



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: December 19, 2012

RE: GKN Sinter Metals/175-32612-00011

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

## Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

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

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

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

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

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

Enclosures  
FNPER-AM.dot12/3/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Amy Smith  
GKN Sinter Metals  
198 South Imperial Drive  
Salem, IN 47167

December 19, 2012

Re: 175-32612-00011  
Administrative Amendment to  
M175-24034-00011

Dear Amy Smith:

GKN Sinter Metals was issued a Minor Source Operating Permit (MSOP) Renewal No. M175-24034-00011 on May 9, 2007 for a stationary iron sintering plant located at 198 South Imperial Drive, Salem, IN 47167. On December 10, 2012, the Office of Air Quality (OAQ) received an application from the source requesting to construct one (1) electric sintering furnace.

Pursuant to 326 IAC 2-6.1-6(d)(8), this change to the permit is considered an administrative amendment because the permit is amended to incorporate a modification that adds an emissions unit or units of the same type that is already permitted or replaces an existing unit and that will comply with the same applicable requirements and permit terms and conditions as the existing emission unit, and the modification does not result in a potential to emit greater than the thresholds in 326 IAC 2-2 (PSD) or 326 IAC 2-3 (Emission Offset) and would not result in a potential to emit equal to or greater than the thresholds in 326 IAC 2-7 (Part 70 Operating Permit).

The following is the emission unit:

- (a) One (1) electric sintering furnace, identified as 507-27, approved for construction in 2012, rated at 2000 pounds of iron powder per hour, exhausting to stack S56.

The PTE of the emission unit is as follows:

Process/ Emission Unit	PTE of Proposed Modification (tons/year)									
	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
507-27	0.53	0.53	0.53	-	-	0.22	-	-	-	-
Total PTE of Proposed Modification	0.53	0.53	0.53	-	-	0.22	-	-	-	-

The uncontrolled/unlimited potential to emit of the entire source after the addition of this emission unit will continue to be within the threshold levels specified in 326 IAC 2-5.1 (MSOP). (See Appendix A for the calculations).

The addition of the emission unit will not cause the source's potential to emit to be greater than the threshold levels specified in 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset) or 326 IAC 2-7 (Part 70).

See Appendix A for the calculation and the PTE of the entire source after the addition of the emission unit.

No new state rules are applicable to this source due to the addition of the emission unit.

**PTE of the Entire Source After Issuance of the MSOP Administrative Amendment**

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this MSOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of MSOP Administrative Amendment (tons/year)									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Blending	3.11	3.11	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sintering Furnaces - Sintering	4.39	4.39	4.39	0.00	0.00	1.83	0.00	0.00	0.00	0.00
Sintering Furnaces - Combustion	0.33	1.30	1.30	0.10	17.17	0.94	14.42	20,729	0.32	0.31 (Hexane)
Draw Furnaces	0.01	0.03	0.03	2.1E-3	0.35	0.02	0.29	417.8	0.32	0.01 (Hexane)
Boilers	1.4E-3	0.01	0.01	4.3E-4	0.07	4.0E-3	0.06	86.83	1.4E-3	1.3E-3 (Hexane)
Evaporators	3.2E-3	0.01	0.01	1.0E-3	0.17	0.009	0.14	206.2	3.2E-3	3.1E-3 (Hexane)
Endothermic Generators	0.01	0.06	0.06	4.6E-3	0.77	0.04	0.64	925.4	0.01	0.01 (Hexane)
<b>Total PTE of Entire Source</b>	<b>7.85</b>	<b>8.91</b>	<b>8.91</b>	<b>0.11</b>	<b>18.52</b>	<b>2.85</b>	<b>15.56</b>	<b>22,365</b>	<b>0.67</b>	<b>0.33 (Hexane)</b>
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

\*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".  
 \*\*The 100,000 CO<sub>2</sub>e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

Pursuant to the provisions of 326 IAC 2-6.1-6, the permit is hereby amended as follows with the deleted language as ~~strikeouts~~ and new language **bolded**.

**A.2 Emission Units and Pollution Control Equipment Summary**

.....

- (h) One (1) electric sintering furnace, identified as 507-26, ~~approved in 2012 for construction~~ **constructed in 2012**, rated at 2000 pounds of iron powder per hour, exhausting to stacks S54 and S55;
- (i) **One (1) electric sintering furnace, identified as 507-27, approved for construction in 2012, rated at 2000 pounds of iron powder per hour, exhausting to stack S56.**
- (ij) Seven (7) natural gas fired endothermic gas generators, each rated at 0.25 million British thermal units per hour heat input, uncontrolled. These units consist of:

.....

- (jk) Two (2) natural gas fired evaporators, identified at 515-30 and 515-30-1, constructed in 1999 and 2000, each rated at 0.195 million British thermal units per hour and 10 gallons per hour;
- (kl) One (1) natural gas fired boiler, identified as 512-22-2, constructed in 1971, rated at 0.0382 million British thermal units per hour heat input, exhausting through stack B02;
- (lm) One (1) natural gas fired boiler, identified as 512-01, constructed in 1995, rated at 0.126 million British thermal units per hour heat input, exhausting through stack B01;
- (mn) One (1) natural gas fired draw furnace, identified as 511-03, constructed on in 1998, rated at 0.145 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks D01 and D02;
- (no) One (1) natural gas fired draw furnace, identified as 511-05, constructed in 1999, rated at 0.145 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks D03 and D04; and
- (op) One (1) natural gas fired draw furnace, identified as 511-06, constructed in 2004, rated at 0.5 million British thermal units per hour and 800 pounds of iron per hour.
- (pq) Two (2) aqua force parts washers, identified as 515-36 and 515-37, approved for construction in 2007, each with a maximum usage rate of 2.68 tons per year of water based Protech 1999C chemical with a VOC concentration of 11.7% by weight.

