD.~~

###### **D.7.3 NESHAP Requirements [40 CFR 63, Subpart DDDDD]**

~~Pursuant to 40 CFR 63, Subpart DDDDD, the Permittee shall comply with the provisions of 40 CFR 63, Subpart DDDDD for the affected facility specified as follows:~~

##### **§ 63.7485 Am I subject to this subpart?**

~~You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP as defined in §63.2 or §63.761 (40 CFR part 63, subpart HH, National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities), except as specified in §63.7491.~~

##### **§ 63.7490 What is the affected source of this subpart?**

~~(a) This subpart applies to new, reconstructed, or existing affected sources as described in paragraphs (a)(1) and (2) of this section.~~

~~(1) The affected source of this subpart is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in §63.7575.~~

**~~§ 63.7495 – When do I have to comply with this subpart?~~**

~~(b) If you have an existing boiler or process heater, you must comply with this subpart no later than September 13, 2007.~~

~~(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.~~

**~~§ 63.7499 – What are the subcategories of boilers and process heaters?~~**

~~The subcategories of boilers and process heaters are large solid fuel, limited use solid fuel, small solid fuel, large liquid fuel, limited use liquid fuel, small liquid fuel, large gaseous fuel, limited use gaseous fuel, and small gaseous fuel. Each subcategory is defined in §63.7575.~~

**~~§ 63.7506 – Do any boilers or process heaters have limited requirements?~~**

~~(b) The affected boilers and process heaters listed in paragraphs (b)(1) through (3) of this section are subject to only the initial notification requirements in §63.9(b) (i.e., they are not subject to the emission limits, work practice standards, performance testing, monitoring, SSMP, site specific monitoring plans, recordkeeping and reporting requirements of this subpart or any other requirements in subpart A of this part).~~

~~(1) Existing large and limited use gaseous fuel units.~~

**~~§ 63.7545 – What notifications must I submit and when?~~**

~~(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8 (e), (f)(4) and (6), and 63.9 (b) through (h) that apply to you by the dates specified.~~

~~(b) As specified in §63.9(b)(2), if you startup your affected source before November 12, 2004, you must submit an Initial Notification not later than 120 days after November 12, 2004. The Initial Notification must include the information required in paragraphs (b)(1) and (2) of this section, as applicable.~~

~~(1) If your affected source has an annual capacity factor of greater than 10 percent, your Initial Notification must include the information required by §63.9(b)(2).~~

**~~§ 63.7555 – What records must I keep?~~**

~~(a) You must keep records according to paragraphs (a)(1) through (3) of this section.~~

~~(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).~~

~~(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.~~

**~~§ 63.7565 – What parts of the General Provisions apply to me?~~**

~~Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.~~

**~~§ 63.7575 What definitions apply to this subpart?~~**

Terms used in this subpart are defined in the CAA, in §63.2 (the General Provisions), and in this section as follows:

*Annual capacity factor* means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year, and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

*Bag leak detection system* means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.*, baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

*Biomass fuel* means unadulterated wood as defined in this subpart, wood residue, and wood products (*e.g.*, trees, tree stumps, tree limbs, bark, lumber, sawdust, sanderdust, chips, scraps, slabs, millings, and shavings); animal litter; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.*, almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds.

*Blast furnace gas fuel fired boiler or process heater* means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total heat input (based on an annual average) from blast furnace gas.

*Boiler* means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Waste heat boilers are excluded from this definition.

*Coal* means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by the American Society for Testing and Materials in ASTM D388-99<sup>1</sup>, "Standard Specification for Classification of Coals by Rank<sup>1</sup>" (incorporated by reference, see §63.14(b)), coal refuse, and petroleum coke. Synthetic fuels derived from coal for the purpose of creating useful heat including but not limited to, solvent refined coal, coal-oil mixtures, and coal-water mixtures, for the purposes of this subpart. Coal-derived gases are excluded from this definition.

*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 (6,000 Btu per pound) on a dry basis.

*Commercial/institutional boiler* means a boiler used in commercial establishments or institutional establishments such as medical centers, research centers, institutions of higher education, hotels, and laundries to provide electricity, steam, and/or hot water.

*Construction/demolition material* means waste building material that result from the construction or demolition operations on houses and commercial and industrial buildings.

*Deviation.* (1) Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard;

~~(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or~~

~~(iii) Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.~~

~~(2) A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for enforcement of the standards.~~

~~*Distillate oil* means fuel oils, including recycled oils, that comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D396-02a, "Standard Specifications for Fuel Oils"<sup>41</sup> (incorporated by reference, see §63.14(b)).~~

~~*Dry scrubber* means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems in fluidized bed boilers and process heaters are included in this definition.~~

~~*Electric utility steam generating unit* means a fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale is considered an electric utility steam generating unit.~~

~~*Electrostatic precipitator* means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper.~~

~~*Fabric filter* means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.~~

~~*Federally enforceable* means all limitations and conditions that are enforceable by the EPA 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.~~

~~*Firetube boiler* means a boiler in which hot gases of combustion pass through the tubes and water contacts the outside surfaces of the tubes.~~

~~*Fossil fuel* means natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials.~~

~~*Fuel type* means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, subbituminous coal, lignite, anthracite, biomass, construction/demolition material, salt water laden wood, creosote treated wood, tires, residual oil. Individual fuel types received from different suppliers are not considered new fuel types except for construction/demolition material.~~

~~*Gaseous fuel* includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas is exempted from this definition.~~

~~Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.~~

~~Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous or liquid fuel and is withdrawn for use external to the vessel at pressures not exceeding 160 psig, including the apparatus by which the heat is generated and all controls and devices necessary to prevent water temperatures from exceeding 210 °F (99 °C).~~

~~Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.~~

~~Large gaseous fuel subcategory includes any watertube boiler or process heater that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent.~~

~~Large liquid fuel subcategory includes any watertube boiler or process heater that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent. Large gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply emergencies are not included in this definition.~~

~~Large solid fuel subcategory includes any watertube boiler or process heater that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent.~~

~~Limited use gaseous fuel subcategory includes any watertube boiler or process heater that burns gaseous fuels not combined with any liquid or solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable annual average capacity factor of equal to or less than 10 percent.~~

~~Limited use liquid fuel subcategory includes any watertube boiler or process heater that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable annual average capacity factor of equal to or less than 10 percent. Limited use gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply emergencies are not included in this definition.~~

~~Limited use solid fuel subcategory includes any watertube boiler or process heater that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable annual average capacity factor of equal to or less than 10 percent.~~

