



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

To: Interested Parties
Date: February 4, 2016
From: Matthew Stuckey, Chief
Permits Branch
Office of Air Quality
Source Name: Haynes International Inc.
Permit Level: Title V Administrative Amendment
Permit Number: 067-36203-00009
Source Location: 2000 W Defenbaugh Street Kokomo, IN 46902
Type of Action Taken: Modification at an existing source

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>
To view the document, select Search option 3, then enter permit 36203.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

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

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of 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.



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Michael R. Pence
Governor

Carol S. Comer
Commissioner

Mr. Greg Morrow
Haynes International, Inc.
2000 W Defenbaugh St.
Kokomo, IN 46902

February 4, 2016

Re: 067-36203-00009
Significant Source Modification

Dear Mr. Morrow:

Haynes International, Inc. was issued Part 70 Operating Permit Renewal No. T067-30930-00009 on February 11, 2013 for a stationary nonferrous metal alloy foundry located at 2000 West Defenbaugh Street, Kokomo, Indiana 46902. An application to modify the source was received on August 28, 2015. Pursuant to the provisions of 326 IAC 2-7-10.5, a Significant Source Modification is hereby approved as described in the attached Technical Support Document.

Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

- (a) One (1) natural gas-fired annealing furnace, identified as CAP furnace, approved in 2015 for construction, with a maximum heat input of 20 MMBtu/hr, exhausting to inside the plant.

Under NESHAP, Subpart DDDDD, CAP furnace is an affected source.

- (b) One (1) strip anneal and Kolene operation, identified as CAP Kolene, approved in 2015 for construction, with one (1) spray quench tank, one (1) mechanical brush scrubber, and one (1) fume scrubber, exhausting through one (1) stack (S/V ID: FS-7).
- (c) One (1) natural gas-fired heater, identified as Kolene Tank Heater, approved in 2015 for construction, supporting CAP Kolene, with a maximum heat input of 4.25 MMBtu/hr, exhausting to inside the plant.

Under NESHAP, Subpart DDDDD, Kolene Tank Heater is an affected source.

- (d) One (1) natural draft, contact cooling tower, identified as CT#18, approved in 2015 for construction, with a 396 gallons per minute circulation rate, supporting the CAP line, exhausting to the atmosphere.

The following construction conditions are applicable to the proposed modification:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

Commenced Construction

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(j), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Approval to Construct

6. Pursuant to 326 IAC 2-7-10.5(h)(2), this Significant Source Modification authorizes the construction of the new emission unit(s), when the Significant Source Modification has been issued.

Pursuant to 326 IAC 2-7-10.5(m), the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

Pursuant to 326 IAC 2-7-12, operation of the new emission unit(s) is not approved until the Significant Permit Modification has been issued. Operating conditions shall be incorporated into the Part 70 Operating Permit as a Significant Permit Modification in accordance with 326 IAC 2-7-10.5(m)(2) and 326 IAC 2-7-12 (Permit Modification).

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 Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

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 Madhurima Moulik of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Madhurima Moulik or extension 3-0868 or dial (317) 233-0868.

Sincerely,



Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

Attachments: Significant Source Modification and Technical Support Document

cc: File - Howard County
Howard County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch



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Significant Source Modification to a Part 70 Source

OFFICE OF AIR QUALITY

Haynes International, Inc.
2000 W. Defenbaugh St.
Kokomo, Indiana 46902

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

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. This permit also addresses certain new source review requirements for new and/or existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Significant Source Modification No.: 067-36203-00009	
Issued by:  Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 4, 2016

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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 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary rolling, drawing, and extruding of nonferrous metal foundry operation.

Source Address:	2000 W. Defenbaugh St., Kokomo, Indiana 46902
General Source Phone Number:	765-456-6714
SIC Code:	3356
County Location:	Howard
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Regulated under 326 IAC 2-2 (PSD) for GHG Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 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:

Metal Melting Operations

- (a) One (1) argon oxygen decarbonization (AOD) vessel, constructed in 2008, processing a limited annual metal throughput of 22,500 tons per twelve (12) consecutive month period with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-14).
- (b) One (1) canopy hood collecting fugitive emissions from the AOD and the EAF vessels, and a peripheral hood over the charge bucket load area, controlling particulate matter emissions with a baghouse and exhausting to one (1) stack (S/V ID: DC-38);
- (c) One (1) electric arc furnace (EAF), constructed in 1963 and modified in 1978 and again in 2004, processing a limited annual metal throughput of 22,500 tons per twelve (12) consecutive month period with a five (5) module dust collector for particulate matter control and exhausting to one (1) duct (S/V ID: DC-22).
- (d) Seven (7) electroslag remelting furnaces (ESRs) (considered one process), constructed in the 1970's and modified in 1982 and again in 2013 processing a total limited annual metal throughput of 28,500 tons per twelve (12) consecutive month period, equipped with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-18);

Metal Machining Operations

- (e) Metal Sawing and Grinding Operations processing a total limited annual metal throughput of 114,000 tons per twelve (12) consecutive month period, consisting of the following units:

- (1) One (1) swing frame abrasive cut-off saw and one (1) automatic abrasive cut-off saw, constructed in 1981, with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-31);
- (2) One (1) CMI automatic abrasive billet grinder, constructed in 1981, with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-32);
- (3) One (1) CMI abrasive billet grinder, constructed in November, 1997, with one (1) dust collector for particulate control and exhausting to one (1) stack (S/V ID: DC-37);
- (4) One (1) trackbound traveling abrasive grind machine operation, identified as Grind 1, consisting of the following:
 - (a) One (1) grinder, constructed in 1954 and modified in 1981, with a dust collector for particulate matter control, and exhausting to stack DC-1.
 - (b) One (1) grinder, constructed in 1954 and modified in 1990, with a dust collector for particulate matter control, and exhausting to stack DC-3.
 - (c) One (1) grinder, constructed in 1983 and modified in 1995, with two (2) dust collectors for particulate matter control, and exhausting to two (2) stacks DC-4 and DC-5.
- (5) One (1) track bound traveling abrasive grind machine and one (1) stationary abrasive end grinder (Grind 2), constructed in 1954 and 1980, respectively, and modified in 1990 and 1995, respectively, with two (2) dust collectors for particulate matter control and exhausting to two (2) stacks (S/V ID: DC-24 and DC-25), respectively;
- (6) One (1) fox automatic abrasive cut-off saw and one (1) swing frame cut-off saw (Saw 1), constructed in 1960 and 1981, respectively, and modified in 1981 and 1995, respectively, with two (2) dust collectors for particulate matter control and exhausting to two (2) stacks (S/V ID: DC-23 and DC-1) respectively;
- (7) One (1) plate grinder, constructed in the 1950's and modified in 1961, and one (1) swing frame belt grinder, constructed in 1954 with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-8);
- (8) Four (4) swing frame abrasive spot grinders, one (1) swing frame abrasive cut-off saw, with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-9);
- (f) Metal Shotblasting Operations processing a total limited annual metal throughput of 28,500 tons per twelve (12) consecutive month period, consisting of the following units:
 - (1) One (1) rotoblast shot blaster, constructed in 1953, with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-10); and
 - (2) One (1) rotoblast shot blaster, constructed in 1989, with a dust collector (DC-36) for particulate matter control and exhausting inside the building R35.

Pickling Operations

- (g) One (1) acid batch dip pickling line, identified as R1, constructed in 1983, consisting of: one (1) 8,000 gallon acid tank with target concentrations of 16% for nitric acid, 5% for hydrofluoric acid and 4-5% for metals, and processing a total limited annual metal throughput of 28,500 tons per twelve (12) consecutive month period; one (1) fume collection system surrounding the top of the

acid tank; and one (1) fume scrubber, identified as FS-1, used to control hydrofluoric acid (HF), nitric acid (HNO₃), NO_x, and particulate emissions, and exhausting to one (1) stack identified as S/V ID: FS-1;

- (h) One (1) acid strip pickling line, identified as R35, constructed in 1989, and processing a total limited annual metal throughput of 28,500 tons per twelve (12) consecutive month period, consisting of: one (1) acid holding tank; one (1) fully enclosed spray tank with a conveyance speed of 5-15 feet per minute and acid target concentrations of 15-20% for nitric acid, and 2-5% for hydrofluoric acid; one (1) spray rinse tank; one (1) blown air drying system; and one (1) fume collection system routed to one (1) fume scrubber, identified as FS-2, used to control hydrofluoric acid (HF), nitric acid (HNO₃), NO_x, and particulate emissions, and exhausting to one (1) stack identified as S/V ID: FS-2.

Natural Gas Combustion Units

- (i) Unrestricted natural gas-fired emission units, consisting of the following:
- (1) Two (2) natural gas-fired boilers, approved in 2011 for construction, identified as Boilers 3 and 4, equipped with low-NO_x burners, each with a maximum capacity of fifteen (15) MMBtu/hr. Under 40 CFR 60, Subpart Dc, these boilers are considered affected units;
 - (2) Four (4) 3-Hi Mill preheat furnaces (Numbers 1, 2, 3, and 4), constructed in the 1940's, each rated at 10.35 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant;
 - (3) One (1) 2-Hi Mill preheat furnace (Number 5), constructed in the 1940's, rated at 22 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant;
 - (4) One (1) annealing furnace (Number 6), constructed in the 1940's, rated at 14.8 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant;
 - (5) One (1) annealing furnace (Number 16), constructed in the 1960's and reconstructed in 2006, rated at 16 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant; and
 - (6) One (1) annealing furnace (Number 20), approved in 2015 for construction, rated at 20 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant.
- (j) Natural gas-fired emission units, combusting a total limited annual natural gas throughput of 780 million cubic feet (MMCF) per twelve (12) consecutive month period, consisting of the following units:
- (1) Five (5) 4-Hi mill preheat furnaces (Numbers 51, 52, 53, 56, and 57), constructed between 1981 and 1983, each rated at 15 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting to five (5) stacks (SV ID: GF51, GF52, GF53, GF56, and GF57);
 - (2) Two (2) 4-Hi mill steckle furnaces, constructed between 1981 and 1983, each rated at 20 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant; and
 - (3) One (1) strip annealing furnace A&K line, constructed between 1981 and 1983, rated at 10 million (mm) British thermal units (Btu) per hour, combusting natural gas, and

exhausting to one (1) stack (S/V ID: GFA & K).

- (k) Natural gas-fired emission units, combusting a total limited annual natural gas throughput of 219 million cubic feet (MMCF) per twelve (12) consecutive month period, consisting of the following units:
 - (1) two (2) 4-Hi mill preheat furnaces (Numbers 54 and 58), approved in 2013 for construction, each rated at 15 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting to two (2) stacks (SV ID: GF54 and GF58).
- (l) One (1) powder torch with a maximum cutting capacity of 18,000 pounds of metal per hour, approved in 2015 for construction, using AOD/EAF Canopy Hood (DC-38) as particulate control, and exhausting to one (1) stack (S/V ID: DC-38).
- (m) One (1) natural draft, contact cooling tower, identified as CT#2, with 700 gallons per minute circulation rate, constructed in March 1977 and permitted in 2015, supporting the Forge Shop, Billet Quench (R-18), exhausting to the atmosphere.
- (n) One (1) natural draft, contact cooling tower, identified as CT#3, with 1,030 gallons per minute circulation rate, constructed in March 1977 and permitted in 2015, supporting the Stokes Furnace (R-31), exhausting to the atmosphere.
- (o) One (1) natural draft, contact cooling tower, identified as CT#12, with 145 gallons per minute circulation rate, constructed in 1983 and permitted in 2015, supporting the Annealing Furnace #20, exhausting to the atmosphere.
- (p) One (1) metal grinder, identified as Hercules Grinder R-55, with a maximum throughput of 12,500 pounds per hour, constructed in 1981 and permitted in 2015, using a mist eliminator as particulate control, identified as MC-6, and exhausting inside the building.

Continuous Anneal and Pickle (CAP) Line

- (q) One (1) natural gas-fired annealing furnace, identified as CAP Furnace, approved in 2016 for construction, with a maximum heat input of 20 MMBtu/hr, exhausting within the plant.

Under NESHAP, Subpart DDDDD, CAP Furnace is an affected source.
- (r) One (1) strip anneal and Kolene operation, identified as CAP Kolene, approved in 2016 for construction, with a maximum capacity of 6.0 tons of metal per hour, with one (1) spray quench tank, one (1) mechanical brush scrubber, and one (1) fume scrubber, exhausting through one (1) stack (S/V ID: FS-7).
- (s) One (1) natural gas-fired heater, identified as Kolene Tank Heater, approved in 2016 for construction, supporting CAP Kolene, with a maximum heat input of 4.25 MMBtu/hr, exhausting within the plant.

Under NESHAP, Subpart DDDDD, Kolene Tank Heater is an affected source.
- (t) One (1) natural draft, contact cooling tower, identified as CT#18, approved in 2016 for construction, with a 396 gallons per minute circulation rate, supporting the CAP line, exhausting to the atmosphere.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities as defined in 326 IAC 2-7-

1(21):

- (a) Natural gas-fired combustion steam generators with heat input equal to or less than ten (10) million (mm) British thermal units (Btu) per hour, as follows:
 - (1) One (1) R1 pickle tank boiler rated at 2.10 mmBtu per hour; [326 IAC 6.5-1-2]
 - (2) One (1) R35 pickle line boiler rated at 1.5 mmBtu per hour; [326 IAC 6.5-1-2]
 - (3) One (1) R42 steam heating boiler rated at 1.05 mmBtu per hour; [326 IAC 6.5-1-2]
 - (4) One (1) R1 Kolene Tank Heater rated at 8.1 MMBtu per hour; [326 IAC 6.5-1-2]
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6, and using non-halogenated solvents (Safety-Kleen) only:
 - (1) fifteen (15) separate cold cleaner degreasers used for parts washing, each of which has less than or equal to 80 gallon capacities; [326 IAC 8-3-2] [326 IAC 8-3-5] and
 - (2) one (1) large mill bearing cleaner/degreaser, located in building R55, utilizing an enclosed power wash cleaner, and a catch basin where wastewater is pumped into an enclosed tank. [326 IAC 8-3-2][326 IAC 8-3-5]
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment, including the following: [326 IAC 6.5-1-2]
 - (1) Welding Stations including:
 - (A) 3 stick welding station in building R-31;
 - (B) 1 Stick, 2 spot and 2 TIG welding stations in building R-35;
 - (C) 1 MIG and 2 spot welding stations located in building R-36;
 - (2) Cutting torches including:
 - (A) 1 – 1" plasma torch located in building R-24;
 - (B) 1 – 1" plasma torch located in building R-30;
 - (C) 3 – 0.5" plasma torches located in building R-31;
 - (D) 7 – 0.3" plasma torches located in building R-35;
 - (E) 3 – 1" plasma torches located in building R-36;
 - (F) 2 – 1" plasma torches located in building R-25 (controlled by dust collector DC-41, permitted in 2016);
 - (G) 1 – 2" plasma torch located in building R-25 (controlled by dust collector DC-41, permitted in 2016);
- (d) Grinding and machining operations with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations, including: [326 IAC 6.5-1-2]
 - (1) Small shot blast and grinding equipment located in building R-43 and vented through duct collector DC-15;
 - (2) Small maintenance dust collectors located in building R-42, including:

- (A) Two (2) Torit units;
 - (B) Two (2) Donaldson Torit units;
 - (C) Two (2) Portable Microair units;
 - (D) One (1) welding area exhaust;
- (3) Two (2) Portable Microair units located in building R-14;
- (4) Wet saws including:
- (A) Two (2) Kasto wet saws located in building R-1;
 - (B) One (1) Tysman wet saw located in building R-1;
 - (C) Savage wet saw located in building R-1;
- (5) Three (3) Hoffman vacuum systems with filtration used to return materials to production, venting inside the building - two located in building R-1 and one in building R-18;
- (e) Other activities or categories below insignificant thresholds:
- (1) two (2) dust silos (one (1) 50 ton storage capacity and one (1) 25 ton storage capacity) located in Building R-24, with two (2) dust collectors; [326 IAC 6.5-1-2]
 - (2) one (1) R36 strip anneal and Kolene operation with one (1) spray quench tank, one (1) mechanical brush scrubber, and one (1) fume scrubber, exhausting through one (1) stack (S/V ID: FS-3); [326 IAC 6.5-1-2]
 - (3) one (1) R24 weigh room utilizing a hood over the raw material scale and vented to a dust collector (DC-33) and out one (1) stack (S/V ID: DC-33); [326 IAC 6.5-1-2] and
 - (4) one (1) vacuum induction melting furnace with a metal throughput of 1 ton per hour, exhausting inside the plant; [326 IAC 6-3-2]
- (f) Emergency generators, including one (1) gasoline powered generator, five (5) natural gas powered generators, and six (6) diesel powered generators, as follows:

Building Location	Manufacturer	Model	Construction Date	Purchase Date	Date of Operation	kW/HP	Fuel Type	New / Existing under NESHAP ZZZZ
R12	Olympian /Caterpillar	93A04964-S		Jul. 1994	Aug. 1994	100 kW	Natural Gas	Existing
R45	Olympian /Caterpillar	93A04963-S		Jul. 1994	Aug. 1994	45 kW	Natural Gas	Existing
R21	Olympian /Caterpillar	G15U35	2006	Oct. 2006	Oct. 2006	12 kW	Natural Gas	New
R35 M.R.	Olympian /Caterpillar	97404786-S		Sep. 1981	Oct. 1981	100 kW	Natural Gas	Existing
R25	Kohler	100RZG		Jun. 2006	July. 2006	85 kW	Natural Gas	New
R30	Winco	HP4500/M				8 HP	Gasoline	Existing
R24	Olympian /Caterpillar	D200P4		Jul. 2004	Aug. 2005	200 kW	Diesel	Existing
R3	Caterpillar	D13-2S	2006	Oct. 2006	Oct. 2007	10.4 kW	Diesel	New
R31	Generac	1747650600	2001	Jun. 2007	June. 2007	300 kW	Diesel	Existing

Building Location	Manufacturer	Model	Construction Date	Purchase Date	Date of Operation	kW/HP	Fuel Type	New / Existing under NESHAP ZZZZ
R55	Cummins	440FDR7 H1HHW				175 kW	Diesel	Existing
R35 C.T.	Cummins	440FDR 7010CCW		Mar. 1998	April. 1998	150 kW	Diesel	Existing
R30 (Lights)	Terex Amida	6207.ZZ/03		Jan. 2012	Jan. 2012	19.0 HP	Diesel	New

Under 40 CFR 60, Subpart JJJJ, the engines associated with Buildings R21 and R25 are considered affected facilities.

Under 40 CFR 60, Subpart IIII, the engines associated with Buildings R3 and R30 are considered affected facilities.

Under 40 CFR 63, Subpart ZZZZ, each engine listed in the table above is considered an affected source.

(g) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million (MM) British thermal units (Btu) per hour, including:

- (1) Four (4) 24 inch bar mill preheat furnaces each rated at 9.0 MMBtu per hour;
- (2) One (1) car bottom annealing furnace rated at 5.4 MMBtu per hour;
- (3) Two (2) 10 inch bar mill preheat furnaces each rated at 9.0 MMBtu per hour;
- (4) Five (5) forge shop preheat furnaces each rated at 7.8 MMBtu per hour;
- (5) One (1) forge shop preheat furnace rated at nine 9.0 MMBtu per hour;
- (6) One (1) strip annealing furnace (A&K Line), rated at 7.8 MMBtu per hour;
- (7) One (1) car bottom annealing furnace rated at 4.0 MMBtu per hour;
- (8) Two hundred fifty-two (252) insignificant / exempt comfort heating units (listed individually in Attachment F, to Title V Permit No.: T067-30930-00009);
- (9) Seventeen (17) insignificant / exempt hot water heaters (listed individually in Attachment F, to Title V Permit No.: T067-30930-00009);
- (10) One (1) R36 Kolene tank heater rated at 5.5 MMBtu per hour;
- (11) Three (3) air make-up units, each rated at 4.9 MMBtu per hour;
- (12) Two (2) natural gas space heaters, identified as Bld R-35 RU354-OU-50, with a maximum heat input capacity of 3.00 MMBtu/hr, each;
- (13) Three (3) natural gas space heaters, identified as Bld R-36 RU354-OU-30, with a maximum heat input capacity of 4.98 MMBtu/hr, each; and
- (14) One (1) natural gas space heater, identified as Bld R-36 RU366-OU-50, with a maximum heat input capacity of 7.90 MMBtu/hr.