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

Emissions Unit Description:

.....

- (h) One (1) electric sintering furnace, identified as 507-26, ~~approved in 2012 for construction~~ **constructed in 2012**, rated at 2000 pounds of iron powder per hour, exhausting to stacks S54 and S55;
- (i) **One (1) electric sintering furnace, identified as 507-27, approved for construction in 2012, rated at 2000 pounds of iron powder per hour, exhausting to stack S56.**
- (ij) Seven (7) natural gas fired endothermic gas generators, each rated at 0.25 million British thermal units per hour heat input, uncontrolled. These units consist of:
  - 1. Three (3) units, identified as 507-102 through 507-104, constructed in 1971;
  - 2. Two (2) units, identified as 507-111 and 507-112, constructed in 1994;
  - 3. One (1) unit, identified as 507-113, constructed in 1996; and
  - 4. One (1) unit, identified as 507-105, constructed in 1971 and reconditioned in 2005.
- (jk) Two (2) natural gas fired evaporators, identified at 515-30 and 515-30-1, constructed in 1999 and 2000, each rated at 0.195 million British thermal units per hour and 10 gallons per hour;
- (kl) One (1) natural gas fired boiler, identified as 512-22-2, constructed in 1971, rated at 0.0382 million British thermal units per hour heat input, exhausting through stack B02;
- (lm) One (1) natural gas fired boiler, identified as 512-01, constructed in 1995, rated at 0.126 million British thermal units per hour heat input, exhausting through stack B01;

- (nn) One (1) natural gas fired draw furnace, identified as 511-03, constructed on in 1998, rated at 0.145 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks D01 and D02;
  - (oo) One (1) natural gas fired draw furnace, identified as 511-05, constructed in 1999, rated at 0.145 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks D03 and D04;
  - (pp) One (1) natural gas fired draw furnace, identified as 511-06, constructed in 2004, rated at 0.5 million British thermal units per hour and 800 pounds of iron per hour; and
  - (qq) Two (2) aqua force parts washers, identified as 515-36 and 515-37, approved for construction in 2007, each with a maximum usage rate of 2.68 tons per year of water based Protech 1999C chemical with a VOC concentration of 11.7% by weight.
- (The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

.....

Emission Unit/Activity	Process Weight Rate (lbs/hr)	Allowable Emissions (326 IAC 6-3-2) (lb/hr)
Powder Blending unit 530-1	1,470	3.33
Powder Blending unit 530-2	1,470	3.33
Sintering Furnace 507-01	600	1.83
Sintering Furnace 507-03	600	1.83
Sintering Furnace 507-04	600	1.83
Sintering Furnace 507-05	600	1.83
<b>Sintering Furnace 526-06</b>	<b>200</b>	<b>0.88</b>
Sintering Furnace 507-08	600	1.83
Sintering Furnace 507-10	600	1.83
Sintering Furnace 507-12	600	1.83
Sintering Furnace 507-13	600	1.83
Sintering Furnace 507-14	600	1.83
Sintering Furnace 507-15	600	1.83
Sintering Furnace 507-16	600	1.83
Sintering Furnace 507-17	600	1.83
Sintering Furnace 507-18	600	1.83
Sintering Furnace 507-19	600	1.83
Sintering Furnace 507-20	600	1.83
Sintering Furnace 507-21	600	1.83
Sintering Furnace 507-22	600	1.83
Sintering Furnace 507-24	2,000	4.10
Sintering Furnace 507-25	300	1.15
Sintering Furnace 507-26	<del>200</del> <b>2,000</b>	<del>0.88</del> <b>4.10</b>
<del>Sintering Furnace 526-06</del>	<del>200</del>	<del>0.88</del>
<b>Sintering Furnace 507-27</b>	<b>2,000</b>	<b>4.10</b>
Vibratory Deburring	200	0.88

.....

**Additional Changes**

IDEM, OAQ has decided to make additional revisions to the permit as described below.

1. Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit (PTE) 100,000 tons per year or more of CO2 equivalent emissions (CO2e). Therefore, CO2e emissions have been calculated for this source. Based on the calculations, the unlimited PTE GHGs from the entire source is less than 100,000 tons of CO2e per year (see Appendix A for the calculations). This did not require any changes to the permit.
2. IDEM, OAQ has decided to revise the permit to remove the Certification Form, since this form is longer required to be submitted. As part of Third Notice Only Change No. 175-31443-00011, issued February 16, 2012, IDEM removed Condition D.8 (Certification). The permit has been revised as follows:

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

~~MINOR SOURCE OPERATING PERMIT (MSOP)  
CERTIFICATION~~

Source Name: ~~\_\_\_\_\_ GKN Sinter Metals~~  
Source Address: ~~\_\_\_\_\_ 198 Imperial Drive, Salem, Indiana 47167~~  
Mailing Address: ~~\_\_\_\_\_ 198 Imperial Drive, Salem, Indiana 47167~~  
MSOP No.: ~~\_\_\_\_\_ 175-24034-00011~~

<del>This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.</del>
<del>_____ Please check what document is being certified:</del>
<del><input type="checkbox"/> Annual Compliance Notification</del>
<del><input type="checkbox"/> Test Result (specify) _____</del>
<del><input type="checkbox"/> Report (specify) _____</del>
<del><input type="checkbox"/> Notification (specify) _____</del>
<del><input type="checkbox"/> Affidavit (specify) _____</del>
<del><input type="checkbox"/> Other (specify) _____</del>

<del>I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.</del>
<del>Signature:</del>
<del>Printed Name:</del>
<del>Title/Position:</del>
<del>Date:</del>

.....

All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Adam Wheat, of my staff, at 317-233-8397 or 1-800-451-6027, and ask for extension 3-8397.

Sincerely,



Nathan C. Bell, Section Chief  
Permits Branch  
Office of Air Quality

Attachments: Updated Permit and Appendix A

NB/AW

cc: File - Washington County  
Washington County Health Department  
U.S. EPA, Region V  
Compliance and Enforcement Branch  
Billing, Licensing and Training Section



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## Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

**GKN Sinter Metals  
198 Imperial Drive  
Salem, Indiana 47167**

(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.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No. M175-24034-00011

Original Signed by:  
Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

Issuance Date: May 9, 2007

Expiration Date: May 9, 2017

First Notice Only Change No. 175-25194-00011, issued on September 27, 2007

Second Notice Only Change No. 175-25768-00011, issued on February 4, 2008

Third Notice Only Change No. 175-31443-00011, issued February 16, 2012

Administrative Amendment No. 175-32612-00011

Issued by:

Nathan Bell, Section Chief  
Permits Branch  
Office of Air Quality

Issuance Date: December 19, 2012

Expiration Date: May 9, 2017

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[IC 13-14-1-13]

**D.1. EMISSIONS UNIT OPERATION CONDITIONS - one (1) Iron Sintering Plant ...**Error! Bookmark not defined.

**Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]**

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**Annual Notification** .....Error! Bookmark not defined.  
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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 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 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

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The Permittee owns and operates a stationary iron sintering plant.

Source Address:	198 Imperial Drive, Salem, IN 47167
General Source Phone Number:	(812) 883-3381
SIC Code:	3714
County Location:	Washington
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) Two (2) powder blending units, identified as 530-1 and 530-2, each rated at 1,470 pounds of metal powder per hour, constructed on April 1, 1998, controlled by one (1) dust collector identified as 530-7;
- (b) One (1) secondary machining operations facility, consisting of wet grinding, lathe turning, drilling, and tapping, each with a process weight rate less than 100 pounds sintered iron per hour and vibratory deburring with a maximum process weight rate of 200 pounds sintered iron per hour;
- (c) Sixteen (16) natural gas fired sintering furnaces, each rated at 2.45 million British thermal units per hour and 600 pounds of iron powder per hour. These units consist of:
  1. One (1) unit, identified as 507-01, constructed in 1981, exhausting to stacks S20 and S21;
  2. One (1) unit, identified as 507-03, constructed in 1981, exhausting to stacks S38, S39, and S68;
  3. One (1) unit, identified as 507-04, constructed in 1981, exhausting to stacks S22 and S23;
  4. One (1) unit, identified as 507-05, constructed in 1981, exhausting to stacks S07, S08, and S09;
  5. One (1) unit, identified as 507-08, constructed in 1998, exhausting to stacks S24, S25, S26, and S27;
  6. One (1) unit, identified as 507-12, constructed in 1993, exhausting to stacks S40, S41, and S67;
  7. One (1) unit, identified as 507-13, constructed in 1994, exhausting to stacks S15 and S16;
  8. One (1) unit, identified as 507-14, constructed in 1996, exhausting to stacks S28, S29, and S30;