~~Liquid fossil fuel means petroleum, distillate oil, residual oil and any form of liquid fuel derived from such material.~~

~~Liquid fuel includes, but is not limited to, distillate oil, residual oil, waste oil, and process liquids.~~

~~*Minimum pressure drop* means 90 percent of the lowest test run average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.~~

~~*Minimum scrubber effluent pH* means 90 percent of the lowest test run average effluent pH measured at the outlet of the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.~~

~~*Minimum scrubber flow rate* means 90 percent of the lowest test run average flow rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.~~

~~*Minimum sorbent flow rate* means 90 percent of the lowest test run average sorbent (or activated carbon) flow rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.~~

~~*Minimum voltage or amperage* means 90 percent of the lowest test run average voltage or amperage to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.~~

~~*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) Liquid petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835-03a, "Standard Specification for Liquid Petroleum Gases" (incorporated by reference, see §63.14(b)).~~

~~*Opacity* means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.~~

~~*Particulate matter* means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an alternative method.~~

~~*Period of natural gas curtailment or supply interruption* means a period of time during which the supply of natural gas to an affected facility is halted for reasons beyond the control of the facility. An increase in the cost or unit price of natural gas does not constitute a period of natural gas curtailment or supply interruption.~~

~~*Process heater* means an enclosed device using controlled flame, that is not a boiler, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not directly come into contact with process materials. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves.~~

~~*Residual oil* means crude oil, and all fuel oil numbers 4, 5 and 6, as defined by the American Society for Testing and Materials in ASTM D396-02a, "Standard Specifications for Fuel Oils<sup>1</sup>" (incorporated by reference, see §63.14(b)).~~

~~*Responsible official* means responsible official as defined in 40 CFR 70.2.~~

~~*Small gaseous fuel subcategory* includes any firetube boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment or gas supply emergencies, and any boiler or process heater that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, and has a rated capacity of less than or equal to 10 MMBtu per hour heat input.~~

~~*Small liquid fuel subcategory* includes any firetube boiler that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, and any boiler or process heater that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, and has a rated capacity of less than or equal to 10 MMBtu per hour heat input. Small gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply emergencies are not included in this definition.~~

~~*Small solid fuel subcategory* includes any firetube boiler that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels, and any other boiler or process heater that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels and has a rated capacity of less than or equal to 10 MMBtu per hour heat input.~~

~~*Solid fuel* includes, but is not limited to, coal, wood, biomass, tires, plastics, and other nonfossil solid materials.~~

~~*Temporary boiler* means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another. A temporary boiler that remains at a location for more than 180 consecutive days is no longer considered to be a temporary boiler. Any temporary boiler that replaces a temporary boiler at a location and is intended to perform the same or similar function will be included in calculating the consecutive time period.~~

~~*Total selected metals* means the combination of the following metallic HAP: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.~~

~~*Unadulterated wood* means wood or wood products that have not been painted, pigment-stained, or pressure treated with compounds such as chromate copper arsenate, pentachlorophenol, and creosote. Plywood, particle board, oriented strand board, and other types of wood products bound by glues and resins are included in this definition.~~

~~*Waste heat boiler* means a device that recovers normally unused energy and converts it to usable heat. Waste heat boilers incorporating duct or supplemental burners that are designed to supply 50 percent or more of the total rated heat input capacity of the waste heat boiler are not considered waste heat boilers, but are considered boilers. Waste heat boilers are also referred to as heat recovery steam generators.~~

~~*Watertube boiler* means a boiler in which water passes through the tubes and hot gases of combustion pass over the outside surfaces of the tubes.~~

~~*Wet scrubber* means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter and/or to absorb and neutralize acid gases, such as hydrogen chloride.~~

~~*Work practice standard* means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.~~

**Technical Support Document (TSD)**

**Comment 14 - Re: TSD, pages 2 and 4**

In Nucor Fastener's previous comments, we inadvertently noted that the following equipment was eliminated. The following equipment should be added back into the "Insignificant Activities" listing: Four (4) natural gas fired annealing furnaces, with a total maximum heat input capacity of 27.6 mmBtu/hr. Also the table on page 4 should be revised to reflect this change.

**Response to Comment 14**

The requested changes will be incorporated in this Addendum to the TSD, not in the TSD itself.

**Insignificant Activities**

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

- (a) Natural gas-fired space heaters, with a total maximum capacity of 8.3 mmBtu/hr;
- (b) Natural gas-fired air makeup units, with a total maximum capacity of 56.2 mmBtu/hr;
- (c) Three (3) natural gas-fired annealing furnaces, each with a maximum heat input capacity of 5.94 mmBtu/hr, and each processing 113,400 pounds of metal per batch. Under NESHAP Subpart DDDDD these are considered existing units in the small gaseous fuel subcategory;
- (d) One (1) natural gas-fired heat treat furnace, including one (1) belt furnace, one (1) hardening furnace, and one (1) draw furnace, with a total maximum heat input capacity of 7.70 mmBtu/hr. Under NESHAP Subpart DDDDD this is considered an existing unit in the small gaseous fuel subcategory;
- (e) Two (2) natural gas-fired heat treat furnaces, including two (2) belt furnaces, two (2) hardening furnaces, and two (2) draw furnaces, with a total maximum heat input capacity of 18.1 mmBtu/hr. Under NESHAP Subpart DDDDD these are considered existing units in the small gaseous fuel subcategory; and
- (f) One (1) wash line, using a maximum of 1,733 gallons of rust preventative per year.
- (g) Four (4) natural gas fired annealing furnaces, with a total maximum heat input capacity of 27.6 mmBtu/hr.**