- (h) Combustion source flame safety purging on startup;
- (i) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;
- (j) The following VOC and HAP storage containers:
 - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons;
 - (2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (k) Refractory storage not requiring air pollution equipment;
- (l) Machining where an aqueous cutting coolant continuously floods the machining interface;
- (m) Cleaners and solvents characterized as follows:
 - (1) having a vapor pressure equal to or less than 2 kPa; 15 mmHg; or 0.3 psi measured at 38 degrees C (100°F) or;
 - (2) having a vapor pressure equal to or less than 0.7 kPa; 5 mmHg; or 0.1 psi measured at 20 degrees C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months;
- (n) Closed loop heating and cooling systems;
- (o) Rolling of recovery systems;
- (p) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;
- (q) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPs;
- (r) Noncontact cooling tower systems with either of the following:
 - (1) forced and induced draft cooling tower system not regulated under a NESHAP, including the following:
 - (A) One (1) non-contact cooling tower, identified as CT#14, constructed in 2003, permitted in 2015.
 - (B) One (1) non-contact cooling tower, identified as CT#10, constructed in 1980, permitted in 2015.
 - (C) One (1) water recirculation tank, previously a non-contact cooling tower, identified as CT#1, constructed in March 1977, permitted in 2015.
 - (D) One (1) non-contact cooling tower, identified as CT#4, constructed in March 1977, permitted in 2015.
 - (E) One (1) non-contact cooling tower, identified as CT#6, constructed in March 1977, permitted in 2015.

- (F) One (1) non-contact cooling tower, identified as CT#16, approved in 2015 for construction.
- (s) Quenching operations used with heat treating processes;
- (t) Replacement or repair of electrostatic precipitators, bags, bags in baghouses and filters in other air filtration equipment;
- (u) Heat exchanger cleaning and repair;
- (v) Paved and unpaved roads and parking lots with public access;
- (w) Underground conveyors;
- (x) Asbestos abatement projects regulated by 326 IAC 14-10;
- (y) Purging of gas lines and vessels that is related to routine maintenance and repair of building, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process;
- (z) Equipment used to collect any material that might be released during a malfunction, process, upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment;
- (aa) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;
- (bb) On-site fire and emergency response training approved by the department;
- (cc) A laboratory as defined in 326 IAC 2-7-1(21)(G), including:
 - (1) two dust collectors (DC-16 and DC-17) and a fume scrubber (FS-6) to provide safety ventilation for sample preparation and analysis activities, in building R-43;
 - (2) Two saws (a cutoff wheel and an abrasive wheel bench-saw) located in the shipping building (R-17) used for cutting samples for onsite and offsite analysis;
 - (3) Laboratory hoods ventilating to the atmosphere located in building R-32; and
- (dd) Farm operations.
- (ee) One (1) slag processing area, identified as Slag #1, constructed in 1994, permitted in 2015, with a maximum capacity of 13.54 tons per day, using baghouse DC-35 as control, and exhausting to stack DC-35.
- (ff) One (1) natural gas fuel-fired emergency generator, with a maximum rating of 300 kW (454 HP), identified at Generator R-1, approved in 2015 for construction, exhausting to stack (RS-1).

Under 40 CFR 60, Subpart JJJJ, Generator R-1 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Generator R-1 is considered an affected source.
- (gg) One (1) cold rolling mill operation, identified as MKW 90 (constructed in 1965) and MKW 100 (constructed in 1966), both permitted in 2016, with a combined maximum capacity of 6.00 ton/hr, using a non-VOC lubricant at a maximum rate of 0.75 lb/ton of metal.

A.4 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, T067-30930-00009, 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] [IC 13-17-12]

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. 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) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

- (1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and
 - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
 - (c) A "responsible official" is defined at 326 IAC 2-7-1(35).

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. All 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
- (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.

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

- (c) 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. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (d) 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.

- (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, 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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

- (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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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)(8) 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.

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 the 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 T067-30930-00009 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 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 a certification that

meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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(a), 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.16 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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 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, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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.18 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 or notice 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 the U.S. EPA.

B.19 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) or (c) 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
Permit Administration and Support Section, 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, 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)(1) and (c)(1). 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) and (c)(1).

- (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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(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.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 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.22 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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.23 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.24 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 Opacity [326 IAC 5-1]

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

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

C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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.4 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). 326 IAC 6-4-2(4) is not federally enforceable.

C.5 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A. The provisions of 326 IAC 6-5 are not federally enforceable.

C.6 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 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
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. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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 Licensed 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 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 2-7-6(1)]

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

- (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. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (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.8 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 the U. S. EPA.

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

C.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

- (a) For new units:

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

- (b) For existing units:

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
- (d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.10 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. The analog instrument shall be capable of measuring values outside of the normal range.
- (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 [326 IAC 2-7-5][326 IAC 2-7-6]

C.11 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 maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) 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.12 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.13 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

- (l) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:
 - (a) The Permittee shall take reasonable response steps to 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 excess emissions.

- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning 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 normal or usual manner of operation.
 - (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; and/or
 - (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 record the reasonable response steps taken.
- (II)
- (a) *CAM Response to excursions or exceedances.*
 - (1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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. 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). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or 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.
 - (2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

- (b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
- (c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.
- (d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).
- (e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
- (f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:
 - (1) Failed to address the cause of the control device performance problems;
or
 - (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.
- (h) *CAM recordkeeping requirements.*
 - (1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.
 - (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks,

or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.14 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 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.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

C.15 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]

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:

- (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 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

**C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
[326 IAC 2-2][326 IAC 2-3]**

- (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. Support information includes the following, where applicable:
 - (AA) All calibration and maintenance records.
 - (BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the Part 70 Operating Permit.
Records of required monitoring information include the following, where applicable:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
- (BB) The dates analyses were performed.
- (CC) The company or entity that performed the analyses.
- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

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 to 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) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a "project" (as defined in 326 IAC 2-2-1(o) and/or 326 IAC 2-3-1(j)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(d) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(p) and/or 326 IAC 2-3-1(k)), the Permittee shall comply with following:
 - (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(o) and/or 326 IAC 2-3-1(j)) at an existing emissions unit, document and maintain the following records:
 - (A) A description of the project.
 - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
 - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;
 - (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(p)(2)(A)(iii) and/or 326 IAC 2-3-1 (k)(2)(A)(iii); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(o) and/or 326 IAC 2-3-1(j)) at an existing emissions unit, other than projects at a source with a

Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
- (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]
[40 CFR 64][326 IAC 3-8]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:

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
- (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) 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.
- (e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
 - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual

emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

- (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part 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

- (g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.18 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 applicable standards for recycling and emissions reduction.

SECTION D.0 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Metal Melting Operations

- (a) One (1) argon oxygen decarbonization (AOD) vessel, constructed in 2008, processing a limited annual metal throughput of 22,500 tons per twelve (12) consecutive month period with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-14).
- (b) One (1) canopy hood collecting fugitive emissions from the AOD and the EAF vessels, and a peripheral hood over the charge bucket load area, controlling particulate matter emissions with a baghouse and exhausting to one (1) stack (S/V ID: DC-38);
- (c) One (1) electric arc furnace (EAF), constructed in 1963 and modified in 1978 and again in 2004, processing a limited annual metal throughput of 22,500 tons per twelve (12) consecutive month period with a five (5) module dust collector for particulate matter control and exhausting to one (1) duct (S/V ID: DC-22).
- (d) Seven (7) electroslag remelting furnaces (ESRs) (considered one process), constructed in the 1970's and modified in 1982 and again in 2013, processing a total limited annual metal throughput of 28,500 tons per twelve (12) consecutive month period, equipped with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-18);

(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.0.1 PSD Minor Limits [326 IAC 2-2]

PM, PM₁₀, and PM_{2.5} emissions from the following operations that have been installed or modified as part of the phased efficiency project permitted in 2013 shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modifications:

- (a) Pursuant to 326 IAC 2-2, metal throughput to the AOD and the EAF (including the AOD/EAF Canopy Hood), each, shall be limited to less than 22,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Pursuant to 326 IAC 2-2, metal throughput to the ESR processes shall be limited to less than 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) Particulate emissions from metal processing shall be limited to the pound per ton limits listed in the following table for each process:

Emission Unit / Process	Metal Throughput Limit (tons/yr)	Emission Factor / Emission Limits (lb/ton)		
		PM	PM ₁₀	PM _{2.5}
AOD Vessel (DC-14)	22,500	0.02	0.15	0.15
AOD/EAF Canopy Hood (DC-38)	22,500	0.84	1.35	1.35
EAF Furnace (DC-22)	22,500	0.15	0.16	0.16
ESR Furnaces (DC-18)	28,500	0.167	0.167	0.167

Compliance with these limitations, in conjunction with limitations for the Pickling Lines, Sawing/Grinding, Shot Blasting, and Furnace Combustion operations shall ensure that PM, PM₁₀, and PM_{2.5} emissions from the efficiency modification are less than twenty-five (25) (PM), fifteen (15) (PM₁₀), and ten (10) (PM_{2.5}) tons per year respectively, rendering 326 IAC 2-2 not applicable to the modification.

D.0.2 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Limitations except Lake County), particulate matter (PM) emissions from each of the facilities listed in this section shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf).

D.0.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan, of this permit, contains the Permittee's obligations with regard to the records required by this condition.

Compliance Determination Requirements

D.0.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Conditions D.0.1(c) and D.0.2, the Permittee shall perform PM, PM₁₀, and PM_{2.5} testing on the following:
- (1) The AOD vessel dust collector stack exhaust (DC-14) utilizing methods as approved by the Commissioner not later than five (5) years from the date of the most recent valid compliance demonstration.
 - (2) The EAF dust collector stack exhaust (DC-22) utilizing methods as approved by the Commissioner not later than five (5) years from the date of the most recent valid compliance demonstration.
 - (3) The AOD/EAF Canopy Hood baghouse stack exhaust (DC-38) utilizing methods as approved by the Commissioner not later than five (5) years from the date of the most recent valid compliance demonstration.
 - (4) The ESR dust collector stack exhaust (DC-18) utilizing methods as approved by the Commissioner not later than five (5) years from the date of the most recent valid compliance demonstration.
- (b) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.0.5 Particulate Control [40 CFR 64]

- (a) In order to comply with conditions D.0.1 and D.0.2, the dust collectors for particulate control shall be in operation and control emissions from each of the facilities listed in this section at all times that the facilities are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.0.6 Visible Emissions Notations [40 CFR 64]

- (a) Visible emission notations of each of the stack exhausts of the dust collectors identified as DC-14, DC-22, DC-18, and DC-38 shall be performed once per day during normal daylight operations. 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.0.7 Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across each of the dust collectors used in conjunction with the facilities listed below, at least once per day when the process is in operation. When for any one (1) reading, the pressure drop across any dust collector is outside the normal ranges listed below or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

<u>Facility</u>	<u>Pressure Drop (inches of water)</u>
AOD (DC-14):	1.0 - 6.0
EAF (DC- 22):	1.0 - 6.0
AOD and EAF Canopy Hood	
Fugitive Emissions (DC-38):	2.0 - 10.0
ESR (DC- 18):	1.0 - 6.0

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

D.0.8 Broken or Failed Bag Detection [40 CFR 64]

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or

replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, or dust traces.

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

D.0.9 Record Keeping Requirement

- (a) In order to document the compliance status with Condition D.0.1, the Permittee shall maintain records of the total amount of all metals processed in the AOD, EAF (including the AOD/EAF Canopy Hood), and the ESR process.
- (b) In order to document the compliance status with Condition D.0.6, the Permittee shall maintain records of visible emission notations of the stack exhaust of each facility listed in this section once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) In order to document the compliance status with Condition D.0.9, the Permittee shall maintain records once per day of the pressure drop across each of the dust collectors during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.0.10 Reporting Requirements

A quarterly summary of the information required to document the compliance status with Condition D.0.1, using the reporting forms located at the end of this permit, or their equivalent, shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Metal Machining Operations

- (e) Metal Sawing and Grinding Operations processing a total limited annual metal throughput of 114,000 tons per twelve (12) consecutive month period, consisting of the following units:
- (1) One (1) swing frame abrasive cut-off saw and one (1) automatic abrasive cut-off saw, constructed in 1981, with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-31);
 - (2) One (1) CMI automatic abrasive billet grinder, constructed in 1981, with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-32);
 - (3) One (1) CMI abrasive billet grinder, constructed in November, 1997, with one (1) dust collector for particulate control and exhausting to one (1) stack (S/V ID: DC-37);
 - (4) One (1) trackbound traveling abrasive grind machine operation, identified as Grind 1, consisting of the following:
 - (a) One (1) grinder, constructed in 1954 and modified in 1981, particulate matter controlled by dust collector, and exhausted to stack DC-1.
 - (b) One (1) grinder, constructed in 1954 and modified in 1990, particulate matter controlled by dust collector, and exhausted to stack DC-3.
 - (c) One (1) grinder, constructed in 1983 and modified in 1995, particulate matter controlled by two (2) dust collectors, and exhausted to two (2) stacks DC-4 and DC-5.
 - (5) One (1) track bound traveling abrasive grind machine and one (1) stationary abrasive end grinder (Grind 2), constructed in 1954 and 1980, respectively, and modified in 1990 and 1995, respectively, with two (2) dust collectors for particulate matter control and exhausting to two (2) stacks (S/V ID: DC-24 and DC-25), respectively;
 - (6) One (1) fox automatic abrasive cut-off saw and one (1) swing frame cut-off saw (Saw 1), constructed in 1960 and 1981, respectively, and modified in 1981 and 1995, respectively, with two (2) dust collectors for particulate matter control and exhausting to two (2) stacks (S/V ID: DC-23 and DC-1) respectively;
 - (7) One (1) plate grinder, constructed in the 1950's and modified in 1961, and one (1) swing frame belt grinder, constructed in 1954 with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-8);
 - (8) Four (4) swing frame abrasive spot grinders, one (1) swing frame abrasive cut-off saw, with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-9);
- (f) Metal Shotblasting Operations processing a total limited annual metal throughput of 28,500 tons per twelve (12) consecutive month period, consisting of the following units:
- (1) One (1) rotoblast shot blaster, constructed in 1953, with a dust collector for particulate matter control and exhausting to one (1) stack (S/V ID: DC-10); and

- (2) One (1) rotoblast shot blaster, constructed in 1989, with a dust collector (DC-36) for particulate matter control and exhausting inside the building R35.
- (p) One (1) metal grinder, identified as Hercules Grinder R-55, with a maximum throughput of 12,500 pounds per hour, constructed in 1981 and permitted in 2015, using a mist eliminator as particulate control, identified as MC-6, and exhausting inside the building.
- (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 PSD Minor Limits [326 IAC 2-2]

PM, PM₁₀, and PM_{2.5} emissions from the following operations that have been installed or modified as part of the phased efficiency project permitted in 2013 shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modifications:

- (a) Pursuant to 326 IAC 2-2, metal throughput to the Sawing/Grinding Operations shall be limited to less than 114,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Pursuant to 326 IAC 2-2, the Permittee shall limit the throughput of metals to the Shot Blasting Operations Combined to less than 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) The particulate emissions from metal Sawing/Grinding and Shot Blasting shall be limited to the pound per ton limits listed in the following table for each process:

Emission Unit / Process	Metal Throughput Limit (tons/yr)	Emission Factor / Emission Limits (lb/ton)		
		PM	PM ₁₀	PM _{2.5}
Sawing/Grinding Operations Combined	114,000	0.17	0.017	0.017
Shot Blasting Operations Combined	28,500	0.17	0.146	0.146

Compliance with these limitations, in conjunction with limitations for the Pickling Lines, Metal Melting Operations (AOD, EAF, AOD/EAF Hood, and ESR), and Furnace Combustion operations shall ensure that PM, PM₁₀, and PM_{2.5} emissions from the efficiency modification are below twenty-five (25) (PM), fifteen (15) (PM₁₀), and ten (10) (PM_{2.5}) tons per year respectively, rendering 326 IAC 2-2 not applicable to the modification.

D.1.2 PSD Minor Limits [326 IAC 2-2]

- (a) PM emissions from the following operations, installed or modified in 1981, shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modification to the source in 1981:
 - (1) PM emissions from dust collector controlling the one (1) sawing operation exhausting through stack DC-31 shall be less than 1.51 pounds per hour;

- (2) PM emissions from the dust collector controlling the abrasive billet grinder exhausting through stack DC-32 shall be less than 1.13 pounds per hour;
- (3) PM emissions from the dust collector controlling the abrasive grind machine in Grind 1 exhausting through stack DC-1 shall be less than 0.71 pound per hour;
- (4) PM emissions from the dust collector controlling the fox automatic abrasive cut-off saw in Saw 1 exhausting through stack DC-23 shall be less than 1.06 pounds per hour;
- (5) PM emissions from the dust collector controlling the swing frame cut-off saw in Saw 1 exhausting through stack DC-1, shall be less than 1.06 pounds per hour;
- (6) PM emissions from the mist eliminator controlling the Hercules Grinder R-55, shall be less than 0.06 pounds per hour.

The PM emission limits in (a)(1) through (6), combined with potential unrestricted PM emissions from the five (5) 4-Hi mill preheat furnaces, the two (2) 4-Hi mill steckle furnaces, and the one (1) strip annealing furnace A&K also installed in 1981, shall render the requirements of 326 IAC 2-2 (PSD) not applicable to the units installed in 1981.

- (b) PM and PM₁₀ emissions from the following operations, installed in 1989, shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modification to the source in 1989:
- (1) PM emissions from the dust collector DC-36 controlling the one (1) rotoblast shot blaster, constructed in 1989, exhausting inside the building shall be less than 5.69 pounds per hour;
 - (2) PM₁₀ emissions from the dust collector DC-36 controlling the one (1) rotoblast shot blaster, constructed in 1989, exhausting inside the building shall be less than 3.41 pounds per hour.

These limits in (b)(1) and (2) combined with the unrestricted PM and PM₁₀ emissions from the R35 acid strip pickling line shall limit PM and PM₁₀-emissions from the units installed in 1989 to less than 25 and 15 tons per year, respectively to render the requirements of 326 IAC 2-2 (PSD) not applicable to the modification to this source in 1989.

- (c) PM and PM₁₀ emissions from the following operations, modified in 1990, shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modification to the source in 1990:
- (1) PM emissions from dust collector controlling the abrasive grind machine in Grind 1 exhausting through stack DC-3, shall be less than 1.19 pounds per hour;
 - (2) PM-10 emissions from dust collector controlling the abrasive grind machine in Grind 1 exhausting through stack DC-3, shall be less than 0.71 pound per hour;
 - (3) PM emissions from the dust collector controlling the abrasive grind machine in Grind 2 exhausting through stack DC-24, shall be less than 2.75 pounds per hour;
 - (4) PM-10 emissions from the dust collector controlling the abrasive grind machine in Grind 2 exhausting through stack DC-24, shall be less than 1.65 pounds per hour;

The limits in (c)(1) through (4) shall limit PM and PM₁₀ emissions from the units installed in 1990 to less than 25 and 15-tons per year, respectively to render the requirements of 326 IAC 2-2 (PSD) not applicable to the modification to this source in 1990.

- (d) PM and PM₁₀ emissions from the following operations, modified in 1995, shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modification to the source in 1995:
- (1) PM emissions from dust collector controlling the abrasive grind machine in Grind 1 exhausting through stack DC-4 and/or DC-5, shall be less than 1.19 pounds per hour;
 - (2) PM-10 emissions from dust collector controlling the abrasive grind machine in Grind 1 exhausting through stack DC-4 and/or DC-5, shall be less than 0.71 pound per hour;
 - (3) PM emissions from the dust collector controlling the abrasive grind machine in Grind 2 exhausting through stack DC-25, shall be less than 2.75 pounds per hour;
 - (4) PM-10 emissions from the dust collector controlling the abrasive grind machine in Grind 2 exhausting through stack DC-25, shall be less than 1.65 pounds per hour.

The limits in (d)(1) through (4) shall limit PM and PM₁₀-emissions from the units modified in 1995 to less than 25 and 15 tons per year, respectively to render the requirements of 326 IAC 2-2 (PSD) not applicable to the modification to this source in 1995.

- (e) PM and PM₁₀ emissions from the following operation, installed in 1997, shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modification to the source in 1997:
- (1) PM emissions from the dust collector controlling the CMI abrasive billet grinder, constructed in 1997, exhausting through stack DC-37 shall be less than 5.71 pounds per hour;
 - (2) PM₁₀ emissions from the dust collector controlling the CMI abrasive billet grinder, constructed in 1997, exhausting through stack DC-37 shall be less than 3.42 pounds per hour.