9. One (1) unit, identified as 507-15, constructed in 1997, exhausting to stacks S31, S32, and S33;
  10. One (1) unit, identified as 507-16, constructed in 1999, exhausting to stacks S54, S55, and S56;
  11. One (1) unit, identified as 507-17, constructed in 1997, exhausting to stacks S57, S58, and S59;
  12. One (1) unit, identified as 507-18, constructed in 2000, exhausting to stacks S60, S61, and S62;
  13. One (1) unit, identified as 507-19, constructed in 2000, exhausting to stacks S10 and S11;
  14. One (1) unit, identified as 507-20, constructed in 2000, exhausting to stacks S44, S45, and S64;
  15. One (1) unit, identified as 507-21, constructed in 2000, exhausting to stacks S46, S47, and S65; and
  16. One (1) unit, identified as 507-22, constructed in 2000, exhausting to stacks S48, S49, and S66.
- (d) One (1) electric sintering furnace, identified as 507-10, constructed in 1992, rated at 2.45 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks S17 and S18;
- (e) One (1) electric sintering furnace, identified as 507-24, constructed in 2001, rated at 3.25 million British thermal units per hour heat input and 2000 pounds of iron powder per hour, exhausting to stacks S50 and S51;
- (f) One (1) electric sintering furnace, identified as 507-25, constructed in 2004, rated at 0.775 million British thermal units per hour with a maximum capacity of 300 pounds of iron powder per hour, exhausting to stacks S04 and S05;
- (g) One (1) electric sintering furnace, identified as 526-06, constructed in 1981, rated at 200 pounds of iron powder per hour, exhausting to stacks S63, and S69;
- (h) One (1) electric sintering furnace, identified as 507-26, constructed in 2012, rated at 2000 pounds of iron powder per hour, exhausting to stacks S54 and S55;
- (i) One (1) electric sintering furnace, identified as 507-27, approved for construction in 2012, rated at 2000 pounds of iron powder per hour, exhausting to stack S56.
- (j) Seven (7) natural gas fired endothermic gas generators, each rated at 0.25 million British thermal units per hour heat input, uncontrolled. These units consist of:
1. Three (3) units, identified as 507-102 through 507-104, constructed in 1971;
  2. Two (2) units, identified as 507-111 and 507-112, constructed in 1994;
  3. One (1) unit, identified as 507-113, constructed in 1996; and
  4. One (1) unit, identified as 507-105, constructed in 1971 and reconditioned in 2005.
- (k) Two (2) natural gas fired evaporators, identified at 515-30 and 515-30-1, constructed in 1999 and 2000, each rated at 0.195 million British thermal units per hour and 10 gallons per hour;
- (l) One (1) natural gas fired boiler, identified as 512-22-2, constructed in 1971, rated at 0.0382 million British thermal units per hour heat input, exhausting through stack B02;
- (m) One (1) natural gas fired boiler, identified as 512-01, constructed in 1995, rated at 0.126 million British thermal units per hour heat input, exhausting through stack B01;

- (n) One (1) natural gas fired draw furnace, identified as 511-03, constructed on in 1998, rated at 0.145 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks D01 and D02;
- (o) One (1) natural gas fired draw furnace, identified as 511-05, constructed in 1999, rated at 0.145 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks D03 and D04; and
- (p) One (1) natural gas fired draw furnace, identified as 511-06, constructed in 2004, rated at 0.5 million British thermal units per hour and 800 pounds of iron per hour.
- (q) Two (2) aqua force parts washers, identified as 515-36 and 515-37, approved for construction in 2007, each with a maximum usage rate of 2.68 tons per year of water based Protech 1999C chemical with a VOC concentration of 11.7% by weight.

## **SECTION B GENERAL CONDITIONS**

### **B.1 Definitions [326 IAC 2-1.1-1]**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

### **B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]**

- 
- (a) This permit, M175-24034-00011, is issued for a fixed term of ten (10) 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, until the renewal permit has been issued or denied.

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

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

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

### **B.4 Enforceability**

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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**

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

### **B.6 Property Rights or Exclusive Privilege**

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

### **B.7 Duty to Provide Information**

- 
- (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. 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 Annual Notification [326 IAC 2-6.1-5(a)(5)]**

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- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:  
  
Compliance and Enforcement Branch, Office of Air Quality  
Indiana Department of Environmental Management  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, IN 46204-2251
- (c) The notification 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.

**B.9 Preventive Maintenance Plan [326 IAC 1-6-3]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ 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.
- (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.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of permits established prior to M175-24034-00011 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

**B. 11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]**

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The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least ninety (90) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

**B.12 Permit Renewal [326 IAC 2-6.1-7]**

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- (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 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
- (1) Submitted at least ninety (90) days 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 2-6.1 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, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

**B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]**

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- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 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  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

**B.14 Source Modification Requirement**

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

**B.15 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]**

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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 permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

**B.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 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  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

**B.17 Annual Fee Payment [326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing.
  
- (b) 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.18 Credible Evidence [326 IAC 1-1-6]**

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-6.1-5(a)(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]

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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 Permit Revocation [326 IAC 2-1.1-9]

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Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Applicability) and (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.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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

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

C.7 Stack Height [326 IAC 1-7]

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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.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

- (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 Asbestos Licensed 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 Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

#### **Testing Requirements [326 IAC 2-6.1-5(a)(2)]**

##### **C.9 Performance Testing [326 IAC 3-6]**

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- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, 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.
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date
- (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.10 Compliance Requirements [326 IAC 2-1.1-11]**

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

#### **Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]**

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

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Compliance with applicable requirements shall be documented as required by this permit. The

Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

**C.12 Instrument Specifications [326 IAC 2-1.1-11]**

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ 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**

**C. 13 Actions Related to Noncompliance Demonstrated by a Stack Test**

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- (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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test
- (b) A retest to demonstrate compliance shall be performed no later than one hundred-eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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.

**Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]**

**C.14 Malfunctions Report [326 IAC 1-6-2]**

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Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (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, for all record keeping requirements not already legally required, the Permittee shall be allowed up ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C. 16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (b) 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.
- (c) 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.