Process/emission unit	Unrestricted Potential to Emit (tons/year)							
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAP	
							Single	Combined
Boiler, installed 1994	0.3	0.3	1.3	0.2	3.6	8.9	0.077 (Hexane)	0.081
Boiler, EP54	0.2	0.3	1.1	0.2	3.1	7.6	0.066 (Hexane)	0.069
Space Heaters	0.1	0.3	0.0	0.2	3.1	3.6	0.065 (Hexane)	0.069
Air Makeup Units	0.5	1.9	0.1	1.4	20.7	24.6	0.443 (Hexane) 0.018 (Formaldehyde)	0.465
3 7 Annealing Furnaces	<del>0.1</del> <b>0.4</b>	<del>0.6</del> <b>1.5</b>	<del>0.0</del> <b>0.1</b>	<del>0.4</del> <b>1.1</b>	<del>6.6</del> <b>16.7</b>	<del>7.8</del> <b>19.9</b>	<del>0.140</del> <b>0.358</b> (Hexane) <del>0.0059</del> <b>0.0149</b> (Formaldehyde)	<del>0.147</del> <b>0.375</b>
4 Heat Treat Furnaces	0.4	1.5	0.1	1.1	16.2	19.3	0.348 (Hexane) 0.0145 (Formaldehyde)	0.365
Sulfuric Acid Pickling Facility	3.46	3.46	3.46	--	--	--	--	--
5 Bolt Formers	71.16	71.16	--	--	--	--	--	--
23 Bolt Makers and 1 Nut Former	8.14	8.14	--	19.86	--	--	--	--
Tumble Blaster	17.73	17.73	--	--	--	--	--	--
NUCOR Vulcraft Group – St. Joe Division (T033-15749-00027)	11.7	11.7	--	770.8	--	--	512.70 (Glycol Ethers) 7.10 (Manganese)	≥25 <25
Total Unrestricted PTE:	<del>113.79</del> <b>114.09</b>	<del>117.09</del> <b>117.99</b>	<del>6.06</del> <b>6.16</b>	<del>794.6</del> <b>794.86</b>	<del>53.3</del> <b>63.4</b>	<del>71.8</del> <b>86.8</b>	4.17 <b>1.292</b> (Hexane) 7.10 (Manganese) 0.04 <b>0.0474</b> (Formaldehyde) 512.70 (Glycol Ethers)	≥25 <25

**Comment 15 - Re: TSD, page 3**

The equipment noted in (g) and (i) are no longer in operation at Nucor's facility and should be deleted from this section.

### **Response to Comment 15**

The Existing Approvals section serves as a historical reference. No changes will be made to the TSD; rather all changes to the TSD will be documented in this Addendum.

### **Comment 16 - Re: TSD, pages 4 and 5**

As discussed in the General Comments, the Potential to Emit Table states that Nucor Vulcraft has a PTE of 512.70 tons per year of "Glycol Ethers." This value should be revised to reflect the delisting of EGBE. As discussed in the General Comments, Nucor is no longer a major source of HAP.

### **Response to Comment 16**

The table reflecting PTE is changed to show the delisting of EGBE from the list of HAPs. Please see the Response to Comment 14. Additionally, part (c) of the Potential to Emit of the Source section has been revised as follows:

- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is ~~equal to or greater~~ **less** than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is ~~equal to or greater~~ **less** than twenty-five (25) tons per year. ~~Therefore, the source is subject to the provisions of 326 IAC 2-7.~~

No changes will be made to the TSD; rather all changes to the TSD will be documented in this Addendum.

### **Comment 17/18 - Re: TSD, Page 7 (f), (g), (h), (i), and (j)**

As Nucor explained in the General Comments, the facility is not subject to 40 CFR 63 Subpart DDDDD. As a result, these provisions may be removed. Nucor proposes that IDEM revise provision (g) on page 7 to explain that these boilers and process heaters are not governed by the NESHAP provision.

As Nucor explained in the General Comments, the facility is not subject to 40 CFR 63 Subpart DDDDD. As a result, provision (g) should be revised to read:

This source is not subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63 Subpart DDDDD because the source is not a major source of hazardous air pollutants. As a result, this NESHAP provision does not apply to the space heaters, boilers, annealing furnaces, and heat treat furnaces at the source.

### **Response to Comment 17/18**

Pursuant to the delisting of EGBE, the source is no longer a major source of HAPs. This makes inapplicable the requirements of the NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63, Subpart DDDDD). No changes will be made to the TSD; rather all changes to the TSD will be documented in this Addendum. Therefore, the following changes are appropriate per the comment above:

The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, are not included in this permit because the source is not a major source of hazardous air pollutants, and thus the NESHAP is not applicable to the source.

**Comment 19 - Re: Appendix A to TSD, page 11**

Nucor has calculated the "Potential Emissions in tons/yr" of NO<sub>x</sub> to be 22.3 tpy. In the permit application the annealing furnaces were separated into two categories since the four (4) box annealing units had a NO<sub>x</sub> emissions rate of 0.12 lb/MMBtu (per vendor data) and the three bell annealing units has a NO<sub>x</sub> emissions rate of 0.1 lb/MMBtu (per AP-42).

**Response to Comment 19**

The seven (7) annealing furnaces were combined and the potential emissions from this grouping was calculated using the emission factor of 100 for uncontrolled NO<sub>x</sub> emissions. The PTE table was updated in this document as necessary. No changes will be made to the TSD; rather all changes to the TSD will be documented in this Addendum. Please see the revised calculation sheet in the Appendix to this Addendum.

**Comment 20 - Re: Appendix A to TSD, page 17**

In reference to the abrasive blasting sheet sent for Nucor's comments: Nucor's equipment is a Pangborn Tumble Blaster and has no spray orifices and therefore the calculation sheet does not apply. The steel shot drops into a feed hopper and is fed to a ¾ inch rotary turbine which throws the steel shot at the tumbling nuts. The turbine is powered by a 30 HP motor and rotates at 1800 rpm.

Nucor has tracked the steel shot/scale dust disposal. We estimate the disposal rate to be 11.7 tons per year. For annual variability we have multiplied by a factor of 1.5. Nucor estimates the uncontrolled PM emissions to be 17.6 tpy.

Note: the nuts that are processed in the tumble blaster are produced in an electric heat induction nut former that does not generate air emissions and is not described in the draft permit.

**Response to Comment 20**

Page 17 of the Appendix A to the TSD has all the information stated above in the calculations, and calculates a PM PTE of 17.73 tons per year. The difference lies in the number of significant figures used. IDEM chooses to keep the "worst-case" calculated PTE - the 17.76 tons per year. As such, page 17 of the TSD Appendix A will stand as written.

**Administrative Changes**

- (1) IDEM has recently changed the mailing addresses for all offices by using mail codes in lieu of P.O. Box addresses. All affected addresses in the permit are changed as follows:

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

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
**MC 61-50 IGCN 1003**  
Indianapolis, Indiana 46204-2251.

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MMBTU/HR <100**

**Company Name:** Nucor Fastener  
**Address City IN Zip:** 6730 County Road 60, St. Joe, Indiana 46785  
**Permit Number:** T 033-20219-00038  
**Plt ID:** 033-00038  
**Reviewer:** Stephanie Wilkerson  
**Date:** June 29, 2007

**1 Belt Heat Treat Furnace,  
including:  
1 Hardening Furnace, and  
1 Draw Furnace**

Heat Input Capacity  
MMBtu/hr

18.35

Potential Throughput  
MMCF/yr

160.7

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.2	0.6	0.0	8.0	0.4	6.8

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

See page 14 for HAP emissions calculations.