The limits in (e)(1) and (2) shall limit PM and PM₁₀ emissions from the CMI abrasive billet grinder to less than 25 and 15 tons per year, respectively to render the requirements of 326 IAC 2-2 (PSD) not applicable to the modification to this source in 1997.

D.1.3 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Limitations except Lake County), particulate matter (PM) emissions from each of the facilities listed in this section shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf).

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for each facility and its control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plans required by this condition.

Compliance Determination Requirements

D.1.5 Particulate Control

- (a) In order to comply with conditions D.1.1, D.1.2, and D.1.3, the dust collectors for particulate control shall be in operation and control emissions from each of the facilities listed in this section at all times that the facilities are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (c) In order to comply with Conditions D.1.2(a)(6) and D.1.3, coolant shall be used at all times the Hercules Grinder R-55 is in operation.

D.1.6 Testing Requirements [326 IAC 2-8-5(1),(6)] [326 IAC 2-1.1-11]

Not later than 180 days after the issuance of this permit, SPM No.: 067-34519-00009, in order to demonstrate compliance with Condition D.1.2(a)(6), the Permittee shall perform PM testing on mist eliminator (MC-6), controlling emissions from the metal grinder, identified as Hercules Grinder R-55, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.1.7 Visible Emissions Notations

- (a) Visible emission notations of each of the stack exhausts of the dust collectors identified as DC-8, DC-9, DC-10, DC-31, DC-1, DC-3, DC-4, DC-24, DC-25, DC-5, DC-23, DC-32, and DC-37 shall be performed once per day during normal daylight operations. 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.8 Visible Emissions Notations [40 CFR 64]

- (a) Visible emission notations of each of the stack exhausts of the dust collector for the dust collector for the Rotoblast shot blaster exhausting through stack DC-36 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.9 Parametric Monitoring

The Permittee shall record the pressure drop across each of the dust collectors used in conjunction with the facilities listed below, at least once per day when the process is in operation. When for any one (1) reading, the pressure drop across any dust collector is outside the normal ranges listed below or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

<u>Facility</u>	<u>Pressure Drop (inches of water)</u>
Rotoblast (DC-10):	1.0 - 6.0
Saw/Grind (DC-31):	1.0 - 6.0
Grinders (DC-1, DC-3, and DC-4):	1.0 - 6.0 each
Grinders (DC-24 and DC-25):	1.0 - 6.0 each
Sawing (DC-5 and DC-23):	1.0 - 6.0 each
CMI grinder (DC-32):	1.0 - 6.0
CMI grinder (DC-37):	1.0 - 6.0
Grinders/Saws (DC-8):	1.0 - 6.0
Grinders/Saws (DC-9):	1.0 - 6.0
Hercules Grinder R-55 (MC-6):	1.0 - 5.0

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

D.1.10 Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across each of the dust collectors used in conjunction with the facilities listed below, at least once per day when the process is in operation when venting to the atmosphere. When for any one (1) reading, the pressure drop across any dust collector is outside the normal ranges listed below or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

<u>Facility</u>	<u>Pressure Drop (inches of water)</u>
Rotoblast (DC-36):	1.0 - 8.0

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

D.1.11 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, or dust traces.

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

D.1.12 Record Keeping Requirements

- (a) In order to document the compliance status with Condition D.1.1, the Permittee shall maintain records of the total amount of all metals processed in the sawing/grinding operations collectively.
- (b) To document the compliance status with Conditions D.1.7 and D.1.8, the Permittee shall maintain records of visible emission notations of the stack exhaust of each facility listed in this section once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day, or, for DC-36, the unit was venting indoors that day).
- (c) To document the compliance status with Conditions D.1.9 and D.1.10, the Permittee shall maintain records once per day of the pressure drop across each of the dust collectors during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day, or, for DC-36, the unit was venting indoors that day).
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.1.13 Reporting Requirements

A quarterly summary of the information required to document the compliance status with Condition D.1.1, using the reporting forms located at the end of this permit, or their equivalent, shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that

meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]

Pickling Operations

- (g) One (1) acid batch dip pickling line, identified as R1, constructed in 1983, consisting of: one (1) 8,000 gallon acid tank with target concentrations of 16% for nitric acid, 5% for hydrofluoric acid and 4-5% for metals, and processing a total limited annual metal throughput of 28,500 tons per twelve (12) consecutive month period; one (1) fume collection system surrounding the top of the acid tank; and one (1) fume scrubber, identified as FS-1, used to control hydrofluoric acid (HF), nitric acid (HNO₃), NO_x, and particulate emissions, and exhausting to one (1) stack identified as S/V ID: FS-1;
- (h) One (1) acid strip pickling line, identified as R35, constructed in 1989, and processing a total limited annual metal throughput of 28,500 tons per twelve (12) consecutive month period, consisting of: one (1) acid holding tank; one (1) fully enclosed spray tank with a conveyance speed of 5-15 feet per minute and acid target concentrations of 15-20% for nitric acid, and 2-5% for hydrofluoric acid; one (1) spray rinse tank; one (1) blown air drying system; and one (1) fume collection system routed to one (1) fume scrubber, identified as FS-2, used to control hydrofluoric acid (HF), nitric acid (HNO₃), NO_x, and particulate emissions, and exhausting to one (1) stack identified as S/V ID: FS-2.

Continuous Anneal and Pickle (CAP) Line

- (r) One (1) strip anneal and Kolene operation, identified as CAP Kolene, approved in 2016 for construction, with a maximum capacity of 6.0 tons of metal per hour, with one (1) spray quench tank, one (1) mechanical brush scrubber, and one (1) fume scrubber, exhausting through one (1) stack (S/V ID: FS-7).

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

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

D.2.1 PSD Minor Limits [326 IAC 2-2]

- (a) PM, PM₁₀, and PM_{2.5} emissions from the following operations that have been installed or modified as part of the phased efficiency project permitted in 2013 shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modifications:
- (1) Pursuant to 326 IAC 2-2, metal throughput to the acid pickling lines, identified as R1 and R35, shall be limited to less than 28,500 tons, each, per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) The particulate emissions from metal acid pickling lines, identified as R1 and R35, shall be limited to the pound per ton limits listed in the following table for each process:

Emission Unit / Process	Metal Throughput Limit (tons/yr)	Emission Factor / Emission Limits (lb/ton)		
		PM	PM ₁₀	PM _{2.5}
R1 Acid Batch Pickling Line (FS-1)	28,500	0.002	0.002	0.002
R35 Acid Strip Pickling Line (FS-2)	28,500	0.0025	0.0025	0.0025

Compliance with these limitations, in conjunction with limitations for the Metal Melting Operations (AOD, EAF, AOD/EAF Hood, and ESR), the Sawing/Grinding, Shot Blasting, and Furnace Combustion operations shall ensure that PM, PM₁₀, and PM_{2.5} emissions from the efficiency modification are below twenty-five (25) (PM), fifteen (15) (PM₁₀), and ten (10) (PM_{2.5}) tons per year respectively, rendering 326 IAC 2-2 not applicable to the modification.

- (b) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to SSM 167-36203-00009, the PM, PM₁₀, and PM_{2.5} emissions shall not exceed the emissions limits listed below and the metal throughput to the strip anneal and Kolene operation, identified as CAP Kolene, shall not exceed 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Emission Unit / Process	Metal Throughput Limit (tons/yr)	Emission Factor / Emission Limits (lb/ton)		
		PM	PM ₁₀	PM _{2.5}
Strip anneal and Kolene operation (CAP Kolene)	28,500	0.52	0.52	0.52

Compliance with limits in Condition D.2.1(b), combined with the potential to emit PM, PM₁₀, and PM_{2.5} from all other emission units from the CAP line project, shall ensure PM, PM₁₀, and PM_{2.5} emissions from the CAP line project are below twenty-five (25) (PM), fifteen (15) (PM₁₀), and ten (10) (PM_{2.5}) tons per year respectively, rendering 326 IAC 2-2 not applicable to the modification.

D.2.2 PSD Minor Limits [326 IAC 2-2]

- (a) NOx emissions from the fume scrubber (FS-1) controlling NOx emissions from the R1 acid batch pickling line shall be less than 7.93 pounds per hour.

This limit combined with potential unrestricted NOx emissions from the annealing furnace (Number 20) shall limit NOx emissions from the units installed in 1983 to less than 40 tons per year to render the requirements of 326 IAC 2-2 (PSD) not applicable.

- (b) NOx emissions from the fume scrubber (FS-2) controlling NOx emissions from the R35 acid strip pickling line shall be less than 9.13 pounds per hour.

This limit will limit NOx emissions from the modification in 1989 to less than 40 tons per year so that the requirements of 326 IAC 2-2 (PSD) do not apply.

D.2.3 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Limitations except Lake County), particulate matter

(PM) emissions from each of the facilities listed in this section shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf).

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for each facility and its control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plans required by this condition.

Compliance Determination Requirements

D.2.5 Scrubber Operating Condition

- (a) In order to assure compliance with Conditions D.2.1(a) and D.2.2, the fume scrubbers identified as FS-1 and FS-2 shall be operated at all times when the R1 batch pickling and R35 strip pickling lines are in operation, respectively.
- (b) In order to assure compliance with Condition D.2.1(b), the fume scrubber, identified as FS-7, shall be in operation and controlling emissions from CAP Kolene at all times when the CAP Kolene is in operation.

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

D.2.6 Visible Emissions Notations

- (a) Visible emission notations of each of the fume scrubber stack exhausts shall be performed once per day during normal daylight operations. 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.2.7 Parametric Monitoring

- (a) The Permittee shall monitor and record the pH and flow rate of the fume scrubbers, identified as FS-1 and FS-2, at least once daily when the units are in operation. When for any one (1) reading, the flow rate of either of the fume scrubbers is less than the minimum specified below or a minimum established during the latest stack test, or the pH of the scrubber is less than the value specified below or a value established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A flow rate that is less than the minimum specified below or a pH reading that is less than the value specified below is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Scrubber	Flow rate	pH
FS-1	150 gallons per minute	above 7
FS-2	75 gallons per minute	above 7

- (b) The Permittee shall record the flow rate of the fume scrubber, identified as FS-7, at least once daily when the unit is in operation. When for any one (1) reading, if the flow rate is less than the minimum rate, the Permittee shall take a reasonable response. The minimum flow rate for this unit is 100 gallons per minute, unless a different minimum flow rate is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A flow rate that is less than the minimum rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.2.8 Record Keeping Requirements

- (a) To document the compliance status with Condition D.2.1(a), the Permittee shall maintain records of the total amount of all metals processed in the acid pickling lines, identified as R1 and R35.
- (b) To document the compliance status with Condition D.2.1(b), the Permittee shall maintain records of the total amount of all metals processed in the strip anneal and Kolene operation, identified as CAP Kolene.
- (c) To document the compliance status with Condition D.2.6, the Permittee shall maintain records of visible emission notations of each of the fume scrubber stack exhausts once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (d) To document the compliance status with Condition D.2.7(a), the Permittee shall maintain records once per day of the pH and flow rate for the fume scrubbers, identified as FS-1 and FS-2, during normal operation. The Permittee shall include in its daily record when a pH or flow rate reading is not taken and the reason for the lack of a pH or flow rate reading (e.g. the process did not operate that day).
- (e) To document the compliance status with Condition D.2.7(b), the Permittee shall maintain records once per day of the flow rate for the fume scrubber, identified as FS-7, during normal operation. The Permittee shall include in its daily record when a flow rate reading is not taken and the reason for the lack of a flow rate reading (e.g. the process did not operate that day).
- (f) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.2.9 Reporting Requirements

A quarterly summary of the information required to document the compliance status with Condition D.2.1, using the reporting forms located at the end of this permit, or their equivalent, shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Natural Gas Combustion Units

- (i) Unrestricted natural gas-fired emission units, consisting of the following:
- (1) Two (2) natural gas-fired boilers, approved in 2011 for construction, identified as Boilers 3 and 4, equipped with low-NO_x burners, each with a maximum capacity of fifteen (15) MMBtu/hr. Under 40 CFR 60, Subpart Dc, these boilers are considered affected units;
 - (2) Four (4) 3-Hi Mill preheat furnaces (Numbers 1, 2, 3, and 4), constructed in the 1940's, each rated at 10.35 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant;
 - (3) One (1) 2-Hi Mill preheat furnace (Number 5), constructed in the 1940's, rated at 22 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant;
 - (4) One (1) annealing furnace (Number 6), constructed in the 1940's, rated at 14.8 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant;
 - (5) One (1) annealing furnace (Number 16), constructed in the 1960's and reconstructed in 2006, rated at 16 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant; and
 - (6) One (1) annealing furnace (Number 20), approved in 2015 for construction, rated at 20 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant.
- (j) Natural gas-fired emission units, combusting a total limited annual natural gas throughput of 780 million cubic feet (MMCF) per twelve (12) consecutive month period, consisting of the following units:
- (1) Five (5) 4-Hi mill preheat furnaces (Numbers 51, 52, 53, 56, and 57), constructed between 1981 and 1983, each rated at 15 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting to five (5) stacks (SV ID: GF51, GF52, GF53, GF56, and GF57);
 - (2) Two (2) 4-Hi mill steckle furnaces, constructed between 1981 and 1983, each rated at 20 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting inside the plant; and
 - (3) One (1) strip annealing furnace A&K line, constructed between 1981 and 1983, rated at 10 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting to one (1) stack (S/V ID: GFA & K).
- (k) Natural gas-fired emission units, combusting a total limited annual natural gas throughput of 219 million cubic feet (MMCF) per twelve (12) consecutive month period, consisting of the following units:
- (1) two (2) 4-Hi mill preheat furnaces (Numbers 54 and 58), approved in 2013 for construction, each rated at 15 million (mm) British thermal units (Btu) per hour, combusting natural gas, and exhausting to two (2) stacks (SV ID: GF54 and GF58).

Continuous Anneal and Pickle (CAP) Line

- (q) One (1) natural gas-fired annealing furnace, identified as CAP Furnace, approved in 2016 for construction, with a maximum heat input of 20 MMBtu/hr, exhausting within the plant.

Under NESHAP, Subpart DDDDD, CAP Furnace is an affected source.

- (s) One (1) natural gas-fired heater, identified as Kolene Tank Heater, approved in 2016 for construction, supporting CAP Kolene, with a maximum heat input of 4.25 MMBtu/hr, exhausting within the plant.

Under NESHAP, Subpart DDDDD, Kolene Tank Heater is an affected source.

(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 Matter (PM) [326 IAC 6.5-1-2]

- (a) Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations), the particulate matter (PM) emissions from the annealing furnace (Number 20) shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (0.03 grain per dry standard cubic foot (gr/scf)).
- (b) Pursuant to 326 IAC 6.5-1-2(b)(3) (Emissions Limitations for Sources of Indirect Heating), the particulate matter (PM) emission rate from each of the natural gas-fired boilers (Boilers 3 and 4) shall in no case exceed 0.01 grains per dry standard cubic foot (dscf) for all gaseous fuel-fired steam generators.
- (c) Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the CAP Furnace shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).
- (d) Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the Kolene Tank Heater shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

D.3.2 PSD Minor Limit [326 IAC 2-2]

- (a) The combined usage of natural gas in the five (5) 4-Hi mill preheat furnaces, the two (2) 4-Hi mill steckle furnaces, and the one (1) strip annealing furnace A&K, shall be limited to a total of 780.0 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) Emissions of NO_x shall not exceed 100 pounds per MMCF of combined natural gas usage in the five (5) 4-Hi mill preheat furnaces, the two (2) 4-Hi mill steckle furnaces, and the one (1) strip annealing furnace A&K.
- (c) Emissions of PM shall not exceed 1.9 pounds per MMCF of combined natural gas usage in the five (5) 4-Hi mill preheat furnaces, the two (2) 4-Hi mill steckle furnaces, and the one (1) strip annealing furnace A&K.

These limits will limit emissions from the modification in 1981 to less than 40 tons per year for NO_x and less than 25 tons per year for PM so that the requirements of 326 IAC 2-2 (PSD) do not apply.

D.3.3 PSD Minor Limits [326 IAC 2-2]

PM, PM₁₀, and PM_{2.5} emissions from the following operations that have been installed or modified as part of the phased efficiency project permitted in 2013 shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modifications:

- (a) Pursuant to 326 IAC 2-2, the Permittee shall limit the combined usage of natural gas in the two (2) 4-Hi mill preheat furnaces (Numbers 54 and 58) to a total of 219.0 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The particulate emissions from two (2) 4-Hi mill preheat furnaces (Numbers 54 and 58), shall be limited to the pound per ton limits listed in the following table for each process:

Emission Unit / Process	Natural Gas Throughput Limit (MMCF/yr)	Emission Factor / Emission Limits (lb/MMCF)		
		PM	PM ₁₀	PM _{2.5}
two (2) 4-Hi mill preheat furnaces	219	1.9	7.6	7.6

Compliance with these limitations, in conjunction with limitations for the Pickling Lines, the Metal Melting Operations (AOD, EAF, AOD/EAF Hood, and ESR), the Sawing/Grinding and the Shot Blasting operations shall ensure that PM, PM₁₀, and PM_{2.5} emissions from the efficiency modification are below twenty-five (25) (PM), fifteen (15) (PM₁₀), and ten (10) (PM_{2.5}) tons per year respectively, rendering 326 IAC 2-2 not applicable to the modification.

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

D.3.4 Record Keeping Requirements

- (a) To document the compliance status with Condition D.3.2, the Permittee shall maintain the following records:
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual natural gas usage in million cubic feet (mmcf) per month for the four (4) 4-Hi mill preheat furnaces, the two (2) 4-Hi mill steckle furnaces, and the one (1) strip annealing furnace A&K combined.
- (b) To document the compliance status with Condition D.3.3, the Permittee shall maintain the following records:
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual natural gas usage in million cubic feet (MMCF) per month for the two (2) 4-Hi preheat mill furnaces (Numbers 54 and 58) combined.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.3.5 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.3.2 and D.3.3 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C -

General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]:

- (l) One (1) powder torch with a maximum cutting capacity of 18,000 pounds of metal per hour, approved in 2015 for construction, using AOD/EAF Canopy Hood (DC-38) as particulate control, and exhausting to one (1) stack (S/V ID: DC-38).
- (m) One (1) natural draft, contact cooling tower, identified as CT#2, with 700 gallons per minute circulation rate, constructed in March 1977 and permitted in 2015, supporting the Forge Shop, Billet Quench (R-18), exhausting to the atmosphere.
- (o) One (1) natural draft, contact cooling tower, identified as CT#12, with 145 gallons per minute circulation rate, constructed in 1983 and permitted in 2015, supporting the Annealing Furnace #20, exhausting to the atmosphere.
- (n) One (1) natural draft, contact cooling tower, identified as CT#3, with 1,030 gallons per minute circulation rate, constructed in March 1977 and permitted in 2015, supporting the Stokes Furnace (R-31), exhausting to the atmosphere.

Continuous Anneal and Pickle (CAP) Line

- (t) One (1) natural draft, contact cooling tower, identified as CT#18, approved in 2016 for construction, with a 396 gallons per minute circulation rate, supporting the CAP line, exhausting to the atmosphere.