## SECTION D.1

## EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Two (2) powder blending units, identified as 530-1 and 530-2, each rated at 1,470 pounds of metal powder per hour, constructed on April 1, 1998, controlled by one (1) dust collector identified as 530-7;
- (b) One (1) secondary machining operations facility, consisting of wet grinding, lathe turning, drilling, and tapping, each with a process weight rate less than 100 pounds sintered iron per hour and vibratory deburring with a maximum process weight rate of 200 pounds sintered iron per hour;
- (c) Sixteen (16) natural gas fired sintering furnaces, each rated at 2.45 million British thermal units per hour and 600 pounds of iron powder per hour. These units consist of:
  - 1. One (1) unit, identified as 507-01, constructed in 1981, exhausting to stacks S20 and S21;
  - 2. One (1) unit, identified as 507-03, constructed in 1981, exhausting to stacks S38, S39, and S68;
  - 3. One (1) unit, identified as 507-04, constructed in 1981, exhausting to stacks S22 and S23;
  - 4. One (1) unit, identified as 507-05, constructed in 1981, exhausting to stacks S07, S08, and S09;
  - 5. One (1) unit, identified as 507-08, constructed in 1998, exhausting to stacks S24, S25, S26, and S27;
  - 6. One (1) unit, identified as 507-12, constructed in 1993, exhausting to stacks S40, S41, and S67;
  - 7. One (1) unit, identified as 507-13, constructed in 1994, exhausting to stacks S15 and S16;
  - 8. One (1) unit, identified as 507-14, constructed in 1996, exhausting to stacks S28, S29, and S30;
  - 9. One (1) unit, identified as 507-15, constructed in 1997, exhausting to stacks S31, S32, and S33;
  - 10. One (1) unit, identified as 507-16, constructed in 1999, exhausting to stacks S54, S55, and S56;
  - 11. One (1) unit, identified as 507-17, constructed in 1997, exhausting to stacks S57, S58, and S59;
  - 12. One (1) unit, identified as 507-18, constructed in 2000, exhausting to stacks S60, S61, and S62;
  - 13. One (1) unit, identified as 507-19, constructed in 2000, exhausting to stacks S10 and S11;
  - 14. One (1) unit, identified as 507-20, constructed in 2000, exhausting to stacks S44, S45, and S64;
  - 15. One (1) unit, identified as 507-21, constructed in 2000, exhausting to stacks S46, S47, and S65; and
  - 16. One (1) unit, identified as 507-22, constructed in 2000, exhausting to stacks S48, S49, and S66.
- (d) One (1) electric sintering furnace, identified as 507-10, constructed in 1992, rated at 2.45 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks S17 and S18;

- (e) One (1) electric sintering furnace, identified as 507-24, constructed in 2001, rated at 3.25 million British thermal units per hour heat input and 2000 pounds of iron powder per hour, exhausting to stacks S50 and S51;
- (f) One (1) electric sintering furnace, identified as 507-25, constructed in 2004, rated at 0.775 million British thermal units per hour with a maximum capacity of 300 pounds of iron powder per hour, exhausting to stacks S04 and S05;
- (g) One (1) electric sintering furnace, identified as 526-06, constructed in 1981, rated at 200 pounds of iron powder per hour, exhausting to stacks S63, and S69;
- (h) One (1) electric sintering furnace, identified as 507-26, constructed in 2012, rated at 2000 pounds of iron powder per hour, exhausting to stacks S54 and S55;
- (i) One (1) electric sintering furnace, identified as 507-27, approved for construction in 2012, rated at 2000 pounds of iron powder per hour, exhausting to stack S56.
- (j) Seven (7) natural gas fired endothermic gas generators, each rated at 0.25 million British thermal units per hour heat input, uncontrolled. These units consist of:
  - 1. Three (3) units, identified as 507-102 through 507-104, constructed in 1971;
  - 2. Two (2) units, identified as 507-111 and 507-112, constructed in 1994;
  - 3. One (1) unit, identified as 507-113, constructed in 1996; and
  - 4. One (1) unit, identified as 507-105, constructed in 1971 and reconditioned in 2005.
- (k) Two (2) natural gas fired evaporators, identified at 515-30 and 515-30-1, constructed in 1999 and 2000, each rated at 0.195 million British thermal units per hour and 10 gallons per hour;
- (l) One (1) natural gas fired boiler, identified as 512-22-2, constructed in 1971, rated at 0.0382 million British thermal units per hour heat input, exhausting through stack B02;
- (m) One (1) natural gas fired boiler, identified as 512-01, constructed in 1995, rated at 0.126 million British thermal units per hour heat input, exhausting through stack B01;
- (n) One (1) natural gas fired draw furnace, identified as 511-03, constructed on in 1998, rated at 0.145 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks D01 and D02;
- (o) One (1) natural gas fired draw furnace, identified as 511-05, constructed in 1999, rated at 0.145 million British thermal units per hour and 600 pounds of iron powder per hour, exhausting to stacks D03 and D04;
- (p) One (1) natural gas fired draw furnace, identified as 511-06, constructed in 2004, rated at 0.5 million British thermal units per hour and 800 pounds of iron per hour; and
- (q) Two (2) aqua force parts washers, identified as 515-36 and 515-37, approved for construction in 2007, each with a maximum usage rate of 2.68 tons per year of water based Protech 1999C chemical with a VOC concentration of 11.7% by weight.