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MMBTU/HR <100**

**HAP Emissions**

**Company Name: Nucor Fastener**  
**Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785**  
**Permit Number: T 033-20219-00038**  
**Plt ID: 033-00038**  
**Reviewer: Stephanie Wilkerson**  
**Date: June 29, 2007**

HAP - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.69E-04	9.64E-05	6.03E-03	1.45E-01	2.73E-04

HAP - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.02E-05	8.84E-05	1.13E-04	3.05E-05	1.69E-04

Methodology is the same as page 13.

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

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

**Company Name: Nucor Fastener**  
**Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785**  
**Permit Number: T 033-20219-00038**  
**Plt ID: 033-00038**  
**Reviewer: Stephanie Wilkerson**  
**Date: June 29, 2007**

**Annealing Furnaces (Bell and Box)**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

45.4

397.7

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.4	1.5	0.1	19.9	1.1	16.7

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**MM BTU/HR <100**

**HAPs Emissions**

**Company Name: Nucor Fastener**  
**Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785**  
**Permit Number: T 033-20219-00038**  
**Pit ID: 033-00038**  
**Reviewer: Stephanie Wilkerson**  
**Date: June 29, 2007**

	HAPs - Organics				
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	4.176E-04	2.386E-04	1.491E-02	3.579E-01	6.761E-04

	HAPs - Metals				
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	9.943E-05	2.187E-04	2.784E-04	7.556E-05	4.176E-04

Methodology is the same as page 1.

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

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

Technical Support Document (TSD) for a Part 70 Operating Permit

**Source Background and Description**

<b>Source Name:</b>	<b>Nucor Fastener</b>
<b>Source Location:</b>	<b>6730 County Road 60, St. Joe, Indiana 46785</b>
<b>County:</b>	<b>DeKalb</b>
<b>SIC Code:</b>	<b>3452</b>
<b>Operation Permit No.:</b>	<b>033-20219-00038</b>
<b>Permit Reviewer:</b>	<b>Chrystal Wagner</b>

The Office of Air Quality (OAQ) has reviewed a Part 70 Operating Permit application from Nucor Fastener relating to the operation of a nut and bolt manufacturing source.

**Source Definition**

This Source Definition was incorporated into this permit as follows:

This source consists of two (2) plants:

- (a) Nucor Fastener is located at 6730 County Road 60, St. Joe, Indiana 46785; and
- (b) NUCOR Vulcraft Group – St. Joe Division is located at 6610 County Road 60, St. Joe, Indiana 46785.

Both plants have been operating under separate operating permits. Nucor Fastener has been operating under MSOP 033-11203-00038, issued on April 4, 2000. NUCOR Vulcraft Group – St. Joe Division has been operating under TVOP 033-15749-00027, issued on July 22, 2003. IDEM has determined that Nucor Fastener and NUCOR Vulcraft Group – St. Joe Division are under the common control of Nucor Corporation, and will be considered one major source. Nucor Fastener is transitioning from a minor source operating permit to a Part 70 operating permit. These two plants are considered one source because they are located on adjacent properties, are under common ownership, and belong to the same industrial grouping. Therefore, the term “source” in the Part 70 documents refers to both Nucor Fastener and NUCOR Vulcraft Group – St. Joe Division as one major source, effective from the date of issuance of this Part 70 permit.

Separate Part 70 permits will be issued to Nucor Fastener with Permit No.: T033-20219-00038 and NUCOR Vulcraft Group – St. Joe Division with Permit No.: T033-15749-00027 (issued on July 22, 2003) solely for administrative purposes.

**Permitted Emission Units and Pollution Control Equipment**

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

- (a) One (1) natural gas-fired boiler, constructed in 1994, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 9.807 million British thermal units per hour

- (mmBtu/hr). Under NESHAP Subpart DDDDD this is considered an existing unit in the small gaseous fuel subcategory;
- (b) One (1) natural gas-fired belt heat treat furnace, including one (1) hardening furnace and one (1) draw furnace, with a total maximum heat input capacity of 18.35 mmBtu/hr. Under NESHAP Subpart DDDDD this is considered an existing unit in the large gaseous fuel subcategory;
  - (c) One (1) sulfuric acid pickling facility, exhausting to stack EP63, with an acid recovery system, with a maximum capacity of 32.4 tons of steel per hour;
  - (d) Twenty-three (23) bolt-making machines, including coolant and oil lubricant usage, with emissions from bolt-making machines controlled by three (3) wet Venturi scrubbers, with a total maximum capacity of 27.2 tons of steel per hour;
  - (e) One (1) nut-forming machine, including coolant usage, with a total maximum capacity of 1.27 tons of steel per hour;
  - (f) One (1) tumble blaster, exhausting to a baghouse, with a maximum capacity of 1.27 tons of steel per hour;
  - (g) Five (5) bolt formers, using lubricant and cooling oil, equipped with oil mist collection systems, with a total maximum usage of 37,500 gallons of oil per year;
  - (h) One (1) natural gas-fired boiler, identified as EP54, constructed May 26, 2000, using liquid propane gas as a backup fuel, with a maximum heat input capacity of 8.37 mmBtu/hr. Under NESHAP Subpart DDDDD this is considered an existing unit in the small gaseous fuel subcategory.

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

There are no unpermitted emission units 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) Natural gas-fired space heaters, with a total maximum capacity of 8.3 mmBtu/hr;
- (b) Natural gas-fired air makeup units, with a total maximum capacity of 56.2 mmBtu/hr;
- (c) Three (3) natural gas-fired annealing furnaces, each with a maximum heat input capacity of 5.94 mmBtu/hr, and each processing 113,400 pounds of metal per batch. Under NESHAP Subpart DDDDD these are considered existing units in the small gaseous fuel subcategory;
- (d) One (1) natural gas-fired heat treat furnace, including one (1) belt furnace, one (1) hardening furnace, and one (1) draw furnace, with a total maximum heat input capacity of 7.70 mmBtu/hr. Under NESHAP Subpart DDDDD this is considered an existing unit in the small gaseous fuel subcategory;
- (e) Two (2) natural gas-fired heat treat furnaces, including two (2) belt furnaces, two (2) hardening furnaces, and two (2) draw furnaces, with a total maximum heat input capacity of 18.1 mmBtu/hr. Under NESHAP Subpart DDDDD these are considered existing units in the small gaseous fuel subcategory; and

- (f) One (1) wash line, using a maximum of 1,733 gallons of rust preventative per year.