Insignificant Activities

- (a) Natural gas-fired combustion steam generators with heat input equal to or less than ten (10) million (mm) British thermal units (Btu) per hour;
 - (1) One (1) R1 pickle tank boiler rated at 2.10 mmBtu per hour; [326 IAC 6.5-1-2]
 - (2) One (1) R35 pickle line boiler rated at 1.5 mmBtu per hour; [326 IAC 6.5-1-2]
 - (3) One (1) R42 steam heating boiler rated at 1.05 mmBtu per hour; [326 IAC 6.5-1-2]
 - (4) One (1) R1 Kolene Tank Heater rated at 8.1 MMBtu per hour; [326 IAC 6.5-1-2]
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 and using non-halogenated solvents (Safety-Kleen) only:
 - (1) fifteen (15) separate cold cleaner degreasers used for parts washing, each of which has less than or equal to 80 gallon capacities; [326 IAC 8-3-2][326 IAC 8-3-5] and
 - (2) one (1) large mill bearing cleaner/degreaser, located in building R55, utilizing an enclosed power wash cleaner, and a catch basin where wastewater is pumped into an enclosed tank. [326 IAC 8-3-2][326 IAC 8-3-5]
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment including the following: [326 IAC 6.5-1-2]
 - (1) Welding Stations including:
 - (A) 3 stick welding station in building R-31;
 - (B) 1 Stick, 2 spot and 2 TIG welding stations in building R-35;
 - (C) 1 MIG and 2 spot welding stations located in building R-36;
 - (2) Cutting torches including:

- (A) 1 – 1" plasma torch located in building R-24;
 - (B) 1 – 1" plasma torch located in building R-30;
 - (C) 3 – 0.5" plasma torches located in building R-31;
 - (D) 7 – 0.3" plasma torches located in building R-35;
 - (E) 3 – 1" plasma torches located in building R-36;
 - (F) 2 – 1" plasma torches located in building R-25 (controlled by dust collector DC-41, permitted in 2016);
 - (G) 1 – 2" plasma torch located in building R-25 (controlled by dust collector DC-41, permitted in 2016);
- (d) Grinding and machining operations with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations, including: [326 IAC 6.5-1-2]
- (1) Small shot blast and grinding equipment located in building R-43 and vented through duct collector DC-15;
 - (2) Small maintenance dust collectors located in building R-42, including:
 - (A) Two (2) Torit units;
 - (B) Two (2) Donaldson Torit units;
 - (C) Two (2) Portable Microair units;
 - (D) One (1) welding area exhaust;
 - (3) Two (2) Portable Microair units located in building R-14;
 - (4) Wet saws including:
 - (A) Two (2) Kasto wet saws located in building R-1;
 - (B) One (1) Tysman wet saw located in building R-1;
 - (C) Savage wet saw located in building R-1.
 - (5) Three (3) Hoffman vacuum systems with filtration used to return materials to production, venting inside the building - two located in building R-1 and one in building R-18; [326 IAC 6.5-1-2]
- (e) Other activities or categories below insignificant thresholds:
- (1) two (2) dust silos (one (1) 50 ton storage capacity and one (1) 25 ton storage capacity) located in Building R-24, with two (2) dust collectors; [326 IAC 6.5-1-2]
 - (2) one (1) R36 strip anneal and Kolene operation with one (1) spray quench tank, one (1) mechanical brush scrubber, and one (1) fume scrubber, exhausting through one (1) stack (S/V ID: FS-3); [326 IAC 6.5-1-2]
 - (3) one (1) R24 weigh room utilizing a hood over the raw material scale and vented to a dust collector (DC-33) and out one (1) stack (S/V ID: DC-33). [326 IAC 6.5-1-2] and
 - (4) one (1) vacuum induction melting furnace with a metal throughput of 1 ton per hour, exhausting inside the plant. [326 IAC 6-3-2]
- (gg) One (1) cold rolling mill operation, identified as MKW 90 (constructed in 1965) and MKW 100 (constructed in 1966), both permitted in 2016, with a combined maximum capacity of 6.00 ton/hr, using a non-VOC lubricant at a maximum rate of 0.75 lb/ton of metal.

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

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

D.4.1 Particulate Matter (PM) [326 IAC 6.5-1-2]

- (a) Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the following insignificant activities shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf):
- (1) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment including the following:
 - (A) Welding Stations including:
 - (1) 3 stick welding station in building R-31;
 - (2) 1 Stick, 2 spot and 2 TIG welding stations in building R-35;
 - (3) 1 MIG and 2 spot welding stations located in building R-36;
 - (B) Cutting torches including:
 - (1) 1 – 1" plasma torch located in building R-24;
 - (2) 1 – 1" plasma torch located in building R-30;
 - (3) 3 – 0.5" plasma torches located in building R-31;
 - (4) 7 – 0.3" plasma torches located in building R-35;
 - (5) 3 – 1" plasma torches located in building R-36;
 - (6) 2 – 1" plasma torches located in building R-25 (controlled by dust collector DC-41, permitted in 2016);
 - (7) 1 – 2" plasma torch located in building R-25 (controlled by dust collector DC-41, permitted in 2016);
 - (2) Grinding and machining operations with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations; including:
 - (A) Small shot blast and grinding equipment located in building R-43 and vented through duct collector DC-15;
 - (B) Small maintenance dust collectors located in building R-42, including:
 - (1) Two (2) Torit units;
 - (2) Two (2) Donaldson Torit units;
 - (3) Two (2) Portable Microair units;
 - (4) One (1) welding area exhaust;
 - (C) Two (2) Portable Microair units located in building R-14;
 - (D) Wet saws including:
 - (1) Two (2) Kasto wet saws located in building R-1;
 - (2) One (1) Tysman wet saw located in building R-1;
 - (3) Savage wet saw located in building R-1.
 - (E) Three (3) Hoffman vacuum systems with filtration used to return materials to production, venting inside the building - two located in building R-1 and one in building R-18;
 - (3) two (2) dust silos (one (1) 50 ton storage capacity and one (1) 25 ton storage capacity) located in Building R-24, with two (2) dust collectors;
 - (4) one (1) R36 strip anneal and Kolene operation with one (1) spray quench tank, one (1) mechanical brush scrubber, and one (1) fume scrubber, exhausting

through one (1) stack (S/V ID: FS-3); and

- (5) one (1) R24 weigh room utilizing a hood over the raw material scale and vented to a dust collector (DC-33) and out one (1) stack (S/V ID: DC-33).
- (b) Pursuant to 326 IAC 6.5-1-2(b)(3) (Emissions Limitations for Sources of Indirect Heating), the particulate matter (PM) emission rate from each of the natural gas-fired boilers (R1 pickle tank boiler, R1 Kolene Tank Heater, R35 pickle line boiler, and R42 steam heating boiler) shall in no case exceed 0.01 grains per dry standard cubic foot (dscf) for all gaseous fuel-fired steam generators.
- (c) Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the powder torch, and contact cooling towers, identified as CT #2, CT #3, CT#12, and CT#18, shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).
- (d) Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from each of the Cold Rolling Mill Operation shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

D.4.2 Cold Cleaner Degreaser Control Equipment and Operating Requirements [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations Degreaser Control and Equipment Operating Requirements), the Permittee shall:

- (a) Ensure the following control equipment and operating requirements are met:
 - (1) Equip the cleaner with a cover;
 - (2) Equip the cleaner with a device for draining cleaned parts;
 - (3) Close the degreaser cover whenever parts are not being handled in the degreaser;
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
 - (5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).
 - (6) Store waste solvent only in closed containers.
 - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.
- (b) Ensure the following additional control equipment and operating requirements are met:
 - (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent used is insoluble in, and heavier than, water.

- (C) A refrigerated chiller.
 - (D) Carbon adsorption.
 - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
- (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
 - (3) If used, solvent spray:
 - (A) must be a solid, fluid stream; and
 - (B) shall be applied at a pressure that does not cause excessive splashing.

D.4.3 Material Requirements for Cold Cleaner Degreaser [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), the Permittee shall not operate a cold cleaning degreaser with a solvent vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

D.4.4 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the vacuum induction melting furnace shall not exceed 4.1 pounds per hour when operating at a process weight rate of 1.0 ton 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:

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

Compliance Determination Requirements

D.4.5 Particulate Control

- (a) In order to comply with condition D.4.1, the dust collectors for particulate control for the dust silos and the R24 weighing operation (DC-33) shall be in operation and control emissions from the dust silos and R24 weighing operation at all times that the dust silos and R24 weigh room are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (c) In order to comply with condition D.4.1, the mechanical brush scrubber and the fume scrubber (FS-3) for particulate control shall be in operation and control emissions from the R36 strip anneal and Kolene operation with one (1) spray quench tank at all times that the R36 strip anneal and Kolene operation with one (1) spray quench tank are in operation.

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

D.4.6 Record Keeping Requirements

To document the compliance status with Condition D.4.3, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

- (a) The name and address of the solvent supplier.
- (b) The date of purchase.
- (c) The type of solvent purchased.
- (d) The total volume of the solvent purchased.
- (e) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

SECTION E.1

NSPS

Emissions Unit Description:

- (a) Two (2) natural gas-fired boilers, approved in 2011 for construction, identified as Boilers 3 and 4, equipped with low-NO_x burners, each with a maximum capacity of fifteen (15) MMBtu/hr. Under 40 CFR 60, Subpart Dc, these boilers are considered affected units;

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

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

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart Dc.
- (b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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

E.1.2 Small Industrial-Commercial-Institutional Steam Generating Units NSPS [40 CFR Part 60, Subpart Dc]

The Permittee which operates small industrial-commercial-institutional steam generating units shall comply with the provisions of 40 CFR Part 60, Subpart Dc, as follows. The full text of Subpart Dc may be found in Attachment E to this permit.

This source is subject to the following portions of Subpart Dc:

- (1) 40 CFR 60.40c
- (2) 40 CFR 60.41c
- (3) 40 CFR 60.48c(a)(1), (a)(3), (g), and (i)

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) Emergency generators, including one (1) gasoline powered generator, five (5) natural gas powered generators, and six (6) diesel powered generators, as follows:

Building Location	Manufacturer	Model	Construction Date	Purchase Date	Date of Operation	kW/HP	Fuel Type	New/Existing under NESHAP ZZZZ
R12	Olympian/Caterpillar	93A04964-S		Jul. 1994	Aug. 1994	100 kW	Natural Gas	Existing
R45	Olympian/Caterpillar	93A04963-S		Jul. 1994	Aug. 1994	45 kW	Natural Gas	Existing
R21	Olympian/Caterpillar	G15U35	2006	Oct. 2006	Oct. 2006	12 kW	Natural Gas	New
R35 M.R.	Olympian/Caterpillar	97404786-S		Sep. 1981	Oct. 1981	100 kW	Natural Gas	Existing
R25	Kohler	100RZG		Jun. 2006	July. 2006	85 kW	Natural Gas	New
R30	Winco	HP4500/M				8 HP	Gasoline	Existing
R24	Olympian/Caterpillar	D200P4		Jul. 2004	Aug. 2005	200 kW	Diesel	Existing
R3	Caterpillar	D13-2S	2006	Oct. 2006	Oct. 2007	10.4 kW	Diesel	New
R31	Generac	1747650600	2001	Jun. 2007	June. 2007	300 kW	Diesel	Existing
R55	Cummins	440FD R7 H1HH W				175 kW	Diesel	Existing
R35 C.T.	Cummins	440FD R7010C CW		Mar. 1998	April. 1998	150 kW	Diesel	Existing
R30 (Lights)	Terex Amida	6207.Z Z/03		Jan. 2012	Jan. 2012	19.0 HP	Diesel	New

Under 40 CFR 60, Subpart JJJJ, the engines associated with Buildings R21 and R25 are considered affected facilities.

Under 40 CFR 60, Subpart IIII, the engines associated with Buildings R3 and R30 are considered affected facilities.

Under 40 CFR 63, Subpart ZZZZ, each engine listed in the table above is considered an affected source.

(ff) One (1) natural gas fuel-fired emergency generator, with a maximum heat input of 300KW, 454 HP, identified at Generator R-1, approved in 2015 for construction, exhausting to stack (RS-1).

Under 40 CFR 60, Subpart JJJJ, Generator R-1 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Generator R-1 is considered an affected source.

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

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

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-82-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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

E.2.2 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-82-1] [40 CFR 63, Subpart ZZZZ]

The Permittee owns and operates stationary reciprocating internal combustion engines (RICE) located at an area source of HAP emissions shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ, included as Attachment B of this permit.

The source is subject to the following portions of Subpart ZZZZ for existing units that are compression ignition:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(iii) and (iv)
- (4) 40 CFR 63.6595(a)(1), (b), and (c)
- (5) 40 CFR 63.6603(a)
- (6) 40 CFR 63.6604(b)
- (7) 40 CFR 63.6605
- (8) 40 CFR 63.6625(e)(3), (f), (h), and (i)
- (9) 40 CFR 63.6635
- (10) 40 CFR 63.6640(a), (b), (e), and (f)
- (11) 40 CFR 63.6645(a)(5)
- (12) 40 CFR 63.6650
- (13) 40 CFR 63.6655
- (14) 40 CFR 63.6660
- (15) 40 CFR 63.6665
- (16) 40 CFR 63.6670
- (17) 40 CFR 63.6675

- (18) Table 2d (item 4)
- (19) Table 6 (item 9)
- (20) Table 8

The source is subject to the following portions of Subpart ZZZZ for existing units that are spark ignition:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(iii) and (iv)
- (4) 40 CFR 63.6595(a)(1), (b), and (c)
- (5) 40 CFR 63.6603(a)
- (6) 40 CFR 63.6605
- (7) 40 CFR 63.6625(e)(3), (f), (h), and (j)
- (8) 40 CFR 63.6635
- (9) 40 CFR 63.6640(a), (b), (e), and (f)
- (10) 40 CFR 63.6645(a)(5)
- (11) 40 CFR 63.6650
- (12) 40 CFR 63.6655
- (13) 40 CFR 63.6660
- (14) 40 CFR 63.6665
- (15) 40 CFR 63.6670
- (16) 40 CFR 63.6675
- (17) Table 2d (item 5)
- (18) Table 6 (item 9)
- (19) Table 8

The source is subject to the following portions of Subpart ZZZZ for new units:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(2)(ii) and (c)(6)
- (4) 40 CFR 63.6595(a)(4)
- (5) 40 CFR 63.6645
- (6) 40 CFR 63.6650
- (7) 40 CFR 63.6660
- (8) 40 CFR 63.6665

SECTION E.3

NSPS

Emissions Unit Description:

(f) Emergency generators, including one (1) gasoline powered generator, five (5) natural gas powered generators, and six (6) diesel powered generators, as follows:

Building Location	Manufacturer	Model	Construction Date	Purchase Date	Date of Operation	kW/HP	Fuel Type	New/Existing under NESHAP ZZZZ
R3	Caterpillar	D13-2S	2006	Oct. 2006	Oct. 2007	10.4 kW	Diesel	New
R30 (Lights)	Terex Amida	6207.Z Z/03		Jan. 2012	Jan. 2012	19.0 HP	Diesel	New

Under 40 CFR 60, Subpart IIII, the engines associated with Buildings R3 and R30 are considered affected facilities.

Under 40 CFR 63, Subpart ZZZZ, each engine listed in the table above is considered an affected source.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.3.1 General Provisions Relating to New Source Performance Standards [326 IAC 12] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart IIII.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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

E.3.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [326 IAC 12] [40 CFR Part 60, Subpart IIII]

The Permittee who owns and operates stationary compression ignition (CI) internal combustion engines (ICE) shall comply with the following provisions of 40 CFR Part 60, Subpart IIII, included as Attachment C of this permit. The source is subject to the following portions of Subpart IIII:

- (1) 40 CFR 60.4200
- (2) 40 CFR 60.4205
- (3) 40 CFR 60.4206
- (4) 40 CFR 60.4207
- (5) 40 CFR 60.4208
- (6) 40 CFR 60.4209

- (7) 40 CFR 60.4211
- (8) 40 CFR 60.4212
- (9) 40 CFR 60.4213
- (10) 40 CFR 60.4214
- (11) 40 CFR 60.4218

SECTION E.4

NSPS

Emissions Unit Description:

- (f) Emergency generators, including one (1) gasoline powered generator, five (5) natural gas powered generators, and six (6) diesel powered generators, as follows:

Building Location	Manufacturer	Model	Construction Date	Purchase Date	Date of Operation	kW/HP	Fuel Type	New/Existing under NESHAP ZZZZ
R21	Olympian/Caterpillar	G15U35	2006	Oct. 2006	Oct. 2006	12 kW	Natural Gas	New
R25	Kohler	100RZG		Jun. 2006	July. 2006	85 kW	Natural Gas	New

Under 40 CFR 60, Subpart JJJJ, the engines associated with Buildings R21 and R25 are considered affected facilities.

Under 40 CFR 63, Subpart ZZZZ, each engine listed in the table above is considered an affected source.

- (ff) One (1) natural gas fuel-fired emergency generator, with a maximum heat input of 300KW, 454 HP, identified at Generator R-1, approved in 2015 for construction, exhausting to stack (RS-1).

Under 40 CFR 60, Subpart JJJJ, Generator R-1 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, Generator R-1 is considered an affected source.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.4.1 General Provisions Relating to New Source Performance Standards [326 IAC 12] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart JJJJ

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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

E.4.2 New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ]

Pursuant to 40 CFR 60, the Permittee shall comply with the provisions of New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines (40

CFR 60, Subpart JJJJ), which are incorporated by reference as 326 IAC 12. The provisions of 40 CFR 60, Subpart JJJJ are shown in their entirety in Attachment D to this permit.

The source is subject to the following portions of Subpart JJJJ for the 12 kW emergency generator (model # G15U35):

- (1) 40 CFR 60.4230(4)(iv)
- (2) 40 CFR 60.4233(h)
- (3) 40 CFR 60.4234
- (4) 40 CFR 60.4243(d)
- (5) 40 CFR 60.4245(a),(d)
- (6) 40 CFR 60.4246
- (7) 40 CFR 60.4248
- (8) Table 2 and 3

The source is subject to the following portions of Subpart JJJJ for the 85kW emergency generator (model # 100RZG):

- (1) 40 CFR 60.4230(4)(iii)
- (2) 40 CFR 60.4233(e), (h)
- (3) 40 CFR 60.4234
- (4) 40 CFR 60.4243(b)(1), (d)
- (5) 40 CFR 60.4245(a),(d)
- (6) 40 CFR 60.4246
- (7) 40 CFR 60.4248
- (8) Table 1, 2 and 3

The source is subject to the following portions of Subpart JJJJ for the emergency generator, identified as Generator R-1:

- (1) 40 CFR 60.4230(4)(iv)
- (2) 40 CFR 60.4233(e), (h)
- (3) 40 CFR 60.4234
- (4) 40 CFR 60.4243(b)(1), (d)
- (5) 40 CFR 60.4245(a),(d)
- (6) 40 CFR 60.4246
- (7) 40 CFR 60.4248
- (8) 40 CFR 60, Table 2, and 3

SECTION E.5

NESHAP

Emissions Unit Description:

- (a) The following boilers and / process heaters are considered to be new large gaseous fuel units pursuant to 40 CFR Part 63.7575:
- (1) Two (2) natural gas-fired boilers, identified as Boilers 3 and 4; and
 - (2) two (2) 4-Hi mill preheat furnaces (Numbers 54, and 58).
- (b) The following boilers and / process heaters are considered to be existing metal process furnaces pursuant to 40 CFR Part 63.7575:
- (1) Four (4) 3-Hi Mill preheat furnaces (Numbers 1, 2, 3, and 4);
 - (2) One (1) 2-Hi Mill preheat furnace (Number 5);
 - (3) One (1) annealing furnace (Number 6);
 - (4) Five (5) 4-Hi mill preheat furnaces (Numbers 51, 52, 53, 56, and 57);
 - (5) Two (2) 4-Hi mill steckle furnaces; and
 - (6) One (1) annealing furnace (Number 16).
- (c) The following boilers and / process heaters are considered to be existing small gaseous fuel units pursuant to 40 CFR Part 63.7575:
- (1) One (1) strip annealing furnace A&K line;
 - (2) One (1) R1 pickle tank boiler;
 - (3) One (1) R1 kolene tank heater;
 - (4) One (1) R35 pickle line boiler;
 - (5) One (1) R42 steam heating boiler;
 - (6) Four (4) 24 inch bar mill preheat furnaces each rated at 9.0 mmBtu per hour;
 - (7) One (1) car bottom annealing furnace rated at 5.4 mmBtu per hour;
 - (8) Two (2) 10 inch bar mill preheat furnaces each rated at 9.0 mmBtu per hour;
 - (9) Five (5) forge shop preheat furnaces each rated at 7.8 mmBtu per hour;
 - (10) One (1) forge shop preheat furnace rated at nine 9.0 mmBtu per hour;
 - (11) One (1) strip annealing furnace (A&K Line), rated at 7.8 mmBtu per hour;
 - (12) One (1) car bottom annealing furnace rated at 4.0 mmBtu per hour;
 - (13) One (1) R36 Kolene tank heater rated at 5.5 mmBtu per hour; and
 - (14) Three (3) air make-up units, each rated at 4.9 mmBtu per hour.
- (d) The following boilers and / process heaters are considered to be new metal process furnaces pursuant to 40 CFR Part 63.7575:
- (1) One (1) annealing furnace (Number 20).

Continuous Anneal and Pickle (CAP) Line

- (q) One (1) natural gas-fired annealing furnace, identified as CAP Furnace, approved in 2016 for construction, with a maximum heat input of 20 MMBtu/hr, exhausting within the plant.