(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 2-6.1-5(a)(1)]**

**D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emitted from the facilities listed below shall be limited as stated, based on the following:

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

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

Emission Unit/Activity	Process Weight Rate (lbs/hr)	Allowable Emissions (326 IAC 6-3-2) (lb/hr)
Powder Blending unit 530-1	1,470	3.33
Powder Blending unit 530-2	1,470	3.33
Sintering Furnace 507-01	600	1.83
Sintering Furnace 507-03	600	1.83
Sintering Furnace 507-04	600	1.83
Sintering Furnace 507-05	600	1.83
Sintering Furnace 526-06	200	0.88
Sintering Furnace 507-08	600	1.83
Sintering Furnace 507-10	600	1.83
Sintering Furnace 507-12	600	1.83
Sintering Furnace 507-13	600	1.83
Sintering Furnace 507-14	600	1.83
Sintering Furnace 507-15	600	1.83
Sintering Furnace 507-16	600	1.83
Sintering Furnace 507-17	600	1.83
Sintering Furnace 507-18	600	1.83
Sintering Furnace 507-19	600	1.83
Sintering Furnace 507-20	600	1.83
Sintering Furnace 507-21	600	1.83
Sintering Furnace 507-22	600	1.83
Sintering Furnace 507-24	2,000	4.10
Sintering Furnace 507-25	300	1.15
Sintering Furnace 507-26	2,000	4.10
Sintering Furnace 507-27	2,000	4.10
Vibratory Deburring	200	0.88

**D.1.2 Particulate Matter (PM) [326 IAC 6-2-3]**

Pursuant to 326 IAC 6-2-3(d), particulate emissions from the one (1) boiler identified as 512-22-2, shall not exceed 0.8 pound per million British thermal units.

**D.1.3 Particulate Matter (PM) [326 IAC 6-2-4]**

Pursuant to 326 IAC 6-2-4, particulate emissions from the one (1) boiler, identified as 512-01, and the two (2) natural gas fired evaporators, identified at 515-30 and 515-30-1, shall each not exceed 0.6 pound per million British thermal units.

#### D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

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Pursuant to 326 IAC 8-3-2, for each of the aqua force parts washers (515-36 and 515-37), the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

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- (a) Pursuant 326 IAC 8-3-5(a), the owner or operator shall ensure that the following control equipment requirements are met for each of the aqua force parts washers (515-36 and 515-37):
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in 326 IAC 8-3-5(b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or

if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant 326 IAC 8-3-5(b), the owner or operator shall ensure that the following operating requirements are met for each of the aqua force parts washers (515-36 and 515-37):
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

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

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	GKN Sinter Metals
<b>Address:</b>	198 Imperial Drive
<b>City:</b>	Salem, Indiana 47167
<b>Phone #:</b>	(812) 883-3381
<b>MSOP #:</b>	M175-24034-00011

I hereby certify that GKN Sinter Metals is :	<input type="checkbox"/> still in operation. <input type="checkbox"/> no longer in operation.
I hereby certify that GKN Sinter Metals is :	<input type="checkbox"/> in compliance with the requirements of MSOP M175-24034-00011. <input type="checkbox"/> not in compliance with the requirements of MSOP M175-24034-00011.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>

### MALFUNCTION REPORT

#### INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FAX NUMBER - 317 233-6865

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6  
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?\_\_\_\_, 25 TONS/YEAR SULFUR DIOXIDE ?\_\_\_\_, 25 TONS/YEAR NITROGEN OXIDES?\_\_\_\_, 25 TONS/YEAR VOC ?\_\_\_\_, 25 TONS/YEAR HYDROGEN SULFIDE ?\_\_\_\_, 25 TONS/YEAR TOTAL REDUCED SULFUR ?\_\_\_\_, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?\_\_\_\_, 25 TONS/YEAR FLUORIDES ?\_\_\_\_, 100TONS/YEAR CARBON MONOXIDE ?\_\_\_\_, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?\_\_\_\_, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?\_\_\_\_, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?\_\_\_\_, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?\_\_\_\_. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERM LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF >MALFUNCTION= AS LISTED ON REVERSE SIDE ?    Y    N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y    N

COMPANY: \_\_\_\_\_ PHONE NO. (    ) \_\_\_\_\_  
LOCATION: (CITY AND COUNTY) \_\_\_\_\_  
PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_

INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

\*SEE PAGE 2

**Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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**Appendix A: Emissions Calculations  
Summary**

**Company Name:** GKN Sinter Metals  
**Source Address:** 198 Imperial Drive, Salem IN 47167  
**Administrative Amendment No.:** 175-32612-00011  
**Reviewer:** Adam Wheat

<b>Uncontrolled Potential Emissions (tons/year)</b>								
Emissions Generating Activity								
Pollutant	Blending	Sintering Furnaces - Sintering	Sintering Furnaces - Combustion	Draw Furnaces	Boilers	Evaporators	Endothermic generators	<b>TOTAL</b>
PM	3.11	4.39	0.33	0.01	1.4E-03	3.2E-03	0.01	<b>7.85</b>
PM10	3.11	4.39	1.30	0.03	0.01	0.01	0.06	<b>8.91</b>
PM2.5*	3.11	4.39	1.30	0.03	0.01	0.01	0.06	<b>8.91</b>
SO2	0.00	0.00	0.10	2.1E-03	4.3E-04	1.0E-03	4.6E-03	<b>0.11</b>
NOx	0.00	0.00	17.17	0.35	0.07	0.17	0.77	<b>18.52</b>
VOC	0.00	1.83	0.94	0.02	4.0E-03	0.009	0.04	<b>2.85</b>
CO	0.00	0.00	14.42	0.29	0.06	0.14	0.64	<b>15.56</b>
GHGs as CO2e	0.00	0.00	20,729	417.8	86.83	206.2	925.4	<b>22,365</b>
Total HAPs	0.00	0.00	0.32	0.32	1.4E-03	3.2E-03	0.01	<b>0.67</b>
Highest Single HAP (Hexane)	0.00	0.00	0.31	0.01	1.3E-03	3.1E-03	0.01	<b>0.33</b>