### **Existing Approvals**

The source has constructed or has been operating under the following previous approvals:

- (a) MSOP 033-11203-00038, issued on April 4, 2000;
- (b) Notice-Only Change 033-13694-00038, issued on April 25, 2001;
- (g) Notice-Only Change 033-15833-00038, issued on April 24, 2002;
- (h) Notice-Only Change 033-17723-00038, issued on June 9, 2003; and
- (i) Notice-Only Change 033-19983-00038, issued on January 6, 2005.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

### **Enforcement Issue**

There are no enforcement actions pending.

### **Recommendation**

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

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

An administratively incomplete Part 70 permit application for the purposes of this review was received on January 4, 2005. Additional information received on September 29, 2005 makes the Part 70 permit application administratively complete.

There was no notice of completeness letter mailed to the Permittee.

### **Emission Calculations**

See Appendix A, pages 1 through 17, of this document for detailed emission calculations. The emission calculations from the NUCOR Vulcraft Group – St. Joe Division permit, T033-15749-00027, presented in the TSD, Attachment A of that permit, are included in the Potential to Emit of the Source section below.

### **Potential to Emit of the Source**

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

Process/emission unit	Unrestricted Potential to Emit (tons/year)							
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAP	
							Single	Combined
Boiler, installed 1994	0.3	0.3	1.3	0.2	3.6	8.9	0.077 (Hexane)	0.081
Boiler, EP54	0.2	0.3	1.1	0.2	3.1	7.6	0.066 (Hexane)	0.069
Space Heaters	0.1	0.3	0.0	0.2	3.1	3.6	0.065 (Hexane)	0.069
Air Makeup Units	0.5	1.9	0.1	1.4	20.7	24.6	0.443 (Hexane) 0.018 (Formal- dehyde)	0.465
3 Annealing Furnaces	0.1	0.6	0.0	0.4	6.6	7.8	0.140 (Hexane) 0.0059 (Formal- dehyde)	0.147
4 Heat Treat Furnaces	0.4	1.5	0.1	1.1	16.2	19.3	0.348 (Hexane) 0.0145 (Formal- dehyde)	0.365
Sulfuric Acid Pickling Facility	3.46	3.46	3.46	--	--	--	--	--
5 Bolt Formers	71.16	71.16	--	--	--	--	--	--
23 Bolt Makers and 1 Nut Former	8.14	8.14	--	19.86	--	--	--	--
Tumble Blaster	17.73	17.73	--	--	--	--	--	--
NUCOR Vulcraft Group – St. Joe Division (T033- 15749-00027)	11.7	11.7	--	770.8	--	--	512.70 (Glycol Ethers)	>25
							7.10 (Manganese)	
Total Unrestricted PTE:	113.79	117.09	6.06	794.6	53.3	71.8	1.17 (Hexane)	>25
							7.10 (Manganese)	
							0.04 (Formal- dehyde)	
							512.70 (Glycol Ethers)	

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of volatile organic compounds (VOC) is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM<sub>10</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) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

### Actual Emissions

No previous emission data has been received from Nucor Fastener.

### County Attainment Status

The source is located in DeKalb County.

Pollutant	Status
PM <sub>10</sub>	Attainment
PM <sub>2.5</sub>	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
1-Hour Ozone	Attainment
8-Hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) DeKalb County has been classified as attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until U.S. EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as surrogate for PM<sub>2.5</sub> emissions. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. DeKalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (c) DeKalb County has been classified as attainment or unclassifiable in Indiana for PM<sub>10</sub>, 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 for the source section.
- (d) 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.

## Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

## Federal Rule Applicability

- (a) This permit does not involve a pollutant-specific emissions unit as defined in 40 CFR 64.1 for any regulated pollutant:
  - (1) with the potential to emit before controls equal to or greater than the major source threshold for that pollutant,
  - (2) that is subject to an emission limitation or standard for that pollutant, and
  - (3) uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not included in this permit.

- (b) The requirements of New Source Performance Standard, 326 IAC 12 (40 CFR 60.40c, Subpart Dc), Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, are not included in this permit because each boiler has a heat input capacity that is less than 10 mmBtu/hr. This NSPS does not apply to process heaters or furnaces.
- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart T (National Emission Standards for Halogenated Solvent Cleaning) are not included in this permit because the wash line is not a cleaning unit that uses halogenated solvents.
- (d) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63.1155, Subpart CCC, National Emission Standards for Hazardous Air Pollutants for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants, are not included in this permit because this NESHAP applies to steel pickling facilities that pickle carbon steel using hydrochloric acid. The steel pickling line located at this source uses sulfuric acid.
- (e) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63.3880, Subpart MMMM, National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, are not included in this permit because the coating applied in the wash line is considered a protective oil and is specifically exempt from these NESHAP requirements.
- (f) The natural gas-fired space heaters, with a total capacity of 8.3 mmBtu/hr, and the natural gas-fired air makeup units, with a total capacity of 56.2 mmBtu/hr are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for

Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD. These units are not part of the affected source for the small gaseous fuel subcategory, as defined by 40 CFR 63.7575, because each is used for comfort heat, space heat, or makeup air, and thus does not meet the definition of process heater.

- (g) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD.
- (h) The one (1) natural gas-fired boiler, constructed in 1994, with a heat input capacity of 9.807 mmBtu/hr and the one (1) natural gas-fired boiler, identified as EP54, constructed May 26, 2000, with a heat input capacity of 8.37 mmBtu/hr are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 326 IAC 20, 40 CFR 63.7480-7575, Subpart DDDDD, because each is an existing affected source located at a major source of HAP. These units are in the small gaseous fuel subcategory because each has a heat input capacity that is less than 10 mmBtu/hr. There are no applicable requirements for units in the small gaseous fuel subcategory.
- (i) The three (3) natural gas-fired annealing furnaces, each with a heat input capacity of 5.94 mmBtu/hr; the one (1) natural gas-fired heat treat furnace, with a total heat input capacity of 7.70 mmBtu/hr; and the two (2) natural gas-fired heat treat furnaces, with a total heat input capacity of 18.1 mmBtu/hr are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 326 IAC 20, 40 CFR 63.7480-7575, Subpart DDDDD, because each is an existing affected source located at a major source of HAP. These units are in the small gaseous fuel subcategory because each has a heat input capacity that is less than 10 mmBtu/hr. There are no applicable requirements for units in the small gaseous fuel subcategory.
- (j) The one (1) natural gas-fired heat treat furnace, with a total heat input capacity of 18.35 mmBtu/hr is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 326 IAC 20, 40 CFR 63.7480-7575, Subpart DDDDD, because it is an existing affected source located at a major source of HAP. This unit is in the large gaseous fuel subcategory because it has a heat input capacity that is greater than 10 mmBtu/hr. These requirements apply to the affected source on and after September 13, 2007. Nonapplicable portions of the NESHAP will not be included in the permit. The affected source is subject to the following portions of Subpart DDDDD:

40 CFR 63.7485

40 CFR 63.7490(a)(1)

40 CFR 63.7495(b), (d)

40 CFR 63.7499

40 CFR 63.7506(b)(1)

40 CFR 63.7545(a)-(b)(1)

40 CFR 63.7555(a)(1)-(2)

40 CFR 63.7565

#### 40 CFR 63.7575

The provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart DDDDD.