Under NESHAP, Subpart DDDDD, CAP Furnace is an affected source.

- (s) One (1) natural gas-fired heater, identified as Kolene Tank Heater, approved in 2016 for construction, supporting CAP Kolene, with a maximum heat input of 4.25 MMBtu/hr, exhausting within the plant.

Under NESHAP, Subpart DDDDD, Kolene Tank Heater is an affected source.

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

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

E.5.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

- (a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission units listed above, except as otherwise specified in 40 CFR Part 63, Subpart DDDDD.
- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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

E.5.2 Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP [40 CFR Part 63, Subpart DDDDD]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart DDDDD (included as Attachment A of this permit):

For the emission units identified in Section E.5, except annealing furnace (Number 20), Kolene Tank Heater, and CAP Furnace:

- (1) 40 CFR 63.7480
- (2) 40 CFR 63.7485
- (3) 40 CFR 63.7490(a), (d)
- (4) 40 CFR 63.7495(b), (d)
- (5) 40 CFR 63.7499(l)
- (6) 40 CFR 63.7500(a)(1), (a)(3)
- (7) 40 CFR 63.7501
- (8) 40 CFR 63.7505(a)
- (9) 40 CFR 63.7515(e)
- (10) 40 CFR 63.7530 (d) and (e)
- (11) 40 CFR 63.7540(a)(10), (a)(11), (a)(12), (b)
- (12) 40 CFR 63.7545(a), (b), (h)
- (13) 40 CFR 63.7550(a), (b), (c), (d), (f)
- (14) 40 CFR 63.7555(a)
- (15) 40 CFR 63.7560
- (16) 40 CFR 63.7565
- (17) 40 CFR 63.7570
- (18) 40 CFR 63.7575
- (19) Table 3 to Subpart DDDDD of Part 63, items 1, 2 and 3

- (20) Table 9 to Subpart DDDDD of Part 63
- (21) Table 10 to Subpart DDDDD of Part 63

For annealing furnace (Number 20) and CAP Furnace:

- (1) 40 CFR 63.7480
- (2) 40 CFR 63.7485
- (3) 40 CFR 63.7490(a) and (b)
- (4) 40 CFR 63.7495(a) and (d)
- (5) 40 CFR 63.7499(l)
- (6) 40 CFR 63.7500(a)(1), (a)(3), (b), and (f)
- (7) 40 CFR 63.7501
- (8) 40 CFR 63.7505(a)
- (9) 40 CFR 63.7510(g)
- (10) 40 CFR 63.7515(d)
- (11) 40 CFR 63.7530(e)
- (12) 40 CFR 63.7540(a)(10), (a)(13), (b), and (d)
- (13) 40 CFR 63.7545(a), (c), and (h)
- (14) 40 CFR 63.7550(a), (b), (c), (d), and (h)(3)
- (15) 40 CFR 63.7555(a), (h), (i), and (j)
- (16) 40 CFR 63.7560
- (17) 40 CFR 63.7565
- (18) 40 CFR 63.7570
- (19) 40 CFR 63.7575
- (20) Table 3 (items 1, 2, 3, and 5)
- (21) Table 9
- (22) Table 10

For Kolene Tank Heater:

- (1) 40 CFR 63.7480
- (2) 40 CFR 63.7485
- (3) 40 CFR 63.7490(a) and (b)
- (4) 40 CFR 63.7495(a) and (d)
- (5) 40 CFR 63.7499(l)
- (6) 40 CFR 63.7500(a)(1), (a)(3), (b), and (f)
- (7) 40 CFR 63.7501
- (8) 40 CFR 63.7505(a)
- (9) 40 CFR 63.7510(g)
- (10) 40 CFR 63.7515(d)
- (11) 40 CFR 63.7530(e)
- (12) 40 CFR 63.7540(a)(11), (a)(12), (a)(13), (b), and (d)
- (13) 40 CFR 63.7545(a), (c), and (h)
- (14) 40 CFR 63.7550(a), (b), (c), (d), and (h)(3)
- (15) 40 CFR 63.7555(a), (h), (i), and (j)
- (16) 40 CFR 63.7560
- (17) 40 CFR 63.7565
- (18) 40 CFR 63.7570
- (19) 40 CFR 63.7575
- (20) Table 3 (items 1, 2, 3, and 5)
- (21) Table 9
- (22) Table 10

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Haynes International, Inc.
Source Address: 2000 W. Defenbaugh St., Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009

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 AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Haynes International, Inc.
Source Address: 2000 W. Defenbaugh St., Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• 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• 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 ₂ , VOC, NO _x , 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: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: the five (5) 4-Hi mill preheat furnaces, two (2) 4-Hi mill steckle furnaces, and the one (1) strip annealing furnace A&K
Parameter: NOx emissions
Limit: The usage of natural gas in the five (5) 4-Hi mill preheat furnaces, the two (2) 4-Hi mill steckle furnaces, and the one (1) strip annealing furnace A&K, shall be limited to a total of 780.0 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Natural Gas Usage This Month (MMCF)	Natural Gas Usage Previous 11 Months (MMCF)	12 Month Total Natural Gas Usage (MMCF)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: two (2) 4-Hi mill preheat furnaces (Numbers 54 and 58)
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: The usage of natural gas in the two (2) 4-Hi mill preheat furnaces (Numbers 54 and 58), shall be limited to a total of 219.0 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Natural Gas Usage This Month (MMCF)	Natural Gas Usage Previous 11 Months (MMCF)	12 Month Total Natural Gas Usage (MMCF)
Month 1			
Month 2			
Month 3			

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: AOD
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the AOD of less than 22,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed (melt) This Month (Tons)	Metal Processed (melt) Previous 11 Months (Tons)	12 Month Total Metal Processed (melt) (Tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: EAF
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the EAF of less than 22,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed (melt) This Month (Tons)	Metal Processed (melt) Previous 11 Months (Tons)	12 Month Total Metal Processed (melt) (Tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: AOD/EAF Canopy Hood
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the AOD/EAF Canopy Hood of less than 22,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed (melt) This Month (Tons)	Metal Processed (melt) Previous 11 Months (Tons)	12 Month Total Metal Processed (melt) (Tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: ESR Process
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the ESR Process of less than 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed (melt) This Month (Tons)	Metal Processed (melt) Previous 11 Months (Tons)	12 Month Total Metal Processed (melt) (Tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: Sawing/Grinding Operations collectively
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the Sawing/Grinding Operations combined of less than 114,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed This Month (Tons)	Metal Processed Previous 11 Months (Tons)	12 Month Total Metal Processed (Tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: Shot Blasting Operations collectively
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the Shot Blasting Operations combined of less than 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed This Month (Tons)	Metal Processed Previous 11 Months (Tons)	12 Month Total Metal Processed (Tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: Acid Pickling Line (R1)
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the Acid Pickling Line (R1) combined of less than 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed This Month (Tons)	Metal Processed Previous 11 Months (Tons)	12 Month Total Metal Processed (Tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: Acid Pickling Line (R35)
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the Acid Pickling Line (R35) of less than 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed This Month (Tons)	Metal Processed Previous 11 Months (Tons)	12 Month Total Metal Processed (Tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: Strip Anneal and Kolene operation (CAP Kolene)
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the strip anneal and Kolene operation of less than 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER:

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed This Month (Tons)	Metal Processed Previous 11 Months (Tons)	12 Month Total Metal Processed (Tons)

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Signature: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Haynes International, Inc.
Source Address: 2000 W. Defenbaugh St., Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009

Months: _____ to _____ Year: _____

<p>This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. Any deviation from the requirements of this permit, 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	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

**Technical Support Document (TSD) for a
Part 70 Significant Source Modification
and Significant Permit Modification**

Source Description and Location

Source Name:	Haynes International, Inc.
Source Location:	2000 W. Defenbaugh St., Kokomo, IN 46902
County:	Howard
SIC Code:	3356 (Rolling, Drawing, and Extruding of Nonferrous Metals, Except Copper and Aluminum)
Operation Permit No.:	T067-30930-00009
Operation Permit Issuance Date:	February 11, 2013
Significant Source Modification No.:	067-36203-00009
Significant Permit Modification No.:	067-36247-00009
Permit Reviewer:	Madhurima Moulik

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T067-30930-00009 on February 11, 2013. The source has since received the following approvals:

- (a) Minor Source Modification No. 067-34403-00009, issued on July 31, 2015; and
- (b) Significant Permit Modification No. 067-34519-00009, issued on September 24, 2015.

County Attainment Status

The source is located in Howard County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Unclassifiable or attainment effective April 5, 2005, for the annual PM _{2.5} standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM _{2.5} standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Howard County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM_{2.5}**
 Howard County has been classified as attainment for PM_{2.5}. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**
 Howard County has been classified as attainment or unclassifiable in Indiana for all other regulated criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a secondary metal production plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (ton/yr)
PM	49.44
PM ₁₀	65.49
PM _{2.5}	65.48
SO ₂	7.38
NO _x	289.15
VOC	20.31
CO	228.55
Single HAP (Nickel)	20.49
Total HAPs	28.26

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, excluding GHGs, is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).
- (b) These emissions are based upon the Technical Support Document (TSD) for Minor Source Modification No. 067-34403-00009 and Part 70 Operating Permit Renewal No.

T067-30930-00009, issued February 11, 2013. (Note: The emissions included in the table above do not include the potential to emit of the unpermitted cold rolling mills MKW 90 and MKW 100).

- (c) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP or greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Haynes Internation, Inc. on August 28, 2015, relating to the construction of a Continuous Anneal and Pickle (CAP) Line and adding a cold rolling mill operation to the permit.

The following is a list of the proposed emission units and pollution control devices:

- (a) One (1) natural gas-fired annealing furnace, identified as CAP Furnace, approved in 2015 for construction, with a maximum heat input of 20 MMBtu/hr, exhausting within the plant.

Under NESHAP, Subpart DDDDD, CAP Furnace is an affected source.

- (b) One (1) strip anneal and Kolene operation, identified as CAP Kolene, approved in 2015 for construction, with a maximum capacity of 6.0 tons of metal per hour, with one (1) spray quench tank, one (1) mechanical brush scrubber, and one (1) fume scrubber, exhausting through one (1) stack (S/V ID: FS-7).

- (c) One (1) natural gas-fired heater, identified as Kolene Tank Heater, approved in 2015 for construction, supporting CAP Kolene, with a maximum heat input of 4.25 MMBtu/hr, exhausting within the plant.

Under NESHAP, Subpart DDDDD, Kolene Tank Heater is an affected source.

- (d) One (1) natural draft, contact cooling tower, identified as CT#18, approved in 2015 for construction, with a 396 gallons per minute circulation rate, supporting the CAP line, exhausting to the atmosphere.

In addition, the following insignificant activities installed previously (MKW 90 was installed in 1965 and MKW 100 was installed in 1966) have been added to the permit:

- (a) One (1) cold rolling mill operation, identified as MKW 90 (constructed in 1965) and MKW 100 (constructed in 1966), both permitted in 2015, with a combined maximum capacity of 6.00 ton/hr, using a non-VOC lubricant at a maximum rate of 0.75 lb/ton of metal.

The source has also proposed to relocate cutting torches from building R-45 to R-25 and each torch in building R-25 will be controlled by dust collector DC-41.

Enforcement Issues

IDEM, OAQ is aware that the source failed to perform stack testing not later than one hundred eighty days after the issuance of T067-30930-00009, as required by Conditions D.0.4(a)(1), D.0.4(a)(2), and D.0.4(a)(4). The source performed stack testing of DC-14, DC-22, and DC-18 in May 2012. T167-30930-00009 was issued on February 11, 2013. The IDEM, OAQ has accepted the stack test results from the May 2012 testing to demonstrate compliance with the DC-14, DC-22, and DC-18 emission limitations contained in Conditions D.0.1(c) and D.0.2. As part of this modification, the IDEM, OAQ is revising Conditions D.0.4(a)(1) through D.0.4(a)(4) to specify that the Permittee shall perform PM, PM10, and PM2.5 testing not later than five (5) years from the

date of the most recent valid compliance demonstration. IDEM is reviewing this matter and will take the appropriate action.

IDEM is aware that there is a pending enforcement action for the construction and operation of various emissions units prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission 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, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

Increase in PTE Before Controls of the Modification (New Units)	
Pollutant	Potential To Emit (ton/yr)
PM	79.93
PM ₁₀	80.53
PM _{2.5}	80.53
SO ₂	0.06
NO _x	10.41
VOC	0.57
CO	8.75
Total HAPs	0.25
Worst HAP	0.19 Hexane

Appendix A of this TSD reflects the unrestricted potential emissions of the modification.

This source modification is subject to 326 IAC 2-7-10.5(g)(4) because the potential to emit of PM, PM₁₀, and PM_{2.5} is greater than twenty-five (25) tons per year before control. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d)(1), because the modification requires significant changes in existing monitoring Part 70 permit terms and conditions.

Permit Level Determination – PSD

PSD Hybrid Test

The Permittee has provided information as part of the application for this approval that, based on the hybrid test in 326 IAC 2-2-2(d)(5) (which involves both an actual-to-projected actual applicability test for existing units and an actual-to-potential applicability test for new units), this modification at a major stationary source will not be major for Prevention of Significant Deterioration under 326 IAC 2-2-1. IDEM, OAQ has not reviewed the actual-to-projected actual applicability information and will not be making any determination in this regard as part of this approval. The applicant will be required to keep records and report in accordance with Source obligation in 326 IAC 2-2-8. See Appendix A of this Technical Support Document for the detailed analysis.

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process / Emission Unit	CAP Line Project Emissions (ton/yr)							
	PM	PM ₁₀	PM _{2.5} *	SO ₂	NO _x	VOC	CO	GHG
<u>New Units - Baseline To Potential Emissions</u>								
Cooling Tower (CT# 18)	0.89	0.89	0.89	-	-	-	-	-
CAP Line NG Combustion (CAP Furnace + Kolene Tank Heater)	0.20	0.79	0.79	0.06	10.41	0.57	8.75	12,570
Kolene Rinse Tank**	7.41	7.41	7.41	-	-	-	-	-
PTE New Units	9.10	9.10	9.10	0.06	10.41	0.57	8.75	12,570
<u>Affected Units- Actual to Projected Actual Emissions (ATPA) Increases</u>								
Acid Strip Pickling (R35)	0.005	0.005	0.005	-	1.765	-	-	-
Shot Blasting (DC-36)	0.321	0.276	0.276	-	-	-	-	-
Melt Shop (EAF, AOD, ESR)	0.09	0.126	0.126	0.064	0.555	0.049	0.674	-
Melt Shop Canopy Hood	0.222	0.358	0.358	0.064	0.002	0.048	0.032	-
Cold Rolling	0.037	0.037	0.037	-	-	-	-	-
Coil Grinding	-	-	-	-	-	-	-	-
ATPA Affected Units	0.675	0.802	0.802	0.128	2.322	0.097	0.706	-
Total for Modification	9.77	9.90	9.90	0.19	12.74	0.67	9.45	<75,000
Significant Thresholds	25	15	10	40	40	40	100	75,000 CO _{2e}

*PM_{2.5} listed is direct PM_{2.5}.

** The emissions from CAP units have been limited in order to make the CAP project minor under 326 IAC 2-2.

Note:

The products processed at the new emission units in the CAP line project will be sequentially processed by the acid pickling line (R35) and rotoblast shot blaster (DC-36).

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional

Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

This modification to an existing major PSD stationary source is not major because:

- (a) The emissions increase of each PSD regulated pollutant, excluding GHGs, are less than the PSD significant thresholds; and
- (b) The emissions increase of GHGs from this modification to an existing major PSD source are less than seventy-five thousand (75,000) tons of CO₂ equivalent (CO₂e) emissions per year.

Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

The uncontrolled/unlimited potential to emit PM, PM₁₀, and PM_{2.5}, from the 2015 CAP project are in excess of the PSD major source thresholds; therefore, Haynes International, Inc. has accepted the following PSD minor limits:

- (a) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM, PM₁₀, and PM_{2.5} emissions shall not exceed the emissions limits listed below and the metal throughput to the strip anneal and Kolene operation, identified as CAP Kolene, shall not exceed 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Emission Unit / Process	Metal Throughput Limit (tons/yr)	Emission Factor / Emission Limits (lb/ton)		
		PM	PM ₁₀	PM _{2.5}
Strip anneal and Kolene operation (CAP Kolene)	28,500	0.52	0.52	0.52

Compliance with the above limits, combined with the potential to emit PM, PM₁₀, and PM_{2.5} from all other emission units from the CAP line project in 2015, shall ensure PM, PM₁₀, and PM_{2.5} emissions from the CAP line project in 2015 are below twenty-five (25) (PM), fifteen (15) (PM₁₀), and ten (10) (PM_{2.5}) tons per year respectively, rendering 326 IAC 2-2 not applicable to the modification.

Discussion of Concurrent Projects

Additional information regarding recent projects at the Haynes International, Inc. is provided below along with justification for why these projects are not related to the CAP Line project.

1. Significant Source Modification No. SSM 067-31584-00009 issued on January 25, 2013.

In SSM No. 067-31584-00009, the Permittee received approval for modification to the source under a project henceforth entitled "2013 Efficiency Project". This project included an increase in production capacity of the existing metal melt furnaces at this facility. The CAP Line Project includes the installation of an annealing furnace which is downstream of the existing melt furnaces. Since the two projects are within a 2-3 year period, it is

appropriate to conduct a more detailed analysis to determine if the emissions increases from the two projects should be aggregated.

The proposed CAP Line Project will allow the plant to produce products that do not need to be bright annealed in the existing annealing furnace, and can be discolored during the bright annealing process requiring additional rework to remove the discoloration, making the process inefficient. The incentive for this project is to allow for more flexibility in the product types available to customers, and is not designed to accommodate an increase in the total production of the existing melt furnaces.

The Permittee has submitted information stating that the CAP Line Project is a standalone project not related to the 2013 Efficiency Project. The capital expenditure for the CAP Line Project was authorized in 2015, and the funding is in no way related to the 2013 Efficiency Project.

Therefore, the two projects have not been aggregated for purposes of determining PSD applicability.

2. Minor Source Modification No. MSM 067-34403-00009 issued on July 31, 2015
This Minor Source Modification incorporated new emission units including a powder torch and insignificant activities (an annealing furnace, a cooling tower and small combustion units). It is not related to the CAP project permitted in SSM No. 067-36203-00009. The torch cutting and the insignificant activities included in MSM 067-34403-00009 are unrelated to the alternative annealing operation, which is being undertaken to allow for more flexibility in response to specific customer demands for certain types of alloys.

Federal Rule Applicability Determination

New Source Performance Standards:

There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

National Emission Standards for Hazardous Air Pollutants:

- (a) The annealing furnace (CAP furnace), with a maximum heat input capacity of 20 MMBtu/hr is subject to the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63.7480, Subpart DDDDD, which is incorporated by reference as 326 IAC 20-95, because the source operates at least one industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAPs.

Non applicable portions of the NESHAP will not be included in the permit. The annealing furnace (CAP furnace) is subject to the following portions of Subpart DDDDD:

- (1) 40 CFR 63.7480
- (2) 40 CFR 63.7485
- (3) 40 CFR 63.7490(a) and (b)
- (4) 40 CFR 63.7495(a) and (d)
- (5) 40 CFR 63.7499(l)
- (6) 40 CFR 63.7500(a)(1), (a)(3), (b), and (f)
- (7) 40 CFR 63.7501
- (8) 40 CFR 63.7505(a)
- (9) 40 CFR 63.7510(g)
- (10) 40 CFR 63.7515(d)
- (11) 40 CFR 63.7530(e)
- (12) 40 CFR 63.7540(a)(10), (a)(13), (b), and (d)

- (13) 40 CFR 63.7545(a), (c), and (h)
- (14) 40 CFR 63.7550(a), (b), (c), (d), and (h)(3)
- (15) 40 CFR 63.7555(a), (h), (i), and (j)
- (16) 40 CFR 63.7560
- (17) 40 CFR 63.7565
- (18) 40 CFR 63.7570
- (19) 40 CFR 63.7575
- (20) Table 3 (items 1, 2, 3, and 5)
- (21) Table 9
- (22) Table 10

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

- (b) The heater (Kolene Tank Heater), with a maximum heat input capacity of 4.25 MMBtu/hr is subject to the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63.7480, Subpart DDDDD, which is incorporated by reference as 326 IAC 20-95, because the source operates at least one industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAPs.