<b>Controlled Potential Emissions (tons/year)</b>								
Emissions Generating Activity								
Pollutant	Blending	Sintering Furnaces - Sintering	Sintering Furnaces - Combustion	Draw Furnaces	Boilers	Evaporators	Endothermic generators	<b>TOTAL</b>
PM	0.00	4.39	0.33	0.01	1.4E-03	3.2E-03	0.01	<b>4.74</b>
PM10	0.00	4.39	1.30	0.03	0.01	0.01	0.06	<b>5.80</b>
PM2.5*	0.00	4.39	1.30	0.03	0.01	0.01	0.06	<b>5.80</b>
SO2	0.00	0.00	0.10	2.1E-03	4.3E-04	1.0E-03	4.6E-03	<b>0.11</b>
NOx	0.00	0.00	17.17	0.35	0.07	0.17	0.77	<b>18.52</b>
VOC	0.00	1.83	0.94	0.02	4.0E-03	0.01	0.04	<b>2.85</b>
CO	0.00	0.00	14.42	0.29	0.06	0.14	0.64	<b>15.56</b>
GHGs as CO2e	0.00	0.00	20,729	417.8	86.83	206.2	925.4	<b>22,365</b>
Total HAPs	0.00	0.00	0.32	0.32	1.4E-03	3.2E-03	0.01	<b>0.67</b>
Highest Single HAP (Hexane)	0.00	0.00	0.31	0.01	1.3E-03	3.1E-03	0.01	<b>0.33</b>

**Notes:**

Total emissions based on rated capacity at 8,760 hours/year.

\*PM2.5 emissions assumed equal to PM10 emissions

**Appendix A: Emissions Calculations  
Blending Operations**

**Company Name:** GKN Sinter Metals  
**Source Address:** 198 Imperial Drive, Salem IN 47167  
**Administrative Amendment No.:** 175-32612-00011  
**Reviewer:** Adam Wheat

Pollutant	Production Schedule (hrs/yr)	Actual Collected (tons/yr)	Potential Collected (tons/yr)	Control Efficiency (%)	Potential Generated (tons/year)	Emissions after controls (tons/yr)
PM10	6000	2.13	3.11	99.9%	3.11	0.003

**Methodology**

Actual collected (ton/yr) = amount of dust collected in one year while operating 6000 hours  
(as documented in Registration No. 175-12587-00011, issued November 30, 2000)

Potential collected (tons/yr) = (Actual Collected (tons/yr) / 6000 hours) \* 8760 hours

Potential generated = Potential collected / control efficiency (%)

Emissions after controls (tons/yr) = potential generated (tons/yr) \* (1-control efficiency (%))

**Appendix A: Emissions Calculations  
Process Emissions From all Sintering Furnaces**

**Company Name:** GKN Sinter Metals  
**Source Address:** 198 Imperial Drive, Salem IN 47167  
**Administrative Amendment No.:** 175-32612-00011  
**Reviewer:** Adam Wheat

Sintering Units	Throughput (lbs/hr)
Sintering Furnace 507-01	600
Sintering Furnace 507-03	600
Sintering Furnace 507-04	600
Sintering Furnace 507-05	600
Sintering Furnace 526-06	200
Sintering Furnace 507-08	600
Sintering Furnace 507-10	600
Sintering Furnace 507-12	600
Sintering Furnace 507-13	600
Sintering Furnace 507-14	600
Sintering Furnace 507-15	600
Sintering Furnace 507-16	600
Sintering Furnace 507-17	600
Sintering Furnace 507-18	600
Sintering Furnace 507-19	600
Sintering Furnace 507-20	600
Sintering Furnace 507-21	600
Sintering Furnace 507-22	600
Sintering Furnace 507-24	2,000
Sintering Furnace 507-25	300
Sintering Furnace 507-26	2,000
Sintering Furnace 507-27	2,000
<b>Total:</b>	<b>16,700</b>

Iron Process	Total Throughput tons/hr
Sintering	8.35

SCC 303000819

	PM and PM10	VOC
Emission Factors lbs/ton produced	0.12	0.05
Percentage of Emissions	100%	100%
Potential emissions lbs/hr	1.002	0.4175
Potential Emissions lbs/day	24.048	10.02
<b>Potential Emissions tons/yr</b>	<b>4.39</b>	<b>1.83</b>

Emission Factors from FIRE, version 6.25 for SCC 303000819

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

**Company Name:** GKN Sinter Metals  
**Source Address:** 198 Imperial Drive, Salem IN 47167  
**Administrative Amendment No.:** 175-32612-00011  
**Reviewer:** Adam Wheat