### State Rule Applicability – Entire Source

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

This source was constructed after August 1977. This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2. The VOC PTE of the entire source is greater than 250 tons per year. However, through a pending Significant Permit Modification (SPM), T033-22929-00027, VOC emissions from the entire source will be limited to less than 250 tons per year by limiting VOC emissions from NUCOR Vulcraft Group – St. Joe Division. This source remains a major source under PSD until issuance of this SPM. There are no PSD requirements included in this permit because there have been no major modifications under PSD at Nucor Fastener. (See T033-22929-00027 that is currently on public notice for the PSD avoidance limit for NUCOR Vulcraft Group – St. Joe Division.)

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

This source is a major source of HAPs. Each unit located at Nucor Fastener will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

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

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have a Part 70 operating permit. In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted by July 1, beginning in 2007 and every three years after. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

#### 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 the permit:

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

### State Rule Applicability – Individual Facilities

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

326 IAC 6-2-4 applies to the boilers because each was constructed after September 21, 1983.

- (a) Pursuant to 326 IAC 6-2-4(a) (Particulate Matter Emission Limitations for Sources of Indirect Heating), particulate matter emissions from the one (1) boiler constructed in 1994, with a heat input capacity of 9.807 mmBtu/hr, shall be limited to 0.60 pounds per mmBtu heat input, because the total source maximum operating capacity is less than 10 mmBtu/hr.

The boiler constructed in 1994 is in compliance with 326 IAC 6-2-4 when burning natural gas, because it has potential particulate matter emissions of 0.002 pounds per mmBtu heat input.

The boiler constructed in 1994 is in compliance with 326 IAC 6-2-4 when burning propane, because it has potential particulate matter emissions of 0.007 pounds per mmBtu heat input.

- (b) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate matter emissions from the one (1) boiler EP54 constructed May 26, 2000, and with a heat input capacity of 8.37 mmBtu/hr, shall be limited to 0.51 pounds per mmBtu heat input. This limitation is based on the following equation:

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

Where:

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

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. As each new indirect heating facility is added to a plant Q will increase. As a result, the emission limitation for each progressively newer facility will be more stringent until the total plant capacity reaches 10,000 mmBtu/hr.

Boiler EP54 is in compliance with 326 IAC 6-2-4 when burning natural gas, because it has potential particulate matter emissions of 0.003 pounds per mmBtu heat input.

Boiler EP54 is in compliance with 326 IAC 6-2-4 when burning propane, because it has potential particulate matter emissions of 0.005 pounds per mmBtu heat input.

- (c) There are no other sources of indirect heating at this source.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

(a) *Sulfuric Acid Pickling Facility*

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the sulfuric acid pickling facility shall not exceed 40.6 pounds per hour when operating at a process weight rate of 32.4 tons of steel per hour. The pounds per hour limitation was calculated using the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The sulfuric acid pickling facility is in compliance with this limit without the use of a control device, because the potential maximum uncontrolled particulate emission rate is less than 40.6 pounds per hour.

(b) *Bolt Formers*

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the combined five (5) bolt formers shall not exceed 12.49 pounds per hour when operating at a process weight rate of 5.27 tons per hour. The pounds per hour limitation was calculated using the following equation:

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

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

The oil mist collection systems shall be in operation at all times the bolt formers are in operation, in order to comply with this limit.

(c) *Bolt-Making Machines*

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the combined twenty-three (23) bolt-making machines shall not exceed 37.5 pounds per hour when operating at a process weight rate of 27.2 tons of steel per hour. The pounds per hour limitation was calculated using the following equation:

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

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

The bolt-making machines are in compliance with this limit without the use of a control device, because potential uncontrolled particulate emissions from the combined bolt-making machines are 0.90 pounds per hour.

(d) *Nut-Forming Machine*

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the one (1) nut-forming machine shall not exceed 4.81 pounds per hour when operating at a process weight rate of 1.27 tons of steel per hour. The pounds per hour limitation was calculated using the following equation:

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

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

The nut-forming machine is in compliance with this limit without the use of a control device, because potential uncontrolled particulate emissions from the nut-forming are 0.96 pounds per hour.

(e) *Tumble Blaster*

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the tumble blaster shall not exceed 4.81 pounds per hour when operating at a process weight rate of 1.27 tons of steel per hour. The pounds per hour limitation was calculated using the following equation:

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

The tumble blaster is in compliance with this limit without the use of a control device, because potential uncontrolled particulate emissions from the tumble blaster are 4.05 pounds per hour.

**326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)**

This rule applies to facilities with a potential to emit of twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide. All facilities at this source have potential SO<sub>2</sub> emissions that are less than 25 tons per year and less than 10 pounds per hour. Therefore, 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations) does not apply.

**326 IAC 8-1-6 (New Facilities; General Reduction Requirements)**

This rule does not apply because there are no new facilities (as of January 1, 1980) included in this permit that have potential VOC emissions of 25 or more tons per year.

**326 IAC 8-2-9 (Miscellaneous Metal Coating)**

This rule does not apply to the wash line because the rust preventative coating does not contain VOC.

**326 IAC 8-3 (Organic Solvent Degreasing Operations)**

326 IAC 8-3 does not apply to the wash line because it does not meet the definition of a cold cleaner degreaser. The wash line uses a non-VOC containing material to clean the parts and then coats the parts with a protective oil (rust preventative).

## Testing Requirements

In order to demonstrate compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the Permittee shall perform PM testing for the five (5) bolt formers during the period between 30 and 36 months after issuance of this TVOP. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C – Performance Testing. Testing is required because the majority of potential PM emissions at this source are from these units.

## Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions. However, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions 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.