Non applicable portions of the NESHAP will not be included in the permit. The Kolene Tank Heater is subject to the following portions of Subpart DDDDD:

- (1) 40 CFR 63.7480
- (2) 40 CFR 63.7485
- (3) 40 CFR 63.7490(a) and (b)
- (4) 40 CFR 63.7495(a) and (d)
- (5) 40 CFR 63.7499(l)
- (6) 40 CFR 63.7500(a)(1), (a)(3), (b), and (f)
- (7) 40 CFR 63.7501
- (8) 40 CFR 63.7505(a)
- (9) 40 CFR 63.7510(g)
- (10) 40 CFR 63.7515(d)
- (11) 40 CFR 63.7530(e)
- (12) 40 CFR 63.7540(a)(11), (a)(12), (a)(13), (b), and (d)
- (13) 40 CFR 63.7545(a), (c), and (h)
- (14) 40 CFR 63.7550(a), (b), (c), (d), and (h)(3)
- (15) 40 CFR 63.7555(a), (h), (i), and (j)
- (16) 40 CFR 63.7560
- (17) 40 CFR 63.7565
- (18) 40 CFR 63.7570
- (19) 40 CFR 63.7575
- (20) Table 3 (items 1, 2, 3, and 5)
- (21) Table 9
- (22) Table 10

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

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers, Subpart Q, are not applicable to the source because the source does not operate with chromium-based water treatment chemicals.

- (d) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

Compliance Assurance Monitoring:

Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

- (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;
- (2) 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.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

CAM Applicability Analysis							
Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (ton/yr)	Controlled PTE (ton/yr)	Part 70 Major Source Threshold (ton/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
CAP Kolene (PM)	Y	Y	78.84	0.79	100*	N	N
CAP Kolene (PM ₁₀ /PM _{2.5})	Y	Y	78.84	0.79	100	N	N

*PM does not have a major source threshold because under the Part 70 Permit Program (40 CFR 70), PM is not considered as a "regulated air pollutant". PM10 is used as a surrogate for PM to determine if the emission unit is subject to CAM.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of modification.

State Rule Applicability Determination

326 IAC 2-2 (PSD)

PSD applicability is discussed under the Permit Level Determination – PSD section.

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

The operation of each new or modified unit will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

The source is located in Howard County, is not specifically listed in 326 IAC 6.5-22 through 326 IAC 6.5-10, but has the potential to emit one hundred (100) tons or more of particulate matter per year. Therefore the source is subject to the requirements of 326 IAC 6.5.

326 IAC 2-7-6(5) (Annual Compliance Certification)

The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual

compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

Annealing Furnace (CAP furnace)

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

The CAP Furnace is not subject to the requirements of 326 IAC 6-2 because it is not a source of indirect heating. Pursuant to 326 IAC 1-2-19, combustion for indirect heating is defined as "the combustion of fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion".

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

Pursuant to 326 IAC 6-3-1(c)(3), the requirements of 326 IAC 6-3 shall not apply if a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule is established in 326 IAC 6.5, concerning particulate matter emissions. The CAP furnace is subject to the requirements of 326 IAC 6.5, therefore the requirements of 326 IAC 6-3 are not applicable to this unit and are not included in the permit.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the CAP furnace shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

Natural gas-fired Heater (Kolene Tank Heater)

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

Pursuant to 326 IAC 6-2-1(e) if any limitation established by this rule is inconsistent with applicable limitations contained in 326 IAC 6.5 and 326 IAC 6.8, then the limitations contained in 326 IAC 6.5 and 326 IAC 6.8 prevail. The Kolene Tank Heater is subject to a more stringent emission limitation under 326 IAC 6.5. Therefore, the requirements of 326 IAC 6-2 does not apply.

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

Pursuant to 326 IAC 6-3-1(c)(3), the requirements of 326 IAC 6-3 shall not apply if a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule is established in 326 IAC 6.5, concerning particulate matter emissions. The Kolene Tank Heater is subject to the requirements of 326 IAC 6.5, therefore the requirements of 326 IAC 6-3 are not applicable to this unit and are not included in the permit.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the Kolene Tank Heater shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

Natural Draft Contact Cooling Tower (CT #18)

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

Pursuant to 326 IAC 6-3-1(c)(3), the requirements of 326 IAC 6-3 shall not apply if a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule is established in 326 IAC 6.5, concerning particulate matter emissions. The Natural Draft Contact Cooling Tower (CT #18) is subject to the requirements of 326 IAC 6.5, therefore the requirements of 326 IAC 6-3 are not applicable to this unit and are not included in the permit.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-2, particulate matter emissions from the Natural Draft Contact Cooling Tower (CT #18) shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

Strip Anneal and Kolene Operation (CAP Kolene)

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

Pursuant to 326 IAC 6-3-1(c)(3), the requirements of 326 IAC 6-3 shall not apply if a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule is established in 326 IAC 6.5, concerning particulate matter emissions. The strip anneal and Kolene operation (CAP Kolene) is subject to the requirements of 326 IAC 6.5, therefore the requirements of 326 IAC 6-3 are not applicable to this unit and are not included in the permit.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the strip anneal and Kolene operation (CAP Kolene) shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

Cold Rolling Mill Operation (MKW 90 and 100)

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

Pursuant to 326 IAC 6-3-1(c)(3), the requirements of 326 IAC 6-3 shall not apply if a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule is established in 326 IAC 6.5, concerning particulate matter emissions. The Cold Rolling Mill Operation is subject to the requirements of 326 IAC 6.5, therefore the requirements of 326 IAC 6-3 are not applicable to these units and are not included in the permit.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from each of the Cold Rolling Mill Operation shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

326 IAC 8-1-6 (New Facilities: General Reduction Requirements: VOC Rules)

The Cold Rolling Mill Operation is not subject to the requirements of 326 IAC 8-1-6 because the Cold Rolling Mill Operation does not have potential VOC emissions of twenty-five (25) tons or more per year. The Cold Rolling Mill Operation uses a non-VOC oil lubricant.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

The Compliance Determination Requirements applicable to this modification are as follows:

- (a) **Particulate Control**
 The fume scrubber, identified as FS-7, shall be in operation and control emissions from CAP Kolene at all times when the CAP Kolene is in operation.

The Compliance Monitoring Requirements applicable to this modification are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Fume Scrubber FS-7 (CAP Kolene)	Visible Emissions	Daily	Normal-Abnormal	Response Steps
	Flowrate		equal to or greater than 100 gallons per min	

These monitoring conditions are necessary because the fume scrubber for the CAP Kolene must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T067-30930-00009. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

1. The facility descriptions in sections A.2, D.2, and D.3 have been revised to add the proposed CAP Line and associated emissions units.
2. Section A.3 has been revised to incorporate previously installed insignificant activities and make other descriptive changes.
3. Condition D.0.4 - Testing Requirements has been revised to clarify the schedule for stack required tests.
4. Condition D.2.1 - PSD Minor Limits has been revised to add emissions limitations for the proposed CAP Line in order to render 326 IAC 2-2 not applicable to SSM No. 067-36203-00009.
5. Condition D.2.5 - Scrubber Operating Conditions has been revised to include the compliance requirements for the fume scrubber FS-7 for the proposed CAP Line.
6. Condition D.2.7 - Parametric Monitoring has been revised to add the parametric monitoring requirement for the fume scrubber FS-7.
7. Condition D.2.8 - Recordkeeping Requirements has been revised to include requirements for the throughput limitations and requirements related to monitoring for the proposed units.
8. Condition D.3.1 - Particulate Matter has been revised to add the PM limitations under 326 IAC 6.5 that are applicable to the proposed CAP Furnace and Kolene Tank Heater.

Additional Changes:

1. IDEM, OAQ has corrected the source's address zip code to 46902 throughout the permit.
2. IDEM, OAQ has corrected minor typographical errors throughout the permit.

A.2 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:

...

Continuous Anneal and Pickle (CAP) Line

- (q) **One (1) natural gas-fired annealing furnace, identified as CAP Furnace, approved in 2016 for construction, with a maximum heat input of 20 MMBtu/hr, exhausting within the plant.**

Under NESHAP, Subpart DDDDD, CAP Furnace is an affected source.

- (r) **One (1) strip anneal and Kolene operation, identified as CAP Kolene, approved in 2016 for construction, with a maximum capacity of 6.0 tons of metal per hour, with one (1) spray quench tank, one (1) mechanical brush scrubber, and one (1) fume scrubber, exhausting through one (1) stack (S/V ID: FS-7).**
- (s) **One (1) natural gas-fired heater, identified as Kolene Tank Heater, approved in 2016 for construction, supporting CAP Kolene, with a maximum heat input of 4.25 MMBtu/hr, exhausting within the plant.**

Under NESHAP, Subpart DDDDD, Kolene Tank Heater is an affected source.

- (t) **One (1) natural draft, contact cooling tower, identified as CT#18, approved in 2016 for construction, with a 396 gallons per minute circulation rate, supporting the CAP line, exhausting to the atmosphere.**

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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

- ...
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment, including the following: [326 IAC 6.5-1-2]
 - ...
 - (2) Cutting torches including:
 - ...
 - (F) 2 – 1" plasma torches located in building R-4525 (controlled by dust collector DC-41, permitted in 2016);
 - (G) 1 – 2" plasma torch located in building R-45-25 (controlled by dust collector DC-4041, permitted in 2016);
 - ...
- (gg) **One (1) cold rolling mill operation, identified as MKW 90 (constructed in 1965) and MKW 100 (constructed in 1966), both permitted in 2016, with a combined maximum capacity of 6.00 ton/hr, using a non-VOC lubricant at a maximum rate of 0.75 lb/ton of metal.**
- ...

D.0.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Conditions D.0.1(c) and D.0.2, the Permittee shall perform PM, PM₁₀, and PM_{2.5} testing on the following:
 - (1) The AOD vessel dust collector stack exhaust (DC-14) utilizing methods as approved by the Commissioner not later than ~~180 days after the issuance of this permit and at least once every~~ five (5) years from the date of the most recent valid compliance demonstration.
 - (2) The EAF dust collector stack exhaust (DC-22) utilizing methods as approved by the Commissioner not later than ~~180 days after the issuance of this permit and at least once every~~ five (5) years from the date of the most recent valid compliance demonstration.
 - (3) The AOD/EAF Canopy Hood baghouse stack exhaust (DC-38) utilizing methods

as approved by the Commissioner not later than ~~180 days after the issuance of this permit and at least once every~~ five (5) years from the date of the most recent valid compliance demonstration.

- (4) The ESR dust collector stack exhaust (DC-18) utilizing methods as approved by the Commissioner not later than ~~180 days after the issuance of this permit and at least once every~~ five (5) years from the date of the most recent valid compliance demonstration.

...

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

~~Facility~~ **Emissions Unit** Description [326 IAC 2-7-5(15)]

...

Continuous Anneal and Pickle (CAP) Line

(r) **One (1) strip anneal and Kolene operation, identified as CAP Kolene, approved in 2016 for construction, with a maximum capacity of 6.0 tons of metal per hour, with one (1) spray quench tank, one (1) mechanical brush scrubber, and one (1) fume scrubber, exhausting through one (1) stack (S/V ID: FS-7).**

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

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

D.2.1 PSD Minor Limits [326 IAC 2-2]

- (a) PM, PM₁₀, and PM_{2.5} emissions from the following operations that have been installed or modified as part of the phased efficiency project permitted in 2013 shall be limited as follows to ensure that the requirements of 326 IAC 2-2 (PSD) do not apply to the modifications:

- (a1) Pursuant to 326 IAC 2-2, metal throughput to the acid pickling lines, identified as R1 and R35, shall be limited to less than 28,500 tons, each, per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b2) The particulate emissions from metal acid pickling lines, identified as R1 and R35, shall be limited to the pound per ton limits listed in the following table for each process:

...

R1 Acid Batch Pickling Line (FS-1)	28,500	0.002	0.002	0.002
------------------------------------	--------	-------	-------	-------

...

- (b) **In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to SSM 167-36203-00009, the PM, PM₁₀, and PM_{2.5} emissions shall not exceed the emissions limits listed below and the metal throughput to the strip anneal and Kolene operation, identified as CAP Kolene, shall not exceed 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

Emission Unit / Process	Metal Throughput Limit (tons/yr)	Emission Factor / Emission Limits (lb/ton)		
		PM	PM ₁₀	PM _{2.5}

Strip anneal and Kolene operation (CAP Kolene)	28,500	0.52	0.52	0.52
---	---------------	-------------	-------------	-------------

Compliance with limits in Condition D.2.1(b), combined with the potential to emit PM, PM₁₀, and PM_{2.5} from all other emission units from the CAP line project, shall ensure PM, PM₁₀, and PM_{2.5} emissions from the CAP line project are below twenty-five (25) (PM), fifteen (15) (PM₁₀), and ten (10) (PM_{2.5}) tons per year respectively, rendering 326 IAC 2-2 not applicable to the modification.

...

D.2.5 Scrubber Operating Condition

- (a)** In order to ~~comply~~ **assure compliance** with ~~condition~~ **Conditions D.2.1(a) and D.2.2**, the fume scrubbers identified as FS-1 and FS-2 shall be operated at all times when the R1 batch pickling and R35 strip pickling lines are in operation, respectively.
- (b)** **In order to assure compliance with Condition D.2.1(b), the fume scrubber, identified as FS-7, shall be in operation and controlling emissions from CAP Kolene at all times when the CAP Kolene is in operation.**

...

D.2.7 Parametric Monitoring

- (a)** The Permittee shall monitor and record the pH and flow rate of ~~each of the~~ **fume scrubbers, identified as FS-1 and FS-2**, at least once daily when the units are in operation. When for any one (1) reading, the flow rate of either of the fume scrubbers is less than the minimum specified below or a minimum established during the latest stack test, or the pH of the scrubber is less than the value specified below or a value established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A flow rate that is less than the minimum specified below or a pH reading that is less than the value specified below is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Scrubber	Flow rate	pH
FS-1	150 gallons per minute	above 7
FS-2	75 gallons per minute	above 7

- (b)** **The Permittee shall record the flow rate of the fume scrubber, identified as FS-7, at least once daily when the unit is in operation. When for any one (1) reading, if the flow rate is less than the minimum rate, the Permittee shall take a reasonable response. The minimum flow rate for this unit is 100 gallons per minute, unless a different minimum flow rate is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A flow rate that is less than the minimum rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.**

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

D.2.8 Record Keeping Requirements

- (a)** ~~In order to~~ **To document the compliance status with Condition D.2.1(a), the Permittee shall maintain records of the total amount of all metals processed in the acid pickling lines, identified as R1 and R35.**
- (b)** **To document the compliance status with Condition D.2.1(b), the Permittee shall maintain records of the total amount of all metals processed in the strip anneal and Kolene operation, identified as CAP Kolene.**

- (bc) ...
- (ed) To document the compliance status with Condition D.2.7(a), the Permittee shall maintain records once per day of the pH and flow rate ~~in each~~ for the fume scrubbers, **identified as FS-1 and FS-2**, during normal operation. The Permittee shall include in its daily record when a pH or flow rate reading is not taken and the reason for the lack of a pH or flow rate reading (e.g. the process did not operate that day).
- (de) **To document the compliance status with Condition D.2.7(b), the Permittee shall maintain records once per day of the flow rate for the fume scrubber, identified as FS-7, during normal operation. The Permittee shall include in its daily record when a flow rate reading is not taken and the reason for the lack of a flow rate reading (e.g. the process did not operate that day).**
- (f) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

...

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Natural Gas Combustion Units

...

Continuous Anneal and Pickle (CAP) Line

- (q) **One (1) natural gas-fired annealing furnace, identified as CAP Furnace, approved in 2016 for construction, with a maximum heat input of 20 MMBtu/hr, exhausting within the plant.**

Under NESHAP, Subpart DDDDD, CAP Furnace is an affected source.

- (s) **One (1) natural gas-fired heater, identified as Kolene Tank Heater, approved in 2016 for construction, supporting CAP Kolene, with a maximum heat input of 4.25 MMBtu/hr, exhausting within the plant.**

Under NESHAP, Subpart DDDDD, Kolene Tank Heater is an affected source.

(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 Matter (PM) [326 IAC 6.5-1-2]

...

- (c) **Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the CAP Furnace shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).**
- (d) **Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the Kolene Tank Heater shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).**

...

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Facility Emissions Unit Description [326 IAC 2-7-5(15)]:

...

Continuous Anneal and Pickle (CAP) Line

(t) **One (1) natural draft, contact cooling tower, identified as CT#18, approved in 2016 for construction, with a 396 gallons per minute circulation rate, supporting the CAP line, exhausting to the atmosphere.**

Insignificant Activities

...

(c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment including the following: [326 IAC 6.5-1-2]

(2) Cutting torches including:

- (A) 1 – 1" plasma torch located in building R-24;
- (B) 1 – 1" plasma torch located in building R-30;
- (C) 3 – 0.5" plasma torches located in building R-31;
- (D) 7 – 0.3" plasma torches located in building R-35;
- (E) 3 – 1" plasma torches located in building R-36;
- (F) 2 – 1" plasma torches located in building R-4525 (**controlled by dust collector DC-41, permitted in 2016**);
- (G) 1 – 2" plasma torch located in building R-45-25 (controlled by dust collector DC-4041, **permitted in 2016**);

...

(gg) **One (1) cold rolling mill operation, identified as MKW 90 (constructed in 1965) and MKW 100 (constructed in 1966), both permitted in 2016, with a combined maximum capacity of 6.00 ton/hr, using a non-VOC lubricant at a maximum rate of 0.75 lb/ton of metal.**

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

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

D.4.1 Particulate Matter (PM) [326 IAC 6.5-1-2]

(a) Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the following insignificant activities shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf):

(1) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment including the following:

...

(B) Cutting torches including:

- (1) 1 – 1" plasma torch located in building R-24;
- (2) 1 – 1" plasma torch located in building R-30;
- (3) 3 – 0.5" plasma torches located in building R-31;
- (4) 7 – 0.3" plasma torches located in building R-35;
- (5) 3 – 1" plasma torches located in building R-36;

- (6) 2 – 1” plasma torches located in building R-4525 (**controlled by dust collector DC-41, permitted in 2016**);
- (7) 1 – 2” plasma torch located in building R-45-25 (controlled by dust collector DC-4041, **permitted in 2016**);

...

(c) Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the powder torch, and contact cooling towers, identified as CT #2, CT #3, ~~and CT#12~~, and **CT#18**, shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

(d) Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from each of the Cold Rolling Mill Operation shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

...

SECTION E.1 ~~EMISSIONS UNIT OPERATION CONDITIONS~~ NSPS

New Source Performance Standards (**NSPS**) Requirements [326 IAC 2-7-5(1)] ~~for Small Industrial-Commercial-Institutional Steam Generating Units, Subpart Dc~~

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

~~Pursuant to 40 CFR 60, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1-1.~~

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart Dc.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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**

SECTION E.2 ~~NESHAP EMISSIONS UNIT OPERATION CONDITIONS~~

National Emissions Standards for Hazardous Air Pollutants (**NESHAP**) Requirements [326 IAC 2-7-5(1)] ~~for Stationary Reciprocating Internal Combustion Engines, Subpart ZZZZ~~

E.2.1 General Provisions Relating to **National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 NESHAP** [326 IAC 20-82-1] [40 CFR Part 63, Subpart A]

~~The provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-82-1, apply to the emission units described in this section except when otherwise specified in 40 CFR Part 63, Subpart ZZZZ.~~

(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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**

SECTION E.3 NSPS EMISSIONS UNIT OPERATION CONDITIONS

**New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)] for Stationary
Compression Ignition Internal Combustion Engines, Subpart IIII**

**E.3.1 General Provisions Relating to New Source Performance Standards NSPS IIII [326 IAC 12] [40
CFR Part 60, Subpart A]**

~~The provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the emergency generators described in this section except when otherwise specified in 40 CFR Part 60, Subpart IIII.~~

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart IIII.**
- (b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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**

SECTION E.4 NSPS EMISSIONS UNIT OPERATION CONDITIONS

**New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)] (NSPS) for Stationary
Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ]**

**E.4.1 General Provisions Relating to New Source Performance Standards NSPS JJJJ [326 IAC 12]
[40 CFR Part 60, Subpart A]**

~~The provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the emergency generators described in this section except when otherwise specified in 40 CFR Part 60, Subpart JJJJ.~~

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart JJJJ**
- (b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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**

SECTION E.5 **NESHAP EMISSIONS UNIT OPERATION CONDITIONS**

Emissions Unit Description:

...