Heat Input Capacity  
MMBtu/hr  
39.20 (16 units @ 2.45 MMBtu/hr each)

Potential Throughput  
MMCF/yr  
343.4

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	SO2	NOx	VOC	CO	CO2e
Potential Emission in tons/yr	0.33	1.30	0.10	17.17	0.94	14.42	0.00

\*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

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Potential Emission in tons/yr	3.6E-04	2.1E-04	1.3E-02	3.1E-01	5.8E-04

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Potential Emission in tons/yr	8.6E-05	1.9E-04	2.4E-04	6.5E-05	3.6E-04

**Total      0.32**

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

**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

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
Potential Emission in tons/yr	20,604	0.39	0.38
Summed Potential Emissions in tons/yr	20,604		
CO2e Total in tons/yr	20,729		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (100)

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

**Company Name:** GKN Sinter Metals  
**Source Address:** 198 Imperial Drive, Salem IN 47167  
**Administrative Amendment No.:** 175-32612-00011  
**Reviewer:** Adam Wheat

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

0.79 (3 units 0.145, 0.145, and 0.5 MMBtu/hr)

6.9

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Potential Emission in tons/yr	1.9	7.6	0.6	100.0	5.5	84.0
	0.007	0.03	0.002	0.35	0.02	0.29

\*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

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Potential Emission in tons/yr	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
	7.3E-06	4.2E-06	2.6E-04	6.2E-03	1.2E-05

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Potential Emission in tons/yr	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
	1.7E-06	3.8E-06	4.8E-06	1.3E-06	7.3E-06

**Total 6.5E-03**

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

**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

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
Potential Emission in tons/yr	120,000	2.3	2.2
	415	0.008	0.008
Summed Potential Emissions in tons/yr	415		
CO2e Total in tons/yr	418		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential

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

**Company Name:** GKN Sinter Metals  
**Source Address:** 198 Imperial Drive, Salem IN 47167  
**Administrative Amendment No.:** 175-32612-00011  
**Reviewer:** Adam Wheat

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

1.75 (7 units @ 0.25 MMBtu/hr each)

15.3

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.015	0.06	0.005	0.77	0.04	0.64

\*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

	HAPs - 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	1.6E-05	9.2E-06	5.7E-04	1.4E-02	2.6E-05

	HAPs - 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	3.8E-06	8.4E-06	1.1E-05	2.9E-06	1.6E-05
<b>Total</b>					<b>1.4E-02</b>

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

**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

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	920	0.018	0.017
Summed Potential Emissions in tons/yr	920		
CO2e Total in tons/yr	925		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential

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

**Company Name:** GKN Sinter Metals  
**Source Address:** 198 Imperial Drive, Salem IN 47167  
**Administrative Amendment No.:** 175-32612-00011  
**Reviewer:** Adam Wheat

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

0.39 (2 units @ 0.195 MMBtu/hr each)

3.4

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Potential Emission in tons/yr	0.003	0.013	0.001	0.17	0.009	0.14

\*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

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Potential Emission in tons/yr	3.6E-06	2.0E-06	1.3E-04	3.1E-03	5.8E-06

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Potential Emission in tons/yr	8.5E-07	1.9E-06	2.4E-06	6.5E-07	3.6E-06

**Total 3.2E-03**

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

**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

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
Potential Emission in tons/yr	205	0.004	0.004
Summed Potential Emissions in tons/yr	205		
CO2e Total in tons/yr	206		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential

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

**Company Name:** GKN Sinter Metals  
**Source Address:** 198 Imperial Drive, Salem IN 47167  
**Administrative Amendment No.:** 175-32612-00011  
**Reviewer:** Adam Wheat

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

0.1642 (2 units @ 0.0382 and 0.126 MMBtu/hr)

1.4

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Potential Emission in tons/yr	0.001	0.005	0.0004	0.07	0.004	0.06

\*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

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Potential Emission in tons/yr	1.5E-06	8.6E-07	5.4E-05	1.3E-03	2.4E-06

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Potential Emission in tons/yr	3.6E-07	7.9E-07	1.0E-06	2.7E-07	1.5E-06
<b>Total</b>					<b>1.4E-03</b>

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

**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

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
Potential Emission in tons/yr	86	0.002	0.002
Summed Potential Emissions in tons/yr	86		
CO2e Total in tons/yr	87		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

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

TO: Amy Smith  
GKN Sinter Metals  
198 South Imperial Drive  
Salem, IN 47167

DATE: December 19, 2012

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

SUBJECT: Final Decision  
Administrative Amendment to MSOP  
175-32612-00011

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07

# Mail Code 61-53

IDEM Staff	PWAY 12/19/2012 GKN Sinter Metals 175-32612-00011 (final)		Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Amy Smith GKN Sinter Metals 198 S Imperial Dr Salem IN 47167 (Source CAATS)										
2		Mr. Wendell Hibdon Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 (Affected Party)										
3		Washington County Health Department 806 Martinsburg Road, Ste 100 Salem IN 47167 (Health Department)										
4		Washington County Commissioners 99 Public Square Salem IN 47167 (Local Official)										
5		Salem City Council and Mayors Office 38 Public Square Salem IN 47167 (Local Official)										
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