The compliance monitoring requirements applicable to this source are as follows:

The five (5) bolt formers have applicable compliance monitoring conditions as specified below:

- (a) Visible emission notations of the five (5) bolt formers' exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (a) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (b) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances shall be considered a deviation from this permit

These monitoring conditions are necessary because the oil mist collection systems for the five (5) bolt formers must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-7 (Part 70).

### **Conclusion**

The operation of this nut and bolt manufacturer shall be subject to the conditions of this Part 70 permit T033-20219-00038.

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

**Company Name: Nucor Fastener**  
**Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785**  
**Permit Number: T 033-20219-00038**  
**Pit ID: 033-00038**  
**Reviewer: Chrystal Wagner**  
**Date: July 11, 2006**

Space Heaters

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

8.3

72.7

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.1	0.3	0.0	3.6	0.2	3.1

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

See page 2 for HAP emissions calculations.

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

**HAP Emissions**  
**Company Name: Nucor Fastener**  
**Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785**  
**Permit Number: T 033-20219-00038**  
**Pit ID: 033-00038**  
**Reviewer: Chrystal Wagner**  
**Date: July 11, 2006**

HAP - 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	7.634E-05	4.362E-05	2.727E-03	6.544E-02	1.236E-04

HAP - 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	1.818E-05	3.999E-05	5.090E-05	1.381E-05	7.634E-05

Methodology is the same as page 1.

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

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

**Company Name:** Nucor Fastener  
**Address City IN Zip:** 6730 County Road 60, St. Joe, Indiana 46785  
**Permit Number:** T 033-20219-00038  
**Pit ID:** 033-00038  
**Reviewer:** Chrystal Wagner  
**Date:** July 11, 2006

Air Makeup Units

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

56.2

492.3

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.5	1.9	0.1	24.6	1.4	20.7

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

See page 4 for HAP emissions calculations.

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

**HAP Emissions**  
**Company Name: Nucor Fastener**  
**Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785**  
**Permit Number: T 033-20219-00038**  
**Pit ID: 033-00038**  
**Reviewer: Chrystal Wagner**  
**Date: July 11, 2006**

HAP - 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	5.169E-04	2.954E-04	1.846E-02	4.431E-01	8.369E-04

HAP - 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	1.231E-04	2.708E-04	3.446E-04	9.354E-05	5.169E-04

Methodology is the same as page 3.

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

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

**Company Name:** Nucor Fastener  
**Address City IN Zip:** 6730 County Road 60, St. Joe, Indiana 46785  
**Permit Number:** T 033-20219-00038  
**Pit ID:** 033-00038  
**Reviewer:** Chrystal Wagner  
**Date:** July 11, 2006

Boiler, installed 1994

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 MMCF/yr

9.8

85.9

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.1	0.3	0.03	4.3	0.2	3.6

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

See page 6 for HAP emissions calculations.

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

**Company Name: Nucor Fastener  
 Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785  
 Permit Number: T 033-20219-00038  
 Pit ID: 033-00038  
 Reviewer: Chrystal Wagner  
 Date: July 11, 2006**

HAP - 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	9.020E-05	5.155E-05	3.222E-03	7.732E-02	1.460E-04

HAP - 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	2.148E-05	4.725E-05	6.014E-05	1.632E-05	9.020E-05

Methodology is the same as page 5.

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

**Appendix A: Emission Calculations  
LPG-Propane - Industrial Boilers**

**Company Name:** Nucor Fastener  
**Address City IN Zip:** 6730 County Road 60, St. Joe, Indiana 46785  
**Permit Number:** T 033-20219-00038  
**Pit ID:** 033-00038  
**Reviewer:** Chrystal Wagner  
**Date:** April 19, 2006

Boiler, installed 1994 - LPG

Heat Input Capacity                      Potential Throughput                      SO2 Emission factor = 0.10 x S  
MMBtu/hr                                      kgals/year                                      S = Sulfur Content = 27.30 grains/100ft<sup>3</sup>

9.80                                      938.23

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2 (0.10S)	NOx	VOC **TOC value	CO
Potential Emission in tons/yr	0.6	0.6	2.7	19.0	0.5	3.2
	0.3	0.3	1.3	8.9	0.2	1.5

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

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

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

**Company Name: Nucor Fastener**  
**Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785**  
**Permit Number: T 033-20219-00038**  
**Pit ID: 033-00038**  
**Reviewer: Chrystal Wagner**  
**Date: July 11, 2006**

Boiler EP54

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 MMCF/yr

8.4

73.3

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.1	0.3	0.02	3.7	0.2	3.1

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

See page 9 for HAP emissions calculations.

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

**Company Name: Nucor Fastener  
 Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785  
 Permit Number: T 033-20219-00038  
 Pit ID: 033-00038  
 Reviewer: Chrystal Wagner  
 Date: July 11, 2006**

HAP - 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	7.699E-05	4.399E-05	2.750E-03	6.599E-02	1.246E-04

HAP - 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	1.833E-05	4.033E-05	5.132E-05	1.393E-05	7.699E-05

Methodology is the same as page 8.

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

**Appendix A: Emission Calculations  
LPG-Propane - Industrial Boilers**

**Company Name:** Nucor Fastener  
**Address City IN Zip:** 6730 County Road 60, St. Joe, Indiana 46785  
**Permit Number:** T 033-20219-00038  
**Pit ID:** 033-00038  
**Reviewer:** Chrystal Wagner  
**Date:** April 19, 2006

Boiler EP54 - LPG

Heat Input Capacity                      Potential Throughput                      SO2 Emission factor = 0.10 x S  
MMBtu/hr                                      kgals/year                                      S = Sulfur Content =                      27.30 grains/100ft<sup>3</sup>

8.37    801.32

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO2 2.7 (0.10S)	NOx 19.0	VOC 0.5 **TOC value	CO 3.2
Potential Emission in tons/yr	0.2	0.2	1.1	7.6	0.2	1.3

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

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

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MMBTU/HR <100**

**Company Name: Nucor Fastener**  
**Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785**  
**Permit Number: T 033-20219-00038**  
**Plt ID: 033-00038**  
**Reviewer: Chrystal Wagner**  
**Date: July 11, 2006**

3 Annealing Furnaces

Heat Input Capacity  
MMBtu/hr

17.8

Potential Throughput  
MMCF/yr

156.1

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.6	0.0	7.8	0.4	6.6

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04

(AP-42 Supplement D 3/98)

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

See page 12 for HAP emissions calculations.