Continuous Anneal and Pickle (CAP) Line

- (q) **One (1) natural gas-fired annealing furnace, identified as CAP Furnace, approved in 2016 for construction, with a maximum heat input of 20 MMBtu/hr, exhausting within the plant.**

Under NESHAP, Subpart DDDDD, CAP Furnace is an affected source.

- (s) **One (1) natural gas-fired heater, identified as Kolene Tank Heater, approved in 2016 for construction, supporting CAP Kolene, with a maximum heat input of 4.25 MMBtu/hr, exhausting within the plant.**

Under NESHAP, Subpart DDDDD, Kolene Tank Heater is an affected source.

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

National Emissions Standards for Hazardous Air Pollutants (NESHAP) Requirements: ~~Industrial, Commercial, and Institutional Boilers and Process Heaters, Subpart DDDDD [326 IAC 2-7-5(1)]~~

E.5.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

~~(a) Pursuant to 40 CFR 63.800, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 unless otherwise specified in 40 CFR 63, Subpart DDDDD (National Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters).~~

(a) **Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission units listed above, except as otherwise specified in 40 CFR Part 63, Subpart DDDDD.**

(b) **Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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**

E.5.2 Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP [40 CFR Part 63, Subpart DDDDD]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart DDDDD (included as Attachment A of this permit):

For the emission units identified in Section E.5, except annealing furnace (Number 20), **Kolene Tank Heater, and CAP Furnace:**

- (1) 40 CFR 63.7480
(2) 40 CFR 63.7485

- (3) 40 CFR 63.7490(a), (d)
- (4) 40 CFR 63.7495(b), (d)
- (5) 40 CFR 63.7499(l)
- (6) 40 CFR 63.7500(a)(1), (a)(3)
- (7) 40 CFR 63.7501
- (8) 40 CFR 63.7505(a)
- (9) 40 CFR 63.7515(e)
- (10) 40 CFR 63.7530 (d) and (e)
- (11) 40 CFR 63.7540(a)(10), (a)(11), (a)(12), (b)
- (12) 40 CFR 63.7545(a), (b), (h)
- (13) 40 CFR 63.7550(a), (b), (c), (d), (f)
- (14) 40 CFR 63.7555(a)
- (15) 40 CFR 63.7560
- (16) 40 CFR 63.7565
- (17) 40 CFR 63.7570
- (18) 40 CFR 63.7575
- (19) Table 3 to Subpart DDDDD of Part 63, items 1, 2 and 3
- (20) Table 9 to Subpart DDDDD of Part 63
- (21) Table 10 to Subpart DDDDD of Part 63

For annealing furnace (Number 20) and CAP Furnace:

- (1) 40 CFR 63.7480
- (2) 40 CFR 63.7485
- (3) 40 CFR 63.7490(a) and (b)
- (4) 40 CFR 63.7495(a) and (d)
- (5) 40 CFR 63.7499(l)
- (6) 40 CFR 63.7500(a)(1), (a)(3), (b), and (f)
- (7) 40 CFR 63.7501
- (8) 40 CFR 63.7505(a)
- (9) 40 CFR 63.7510(g)
- (10) 40 CFR 63.7515(d)
- (11) 40 CFR 63.7530(e)
- (12) 40 CFR 63.7540(a)(10), (a)(13), (b), and (d)
- (13) 40 CFR 63.7545(a), (c), and (h)
- (14) 40 CFR 63.7550(a), (b), (c), (d), and (h)(3)
- (15) 40 CFR 63.7555(a), (h), (i), and (j)
- (16) 40 CFR 63.7560
- (17) 40 CFR 63.7565
- (18) 40 CFR 63.7570
- (19) 40 CFR 63.7575
- (20) Table 3 (items 1, 2, 3, and 5)
- (21) Table 9
- (22) Table 10

For Kolene Tank Heater:

- (1) 40 CFR 63.7480
- (2) 40 CFR 63.7485
- (3) 40 CFR 63.7490(a) and (b)
- (4) 40 CFR 63.7495(a) and (d)
- (5) 40 CFR 63.7499(l)
- (6) 40 CFR 63.7500(a)(1), (a)(3), (b), and (f)
- (7) 40 CFR 63.7501
- (8) 40 CFR 63.7505(a)
- (9) 40 CFR 63.7510(g)
- (10) 40 CFR 63.7515(d)
- (11) 40 CFR 63.7530(e)
- (12) 40 CFR 63.7540(a)(11), (a)(12), (a)(13), (b), and (d)

- (13) 40 CFR 63.7545(a), (c), and (h)
- (14) 40 CFR 63.7550(a), (b), (c), (d), and (h)(3)
- (15) 40 CFR 63.7555(a), (h), (i), and (j)
- (16) 40 CFR 63.7560
- (17) 40 CFR 63.7565
- (18) 40 CFR 63.7570
- (19) 40 CFR 63.7575
- (20) Table 3 (items 1, 2, 3, and 5)
- (21) Table 9
- (22) Table 10

...

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

Part 70 Quarterly Report

Source Name: Haynes International, Inc.
Source Address: 2000 West Deffenbaugh Street, Kokomo, Indiana 46902
Part 70 Permit No.: T067-30930-00009
Facility: Strip Anneal and Kolene operation (CAP Kolene)
Parameter: PM, PM₁₀, PM_{2.5} emissions
Limit: throughput of metals to the strip anneal and Kolene operation of less than 28,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER:

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Processed This Month (Tons)	Metal Processed Previous 11 Months (Tons)	12 Month Total Metal Processed (Tons)

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

Form Completed by: _____
Title / Position: _____
Date: _____

Phone: _____
Signature: _____

...

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 067-36203-00009 and Significant Permit Modification No. 067-36247-00009. The staff recommends to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Madhurima Moulik at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-0868 or toll free at 1-800-451-6027 extension 3-0868.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**TSD Appendix A: Emission Calculations
Part 70 Modification Emission Summary**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Source Modification Determination: 326 IAC 2-7-10.5											
Uncontrolled Potential Emissions (ton/year)											
Emission Units	Date of Construction	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	GHGs	Single HAP	Total HAP
Cooling Tower (CT# 18)	2015	0.89	0.89	0.89	-	-	-	-	-	-	-
CAP Line NG Combustion (CAP Furnace and Kolene Tank Heater)	2015	0.20	0.79	0.79	0.06	10.41	0.57	8.75	12,570	0.19 Hexane	0.20
New Kolene Rinse Tank	2015	78.84	78.84	78.84	-	-	-	-	-	4.93E-02 Lead	4.93E-02
Total		79.93	80.53	80.53	0.06	10.41	0.57	8.75	12,570	0.19 Hexane	0.25
Minor Mod.Threshold		5	5	5	10	10	10	25		1	2.5
Significant Mod. Threshold		25	25	25	25	25	25	100		10	25

TSD Appendix A: Emission Calculations
Emission Summary
CAP Line Project - Hybrid Test
Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Hybrid Test Analysis for PSD Applicability

Since the project affects existing and new units, the hybrid test in 326 IAC 2-2-2(d)(5) is being used to evaluate whether the project causes a significant emissions increase. The baseline period for existing emission units was established based on the 2-year period between with the highest emissions. Projected actual emission factors for existing emission units are assumed to be the same as the baseline period emission factors. Projected Actual Emissions are based on 3% demand growth for 5 years (highest is at the end period of the 5 years) Actual hours of operation are not used for this calculation. New and modified equipment Projected Actual Emissions are based on 8,760 hours of operation.

For new units:
Baseline Actual Emissions = 0
Projected Actual Emissions = Potential to Emit (after consideration of controls)
For existing units:
Baseline Actual Emissions and Future Projected Actual Emissions are as provided by the Permittee.
Projected Actual Emissions = Increase of actual throughput of 3% per year for 5 years
BAE - Baseline Actual Emissions; PAE - Projected Actual Emissions

Emissions Unit		24 month period	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs	Lead
New Units											
Cooling Tower (CT# 18)	BAE	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower (CT# 18)	PAE	NA	0.89	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00
CAP Line NG Combustion (CAP Furnace and Kolene Tank Heater)	BAE	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAP Line NG Combustion (CAP Furnace and Kolene Tank Heater)	PAE	NA	0.20	0.79	0.79	0.06	10.41	0.57	8.75	12,570	0.00
New Kolene Rinse Tank	BAE	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Kolene Rinse Tank	PAE	NA	7.41	7.41	7.41	0.00	0.00	0.00	0.00	0.00	2.67E-02
Increase (new units) tons per year			9.10	9.10	9.10	0.06	10.41	0.57	8.75	12570.14	2.67E-02
Existing Units											
Acid Strip Pickling R35	BAE	Sep 2013-Sep 2015	0.004	0.004	0.004	0	1.649	0	0	0	0.00
Acid Strip Pickling R35	PAE	Sep 2019-Sep 2020	0.009	0.009	0.009	0	3.414	0	0	0	0.00
ATPA (tons per year)			0.005	0.005	0.005	0	1.765	0	0	0	0.00
Shot Blasting Units	BAE	Sep 2013-Sep 2015	0.301	0.258	0.258	0	0	0	0	0	0
Shot Blasting Units	PAE	Sep 2019-Sep 2020	0.622	0.534	0.534	0	0	0	0	0	0
ATPA (tons per year)			0.321	0.276	0.276	0	0	0	0	0	0
Melt Shop AOD	BAE	Sep 2013-Sep 2015	0.035	0.265	0.265	0	0.035	0	3.413	0	0
Melt Shop AOD	PAE	Sep 2019-Sep 2020	0.041	0.305	0.305	0	0.041	0	3.925	0	0
ATPA (tons per year)			0.006	0.04	0.04	0	0.006	0	0.512	0	0
Melt Shop EAF	BAE	Sep 2013-Sep 2015	0.265	0.283	0.283	0.424	3.024	0.318	0.831	0	0
Melt Shop EAF	PAE	Sep 2019-Sep 2020	0.305	0.325	0.325	0.488	3.478	0.366	0.956	0	0
ATPA (tons per year)			0.04	0.042	0.042	0.064	0.454	0.048	0.125	0	0
Melt shop ESR	BAE	Sep 2013-Sep 2015	0.295	0.295	0.295	0	0.637	0.007	0.248	0	0
Melt Shop ESR	PAE	Sep 2019-Sep 2020	0.339	0.339	0.339	0	0.732	0.008	0.285	0	0
ATPA (tons per year)			0.044	0.044	0.044	0	0.095	0.001	0.037	0	0
Melt Shop Canopy Hood	BAE	Sep 2013-Sep 2015	1.486	2.388	2.388	0.424	0.014	0.318	0.212	0	0
Melt Shop Canopy Hood	PAE	Sep 2019-Sep 2020	1.708	2.746	2.746	0.488	0.016	0.366	0.244	0	0
ATPA (tons per year)			0.222	0.358	0.358	0.064	0.002	0.048	0.032	0	0
Cold Rolling	BAE	Sep 2013-Sep 2015	0.248	0.248	0.248	0	0	0	0	0	0
Cold Rolling	PAE	Sep 2019-Sep 2020	0.285	0.285	0.285	0	0	0	0	0	0
ATPA (tons per year)			0.037	0.037	0.037	0	0	0	0	0	0
Coil Grinding	BAE	Sep 2013-Sep 2015	0.118	0.012	0.012	0	0	0	0	0	0
Coil Grinding	PAE	Sep 2019-Sep 2020	0.095	0.009	0.009	0	0	0	0	0	0
ATPA (tons per year)			0	0							
Total (Affected Units)			0.675	0.802	0.802	0.128	2.322	0.097	0.706	0	0
Total (tons per year)			9.77	9.90	9.90	0.19	12.74	0.67	9.45	12,570	0.03
PSD Significant Level			25	15	10	40	40	40	100	75,000	0.6

**TSD Appendix A: Emission Calculations
Metal Melting, Pickling, and Insignificant Activities**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

		(tons/hr)	(tons/yr)	Control Device: Dust Collector DC-14				
		5	43,800	Control Efficiency: 99.00%				
		Limited Metal Throughput	2.57	22,500				
AOD (DC-14)	PM lb/ton metal	PM ₁₀ /PM _{2.5} lb/ton metal	SOx lb/ton metal	NOx lb/ton metal	VOC lb/ton metal	CO lbs/ton metal	Lead lbs/ton metal	
	0.02	0.15	--	0.02	--	1.93	0.00005	
Potential Uncontrolled Emissions (tons/yr)	43.80	328.50	0.00	0.44	0.00	42.27	1.10E-03	
Potential Controlled Emissions (tons/yr)	0.44	3.29	0.00	0.44	0.00	42.27	1.10E-03	
Limited Emissions (tons/yr)	0.23	1.69	0.00	0.23	0.00	21.71	5.63E-04	

PM and PM10 emission factors are based upon the results from the most recent stack test conducted on 5/15/12 on the AOD vessel dust collector stack DC-14. Uncontrolled emissions are based upon an overall dust collector control efficiency of 99%.

NOx, CO, and Pb emission factors are based upon the most recent stack test conducted on 5/15/12 on the AOD vessel dust collector stack DC-14. These are assumed to be an uncontrolled emission factor. There are no emission controls for these pollutants associated with this process.

CO emission factor from USEPA's AP-42, Draft section 12.5.1, Table 12.5.1-5.

		(tons/hr)	(tons/yr)	Control Device: Dust Collector DC-22				
		5	43,800	Control Efficiency: 99.00%				
		Limited Metal Throughput	2.57	22,500				
EAF (DC-22)	PM lb/ton metal	PM ₁₀ /PM _{2.5} lb/ton metal	SOx lb/ton metal	NOx lb/ton metal	VOC lb/ton metal	CO lbs/ton metal	Lead lbs/ton metal	
	0.15	0.16	0.24	1.71	0.18	0.47	0.0003	
Potential Uncontrolled Emissions (tons/yr)	328.50	350.40	5.26	37.45	3.94	10.29	6.57E-03	
Potential Controlled Emissions (tons/yr)	3.29	3.50	5.26	37.45	3.94	10.29	6.57E-03	
Limited Emissions (tons/yr)	1.69	1.80	2.70	19.24	2.03	5.29	3.38E-03	

PM and PM10 emission factors are based upon the emission factors obtained from the most recent stack test conducted on 5/15/12 on the EAF dust collector stack DC-22. Uncontrolled emissions are based upon an overall dust collector control efficiency of 99%.

NOx, CO, and Pb emission factors are based upon the most recent stack test conducted on 5/15/12 on the EAF dust collector stack DC-22. These are assumed to be an uncontrolled emission factor. There are no emission controls for these pollutants associated with this process.

SO2 and VOC emission factors are based upon USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24. These are all uncontrolled emission factors and there are no emission controls for these pollutants associated with this process.

		(tons/hr)	(tons/yr)	Control Device: Dust Collector DC-18				
		5	43,800	Control Efficiency: 99.00%				
		Limited Metal Throughput	3.25	28,500				
ESRs (DC-18)	PM lb/ton metal	PM ₁₀ /PM _{2.5} lb/ton metal	SOx lb/ton metal	NOx lb/ton metal	VOC lb/ton metal	CO lbs/ton metal	Lead lbs/ton metal	
	0.167	0.167	0.00	0.36	0.004	0.14	0.00	
Potential Uncontrolled Emissions (tons/yr)	365.73	365.73	0.00	7.88	0.09	3.07	0.00	
Potential Controlled Emissions (tons/yr)	3.66	3.66	0.00	7.88	0.09	3.07	0.00	
Limited Emissions (tons/yr)	2.38	2.38	0.00	5.13	0.06	2.00	0.00	

PM emission factor is based upon the emission factor obtained from the most recent stack test conducted on 1/12/12 on the ESR dust collector stack DC-18. The actual test results are scaled up to represent maximum process capacity. Uncontrolled emissions are based upon an overall dust collector control efficiency of 99%. PM-10 / PM2.5 emissions are assumed to equal PM emissions based upon methodology used during stack testing.

NOx and CO emission factors are based upon the most recent stack test conducted on 5/15/12 on the ESR dust collector stack DC-18. These are assumed to be an uncontrolled emission factor. There are no emission controls for these pollutants associated with this process.

VOC emission factor is based upon the original Title V Permit #067-7729-00009 issued by IDEM on 6/24/99. This is assumed to be an uncontrolled emission factor. There are no emission controls for this pollutant associated with this process.

		(tons/hr)	(tons/yr)	Control Device: Dust Collector DC-38				
		5	43,800	Control Efficiency: 99.00%				
		Limited Metal Throughput	2.57	22,500				
AOD/EAF Canopy Hood (DC-38)	PM lbs/ton metal	PM ₁₀ /PM _{2.5} lbs/ton metal	SOx lbs/ton metal	NOx lbs/ton metal	VOC lbs/ton metal	CO lbs/ton metal	Lead lbs/ton metal	
	0.84	1.35	0.24	0.01	0.180	0.12	0.0002	
Potential Uncontrolled Emissions (tons/yr)	1839.60	2956.50	5.26	0.22	3.94	2.63	4.38E-03	
Potential Controlled Emissions (tons/yr)	18.40	29.57	5.26	0.22	3.94	2.63	4.38E-03	
Limited Emissions (tons/yr)	9.45	15.19	2.70	0.11	2.03	1.35	2.25E-03	

NOx, CO, and Pb emission factors are based upon the most recent stack test conducted on 5/15/12 on the canopy hood dust collector stack DC-38. These are assumed to be an uncontrolled emission factor. There are no emission controls for these pollutants associated with this process.

SO2 and VOC emission factors are based upon USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24. These are all uncontrolled emission factors and there are no emission controls for these pollutants associated with this process.

PM and PM10 emission factors are based upon the emission factors obtained from the most recent stack test conducted on 5/15/12 on the canopy hood dust collector stack DC-38. Uncontrolled emissions are based upon an overall dust collector control efficiency of 99%.

Lead emission factor from USEPA's AP-42, Draft section 12.5.1, Table 12.5.1-7 and represents controlled emissions.

TSD Appendix A: Emission Calculations
Metal Melting, Pickling, and Insignificant Activities (continued...)

		(tons/hr)	(tons/yr)	Control Device: Fume Scrubber FS-1 Control Efficiency: 70.28% for NOx			
Metal Throughput		15	131,400				
Limited Metal Throughput		3.25	28,500				
R1 acid batch pickling line (FS-1)	PM lbs/ton metal	PM₁₀/PM_{2.5} lbs/ton metal	SOx lbs/ton metal	NOx lbs/ton metal	VOC lbs/ton metal	CO lbs/ton metal	Lead lbs/ton metal
	0.002	0.002	0.0	1.29	0.0	0.0	0.0
Potential Uncontrolled Emissions (tons/yr)	0.13	0.13	0.00	285.17	0.00	0.00	0.00
Potential Controlled Emissions (tons/yr)	0.13	0.13	0.00	84.75	0.00	0.00	0.00
Limited Emissions (tons/yr)	0.03	0.03	0.00	18.38	0.00	0.00	0.00

Note: PM and PM10 emission factors based on stack test performed on 2/4/2003 on FS-1 and FS-2 and the NOx emission factor based on stack test performed on 2/11/2002 on FS-1 and FS-2.

		(tons/hr)	(tons/yr)	Control Device: Fume Scrubber FS-2 Control Efficiency: 53.89% for NOx			
Metal Throughput		7.5	65,700				
Limited Metal Throughput		3.25	28,500				
R35 acid strip pickling line (FS-2)	PM lbs/ton metal	PM₁₀/PM_{2.5} lbs/ton metal	SOx lbs/ton metal	NOx lbs/ton metal	VOC lbs/ton metal	CO lbs/ton metal	Lead lbs/ton metal
	0.0025	0.0025	0.00	0.43	0.00	0.00	0.000
Potential Uncontrolled Emissions (tons/yr)	0.08	0.08	0.00	30.63	0.00	0.00	0.00
Potential Controlled Emissions (tons/yr)	0.08	0.08	0.00	14.13	0.00	0.00	0.00
Limited Emissions (tons/yr)	0.04	0.04	0.00	6.13	0.00	0.00	0.00

Note: PM and PM10 emission factors based on stack test performed on 2/4/2003 on FS-1 and FS-2 and the NOx emission factor based on stack test performed on 9/24/2004 on FS-2.