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MMBTU/HR <100**

**HAP Emissions**

**Company Name:** Nucor Fastener  
**Address City IN Zip:** 6730 County Road 60, St. Joe, Indiana 46785  
**Permit Number:** T 033-20219-00038  
**Plt ID:** 033-00038  
**Reviewer:** Chrystal Wagner  
**Date:** July 11, 2006

HAP - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.64E-04	9.37E-05	5.85E-03	1.40E-01	2.65E-04

HAP - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.90E-05	8.59E-05	1.09E-04	2.97E-05	1.64E-04

Methodology is the same as page 11.

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

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MMBTU/HR <100**

**Company Name:** Nucor Fastener  
**Address City IN Zip:** 6730 County Road 60, St. Joe, Indiana 46785  
**Permit Number:** T 033-20219-00038  
**Plt ID:** 033-00038  
**Reviewer:** Chrystal Wagner  
**Date:** July 11, 2006

**4 Belt Heat Treat Furnaces,  
including:  
4 Hardening Furnaces, and  
4 Draw Furnaces**

Heat Input Capacity  
MMBtu/hr

44.15

Potential Throughput  
MMCF/yr

386.8

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.4	1.5	0.1	19.3	1.1	16.2

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

See page 14 for HAP emissions calculations.

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MMBTU/HR <100**

**HAP Emissions**

**Company Name:** Nucor Fastener  
**Address City IN Zip:** 6730 County Road 60, St. Joe, Indiana 46785  
**Permit Number:** T 033-20219-00038  
**Plt ID:** 033-00038  
**Reviewer:** Chrystal Wagner  
**Date:** July 11, 2006

HAP - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.06E-04	2.32E-04	1.45E-02	3.48E-01	6.57E-04

HAP - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	9.67E-05	2.13E-04	2.71E-04	7.35E-05	4.06E-04

Methodology is the same as page 13.

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

**Appendix A: Emission Calculations  
Non-Combustion  
Sulfuric Acid Pickling**

**Company Name: Nucor Fastener  
Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785  
Permit Number: T 033-20219-00038  
Pit ID: 033-00038  
Reviewer: Chrystal Wagner  
Date: July 11, 2006**

***Sulfuric Acid Pickling Facility***

Maximum Uncontrolled PM/PM10 (lb/hr)*	Maximum Uncontrolled PM/PM10 (ton/yr)	Capture Efficiency Fume Exhaust (%)	Control Efficiency Scrubber and Mist Eliminator (%)	Maximum Controlled Emissions (lb/hr)	Maximum Controlled Emissions (ton/yr)
0.79	3.46	70.0%	98.0%	0.25	1.09

Since the emissions are a sulfuric acid mist, the potential to emit SO<sub>2</sub> is conservatively equal to PM emissions.

**Methodology**

Maximum controlled emissions (lb/hr) = Maximum uncontrolled PM/PM10 (lb/hr) \* (1-Capture Efficiency) + Maximum uncontrolled PM/PM10 (lb/hr) \* Capture Efficiency \* (

\*Since there is no applicable AP-42 emissions factor available, the pound per hour emission rate is based on 360 grams per hour, as supplied by the vendor.

1-Control Efficiency)

**Appendix A: Emission Calculations  
Non-Combustion  
Miscellaneous Operations**

**Company Name: Nucor Fastener  
Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785  
Permit Number: T 033-20219-00038  
Pit ID: 033-00038  
Reviewer: Chrystal Wagner  
Date: July 11, 2006**

**5 Bolt Formers**

Facility	Material	Potential Usage (gal/yr)	Density (lb/gal)	PM Emitted (%)	HAP	Potential PM Emissions Before Controls (lb/hr)	Potential PM Emissions Before Controls (ton/yr)	Control Efficiency (%)	Potential PM Emissions After Controls (lb/hr)	Potential PM Emissions After Controls (ton/yr)
5 Bolt Formers	Cooling Oil	37,500	7.59	50.0%	---	16.25	71.16	0.90	1.62	7.12

Compliance with 326 IAC 6-3-2:

Cooling Oil Throughput (gal/yr)	Density (lb/gal)	Cooling Oil Throughput (ton/yr)	Steel Throughput (ton/yr)	Total Process Throughput (ton/yr)	Process Weight Rate (ton/hr)
37,500	7.59	142.31	46,000.00	46,142.31	5.27

$E = 4.10P^{0.67}$

$E = 12.49 \text{ lb/hr}$

Potential PM emissions before controls are 16.25 lb/hr.

Potential PM emissions after controls are 1.62 lb/hr.

**Appendix A: Emission Calculations  
Non-Combustion  
Miscellaneous Operations**

**Company Name: Nucor Fastener  
Address City IN Zip: 6730 County Road 60, St. Joe, Indiana 46785  
Permit Number: T 033-20219-00038  
Plt ID: 033-00038  
Reviewer: Chrystal Wagner  
Date: July 11, 2006**

**Tumble Blaster**

Baghouse Collection Rate* (ton/yr)	Potential Baghouse Collection Rate (ton/yr)	Control Efficiency (%)	Potential PM** Emissions (ton/yr)	Potential PM Emissions (lb/hr)	PM Emissions After Controls (ton/yr)	PM Emissions After Controls (lb/hr)
11.7	17.55	99.0%	17.73	4.05	0.18	0.04

\*Based on the information supplied by the applicant, the collection rate for the tumble blast dust collector is 11.7 tons of PM per year.

\*\*PM=PM10

**Methodology**

Potential Baghouse Collection Rate = Collection Rate \* 1.5

The Collection Rate is multiplied by a factor of 1.5 to account for annual variability.

Emissions (ton/yr) = Potential Baghouse Collection Rate / Control Efficiency

Emissions (lb/hr) = Emissions (ton/yr) \* 2000 lb/ton / 8760 hrs/yr

Emissions After Controls = Potential Emissions \* (1 - Control Efficiency)

**23 Bolt Makers & 1 Nut Former**

Facility	Material	Potential Usage (lb/yr)	VOC Content (%)	PM Content (%)	Potential VOC Emissions Before Controls (ton/yr)	Potential PM Emissions Before Controls (lb/hr)	Potential PM Emissions Before Controls (ton/yr)	Control Efficiency (%)	Potential PM Emissions After Controls (lb/hr)	Potential PM Emissions After Controls (ton/yr)
23 Bolt Makers	Cooling Oil	78,770	50.00%	10.00%	19.69	0.90	3.94	98.00%	0.02	0.08
1 Nut Former	Cooling Oil	84,000	0.40%	10.00%	0.17	0.96	4.20	0.00	0.96	4.20

**Total Emissions (tons/yr):** VOC = 19.86 PM = 8.14 PM Controlled = 4.28