Methodology

Potential Uncontrolled Emissions (ton/yr) = emission factor based on control (lb/ton) * throughput (ton/yr) / (1-control efficiency %) * 1/2000 (ton/lb)
 Potential Uncontrolled Emissions (ton/yr) = throughput (ton/yr) * emission factor (lb/ton) / 2000 (lb/ton)
 Potential Controlled Emissions (ton/yr) = throughput (ton/yr) * emission factor based on control (lb/ton) / 2000 (lb/ton) / (1 - control efficiency %)
 Potential Controlled Emissions (ton/yr) = throughput (ton/yr) * emission factor (lb/ton) / 2000 (lb/ton)
 Limited Emissions (ton/yr) = limited throughput (ton/yr) * emission factor based on control (lb/ton) / 2000 (lb/ton) / (1 - control efficiency %)
 Limited Emissions (ton/yr) = limited throughput (ton/yr) * emission factor (lb/ton) / 2000 (lb/ton)

**TSD Appendix A: Emission Calculations
CAP Kolene (Annealing and Pickling)**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

	(tons/hr)	(tons/yr)	
Metal Throughput	6	52,560	Control Device: Fume Scrubber FS-7 (99% control)

	PM lbs/ton metal	PM ₁₀ lbs/ton metal	PM _{2.5} lbs/ton metal	Lead lbs/ton metal
New Kolene Rinse Tank Uncontrolled Emission Factor	3.00	3.00	3.00	0.001875
Potential Uncontrolled Emissions (tons/yr)	78.84	78.84	78.84	0.05
Limited Emissions (tons/yr)	9.10	9.10	9.10	0.03

Note:
 In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM, PM₁₀, and PM_{2.5} emissions have been limited such that PM, PM₁₀, and PM_{2.5} emissions from the CAP Line project shall not exceed 25, 15, and 10 tons per year, respectively. The metal throughput to the strip anneal and Kolene operation, identified as CAP Kolene, shall not exceed 28,500 tons/yr and PM, PM₁₀, and PM_{2.5} emissions shall not exceed 0.52 lb/ton, each.

Emission factors are from Allegheny Lulum Corp, assumed to be a similar source.
 Lead emissions are estimated by the ratio from melt shop emissions.

Methodology

Potential Uncontrolled Emissions (ton/yr) = throughput (ton/yr) * emission factor (lb/ton) / 2000 (lb/ton)
 Limited Particulate Emissions (ton/yr) = Limited throughput (ton/yr) * Limited Emission Factor (lb/ton)/ 2000 (lb/ton)
 Limited Lead Emissions (ton/yr) = Limited throughput (ton/yr) * Uncontrolled Emission Factor (lb/ton)/ 2000 (lb/ton)

**TSD Appendix A: Emission Calculations
Slag Processing Area**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Slag Processing Unit (crushing) controlled with Baghouse DC-35, identified as Slag #1, constructed in 1994

Process Unit	tons/day	tons/hr	Uncontrolled	Control Efficiency
			Maximum throughput (tons/yr)	
Slag Processing Area	13.54	0.564	4,942.10	99%

	PM	PM10	PM2.5
Emission Factor (lb/ton metal)	0.29	0.29	0.29
Uncontrolled PTE (tons/yr)	0.72	0.72	0.72
Controlled PTE (tons/yr)	7.17E-03	7.17E-03	7.17E-03

Note
Emission Factor is from Steel Furnace Slag Processing SCC# 0-03-009-24, PM10, Filterable

Methodology
Maximum throughput (tons/yr) = Throughput (tons/hr) * 8760 (hours/yr)
Uncontrolled PTE (ton/yr) = throughput (ton/yr) * Emission factor (lb/ton) / 2000 (lb/ton)
Controlled PTE (ton/yr) = throughput (ton/yr) * Emission factor (lb/ton) / 2000 (lb/ton) * (1-control efficiency)
PM and PM2.5 assumed to equal PM10 when no emission factors are provided.

**TSD Appendix A: Emission Calculations
Machining Operations**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Unit I.D.	Maximum Metal Throughput (tons/hr)	Emission Factor in lb/ton metal	PM*	PM10*	PM2.5	SO2	NOx	VOC	CO
			17.0	1.7	1.7	0.0	0.0	0.0	0.0
			Uncontrolled Potential Emissions (tons/yr)						
Sawing Operation (DC-31)	4.000		297.84	29.78	29.78	0.00	0.00	0.00	0.00
CMI automatic abrasive billet grinder (DC-32)	3.000		223.38	22.34	22.34	0.00	0.00	0.00	0.00
One (1) new CMI grinder (DC-37)	3.000		223.38	22.34	22.34	0.00	0.00	0.00	0.00
Abrasive grind machines (Grind 1) (DC-1)	1.875		139.61	13.96	13.96	0.00	0.00	0.00	0.00
Abrasive grind machines (Grind 1) (DC-3)	1.875		139.61	13.96	13.96	0.00	0.00	0.00	0.00
Abrasive grind machines (Grind 1) (DC-4 & DC-5)	1.875		139.61	13.96	13.96	0.00	0.00	0.00	0.00
One (1) grinder operation (Grind 2) (DC-24)	4.350		323.90	32.39	32.39	0.00	0.00	0.00	0.00
One (1) grinder operation (Grind 2) (DC-25)	4.350		323.90	32.39	32.39	0.00	0.00	0.00	0.00
One (1) Sawing operation (Saw 1) (DC-1)	2.800		208.49	20.85	20.85	0.00	0.00	0.00	0.00
One (1) Sawing operation (Saw 1) (DC-23)	2.800		208.49	20.85	20.85	0.00	0.00	0.00	0.00
One (1) grinding and sawing operation (DC-8)	1.150		85.63	8.56	8.56	0.00	0.00	0.00	0.00
One (1) grinding and sawing operation (DC-9)	1.000		74.46	7.45	7.45	0.00	0.00	0.00	0.00
			2388.30	238.83	238.83	0.00	0.00	0.00	0.00
			Uncontrolled Potential Emissions (tons/yr)						
		Emission Factor in lb/ton metal	17.0	14.6	14.6	0.0	0.0	0.0	0.0
			Uncontrolled Potential Emissions (tons/yr)						
One (1) rotoblast shot blaster (DC-36)	8.000		595.68	512.28	512.28	0.00	0.00	0.00	0.00
One (1) rotoblast shot blaster (DC-10)	1.500		111.69	96.05	96.05	0.00	0.00	0.00	0.00
			707.37	608.34	608.34	0.00	0.00	0.00	0.00
Total Uncontrolled Potential Emissions (tons/yr)			3,095.67	847.17	847.17	0.00	0.00	0.00	0.00

Note:
 PM and PM10 emission factor from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24 for similar operation at gray iron foundry.
 The PM10 emissions from the rotoblast shot blasters (DC-10 and DC-36) were calculated using a 0.86 lb PM10/ lb PM ration pursuant to Stappa Alapco, Section 3 for steel shot media.
 Uncontrolled Potential Emission (tons/yr) = throughput (tons/hr) * emission factor (lb/ton metal) * 8760 (hr/yr) / 2000 (lb/ton)
 Assumed PM10 = PM2.5

**Appendix A: Emissions Calculations
Machining Operations (continued)**

Unit I.D.	Maximum Metal Throughput (tons/hr)	Control Efficiency (%)	Emission Factor in lb/ton metal	PM*	PM10*	PM2.5	SO2	NOx	VOC	CO
				17.0	1.7	1.7	0.0	0.0	0.0	0.0
				Controlled Potential Emissions (tons/yr)						
Sawing Operation (DC-31)	4.000	99.00%		2.98	0.30	0.30	0.00	0.00	0.00	0.00
CMI automatic abrasive billet grinder (DC-32)	3.000	99.00%		2.23	0.22	0.22	0.00	0.00	0.00	0.00
One (1) new CMI grinder (DC-37)	3.000	99.00%		2.23	0.22	0.22	0.00	0.00	0.00	0.00
Abrasive grind machines (Grind 1) (DC-1)	1.875	99.00%		1.40	0.14	0.14	0.00	0.00	0.00	0.00
Abrasive grind machines (Grind 1) (DC-3)	1.875	99.00%		1.40	0.14	0.14	0.00	0.00	0.00	0.00
Abrasive grind machines (Grind 1) (DC-4 & DC-5)	1.875	99.00%		1.40	0.14	0.14	0.00	0.00	0.00	0.00
One (1) grinder operation (Grind 2) (DC-24)	4.350	99.00%		3.24	0.32	0.32	0.00	0.00	0.00	0.00
One (1) grinder operation (Grind 2) (DC-25)	4.350	99.00%		3.24	0.32	0.32	0.00	0.00	0.00	0.00
One (1) Sawing operation (Saw 1) (DC-1)	2.800	99.00%		2.08	0.21	0.21	0.00	0.00	0.00	0.00
One (1) Sawing operation (Saw 1) (DC-23)	2.800	99.00%		2.08	0.21	0.21	0.00	0.00	0.00	0.00
One (1) grinding and sawing operation (DC-8)	1.150	99.00%		0.86	0.09	0.09	0.00	0.00	0.00	0.00
One (1) grinding and sawing operation (DC-9)	1.000	99.00%		0.74	0.07	0.07	0.00	0.00	0.00	0.00
				23.88	2.39	2.39	0.00	0.00	0.00	0.00

			Emission Factor in lb/ton metal	PM*	PM10*	PM2.5	SO2	NOx	VOC	CO
				17.0	14.6	14.6	0.0	0.0	0.0	0.0
				Controlled Potential Emissions (tons/yr)						
One (1) rotoblast shot blaster (DC-36)	8.000	99.00%		5.96	5.12	5.12	0.00	0.00	0.00	0.00
One (1) rotoblast shot blaster (DC-10)	1.500	99.00%		1.12	0.96	0.96	0.00	0.00	0.00	0.00
364,197.00 tons/yr				7.07	6.08	6.08	0.00	0.00	0.00	0.00

Total Controlled Potential Emissions (tons/yr) **30.96** **8.47** **8.47** **0.00** **0.00** **0.00** **0.00**

Combined (Sawing and Grinding Units)	Metal throughput Limit (tons/yr)	Limited Emission Factor in lb/ton metal	PM*	PM10*	PM2.5	SO2	NOx	VOC	CO
			0.17	0.017	0.017	0.0	0.0	0.0	0.0
			Limited Potential Emissions (tons/yr)						
Limited PTE (tons/yr)	114,000.00		9.69	0.97	0.97	0	0	0	0

Combined (Shot Blasting Units)	Metal throughput Limit (tons/yr)	Limited Emission Factor in lb/ton metal	PM*	PM10*	PM2.5	SO2	NOx	VOC	CO
			0.17	0.146	0.146	0.0	0.0	0.0	0.0
			Limited Potential Emissions (tons/yr)						
Limited PTE (tons/yr)	28,500.00		2.42	2.08	2.08	0	0	0	0

Total Limited Potential Emissions (tons/yr) **12.11** **3.05** **3.05** **0.00** **0.00** **0.00** **0.00**

Note:
 PM and PM10 emission factor from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24 for similar operation at gray iron foundry.
 The PM10 emissions from the rotoblast shot blasters (DC-10 and DC-36) were calculated using a 0.86 lb PM10/ lb PM ration pursuant to Stappa Alapco, Section 3 for steel shot media.
 Controlled Potential Emission (tons/yr) = throughput (tons/hr) * emission factor (lb/ton metal) * 8760 (hr/yr) / 2000 (lb/ton) * (1 - Control Efficiency %)
 Limited PTE (tons/yr) = limited throughput (tons/yr) * emission factor (lb/ton metal) / 2000 (lb/ton)
 Assumed PM10 = PM2.5

TSD Appendix A: Emission Calculations
Machining Operations - continued (Hercules Grinder R-55, Particulate)

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

12.5	single roller weight (tons/roller)
22.086	maximum grinding rate (lb/hr)
4.9	minimum roller process time (hr/roller)
108.221	assumed maximum pounds of material grinded per roller (lb/roller)
8.658	emissions (lb/ton)
1,787.755	maximum rollers processed per year (rollers/yr)
6,050.272	average tons of rollers/year
95%	Assumed Control Efficiency from Integral Determination of Coolant
95%	Assumed Control Efficiency for Mist Eliminator

Max throughput (tons of rollers/yr)	Uncontrolled Emission Factor (lb/ton)	Uncontrolled PM PTE (ton/yr)	Assumed Control Efficiency from Coolant as Integral	After Consideration of Integral Coolant PM PTE (ton/yr)	Control Efficiency of Mist Eliminator (%)	After Mist Eliminator Control PM PTE (ton/yr)	Limited PM PTE (ton/yr)
22,346.939	8.658	96.74	95%	4.84	95%	0.24	0.26

Notes

Assumed PM10 and PM2.5 = PM
 Maximum grinding rate, emission factor, pounds controlled per month on filter, roller process time, and rollers per year were assumed from actual production data from October 2, 2013 to August 25, 2014.
 In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM emissions from Hercules Grinder R-55 shall not exceed 0.06 lb/hr.
 There are no limits associated with PM10 and PM2.5.

Methodology

Maximum pounds per roller (lb/roller) = Maximum grinding rate (lb/hr) * minimum roller process time (hr/roller)
 Emissions (lb/ton) assuming 100% of emissions would be PM = Maximum pounds of material grinded per roller (lb/roller) * (1 roller / 12.5 tons)
 Maximum rollers per year processed (rollers/yr) = Roller per 4.9 hours (roller/hr) * 8760 (hr/yr)
 Average tons of rollers per year (tons/yr) = 427 actual rollers during production * 365 (days/year) / ((8/19/2014) - (10/1/2013) (days))
 Maximum throughput (tons/yr) = Maximum rollers per year processed (rollers/yr) * (12.5 tons / 1 roller)
 Uncontrolled Potential Emission (tons/yr) = throughput (tons/yr) * emission factor (lb/ton) / 2000 (lb/ton)
 After Consideration of Integral Coolant PM PTE (tons/yr) = throughput (tons/yr) * emission factor (lb/ton metal) / 2000 (lb/ton) * (1-control efficiency)
 After Mist Eliminator Control (ton/yr) = after consideration of coolant control (ton/yr) * (1 - control efficiency of mist eliminator)

**TSD Appendix A: Emission Calculations
Machining Operations (VOC)**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

	Gallons per 7 rollers	Gallon per roller	Density (lb/gal)	Coolant Used (lb/roller)	VOC content by weight (%)	Max rollers processed per year (rollers/yr)	VOC PTE (ton/yr)
Wet Grinding Coolant	0.75	0.107	8.70	0.93	27.4%	1,787.76	0.23
Bearing Lubricant	1	0.143	7.44	1.06	100%		0.95
1.18							Total

Note

Assuming the bearing lubricant is 100% VOC

Methodology

Uncontrolled Potential Emission (tons/yr) = coolant used throughput (lbs/roller) * VOC content * max rollers processed per year (rollers/yr) / 2000 (lbs/ton)

**TSD Appendix A: Emission Calculations
Contact Cooling Towers**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Cooling Tower Unit	Construction Date	Flow Rate (gal/min)	Total Dissolved Solids (TDS) (ppm)*	Cooling Fluid Density (lbs/gal)	Drift Rate (%)	PM10 Emission Rate (lb/hr)	PM10 Emission Rate (tons/yr)	PM Emission Rate (tons/yr)	PM2.5 Emission Rate (tons/yr)
Cooling Tower (CT#2)	March 1977	700	20600	8.34	0.005	0.36	1.58	1.58	1.58
Cooling Tower (CT#3)	March 1977	1,030	20600	8.34	0.005	0.53	2.33	2.33	2.33
Cooling Tower (CT#12)	1983	145	20600	8.34	0.005	0.07	0.33	0.33	0.33
Cooling Tower (CT#18)	approved in 2015	396	20600	8.34	0.005	0.20	0.89	0.89	0.89
Total						0.97	5.13	5.13	5.13

Methodology

Assumed PM10 = PM2.5 and PM

PM10 (lb/hr) = Flow Rate (gal fluid/minute) x Fluid Density (lb fluid/ gal fluid) x (Drift Rate (%) / 100) x Total Dissolved Solids (lbs of solids/ 1,000,000 gal fluid) x 60 minutes/hour

PM10 emission rate is equal to the PM emission rate and PM2.5 emission rate.

* Total Dissolved Solids concentration is based on the geometric mean TDS value from AP-42, Chapter 13.4, Table 13.4-2. Data was unavailable for natural draft towers.

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Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Sulfur Content (S) of Fuel (% by weight) **0.500**

Stationary Emergency Reciprocating Internal Combustion Engines - Diesel Fuel
 Output Rating (<=600 HP)

Emission Unit ID / Model #	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	Diesel Industrial Engines Emission Factors (lb/hp-hr)						
				PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
				2.20E-03	2.20E-03	2.20E-03	2.05E-03	3.10E-02	2.47E-03	6.68E-03
				Potential Emissions (TPY)						
				PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
R24 / D200P4	200	268.97	134,483	0.148	0.148	0.148	0.138	2.084	0.166	0.449
				Diesel Industrial Engines Emission Factors (lb/hp-hr)						
Emission Unit ID / Model #	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
				2.20E-03	2.20E-03	2.20E-03	2.05E-03	3.10E-02	2.47E-03	6.68E-03
				Potential Emissions (TPY)						
				PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
R3 / D13-2S	10.4	13.99	6,993	0.008	0.008	0.008	0.007	0.108	0.009	0.023
				Diesel Industrial Engines Emission Factors (lb/hp-hr)						
Emission Unit ID / Model #	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
				2.20E-03	2.20E-03	2.20E-03	2.05E-03	3.10E-02	2.47E-03	6.68E-03
				Potential Emissions (TPY)						
				PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
R31 / 1747650600	300	403.45	201,724	0.222	0.222	0.222	0.207	3.127	0.249	0.674
				Diesel Industrial Engines Emission Factors (lb/hp-hr)						
Emission Unit ID / Model #	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
				2.20E-03	2.20E-03	2.20E-03	2.05E-03	3.10E-02	2.47E-03	6.68E-03
				Potential Emissions (TPY)						
				PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
R55 / 440FDR7 H1HHW	175	235.34	117,672	0.129	0.129	0.129	0.121	1.824	0.145	0.393
				Diesel Industrial Engines Emission Factors (lb/hp-hr)						
Emission Unit ID / Model #	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
				2.20E-03	2.20E-03	2.20E-03	2.05E-03	3.10E-02	2.47E-03	6.68E-03
				Potential Emissions (TPY)						
				PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
R35 C.T. / 440FDR 7010CCW	150	201.72	100,862	0.111	0.111	0.111	0.103	1.563	0.125	0.337
				Diesel Industrial Engines Emission Factors (lb/hp-hr)						
Emission Unit ID / Model #	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
				2.20E-03	2.20E-03	2.20E-03	2.05E-03	3.10E-02	2.47E-03	6.68E-03
				Potential Emissions (TPY)						
				PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
R30 (Lights) / 6207.ZZ/03	14.125	19.00	9,498	0.010	0.010	0.010	0.010	0.147	0.012	0.032

Emission Unit ID	Emission Factor lb/hp-hr			GHG	
	CO2	CH4	N2O	PTE (ton/yr)	CO2e PTE (ton/yr)
R24 / D200P4	1.16	6.35E-05	9.30E-06	78	78
R3 / D13-2S	4.06	2.22E-04	3.25E-05	4	4
R31 / 1747650600	117.00	6.40E-03	9.38E-04	117	117
R55 / 440FDR7 H1HHW	68.25	3.73E-03	5.47E-04	68	68
R35 C.T. / 440FDR 7010CCW	58.50	3.20E-03	4.69E-04	59	59
R30 (Lights) / 6207.ZZ/03	5.51	3.01E-04	4.42E-05	6	6

Methodology	Total Potential Emissions (ton/yr)	CO2e	PM	PM-10	PM-2.5	SOx	NOx	VOC	CO
For HP < 600 HP=Kw/hr*1.344825737 hp-hr/yr = hp * 500 hr/yr for emergency generators Emission Factors are from AP 42, Chapter 3.4, Table 3.4-1, SCC #2-02-004-01 Emission (tons/yr) = (hp-hr/yr) x Emission Factor (lb/hp-hr)/2,000 lb/ton Note: Per EPA Memorandum (09/06/1995), potential emissions were calculated based on 500 hours of operation per year since the generators are used solely to provide backup power. CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).		333	0.628	0.628	0.628	0.586	8.854	0.705	1.908

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Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<600 HP)

Emission Unit ID	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	Diesel Industrial Engines Emission Factors (lb/hp-hr)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
				6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
				Potential Emissions (TPY)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
R24 / D200P4	200	268.97	134,483	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
Emission Unit ID	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	Diesel Industrial Engines Emission Factors (lb/hp-hr)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
				6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
				Potential Emissions (TPY)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
R3 / D13-2S	10.4	13.99	6,993	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Emission Unit ID	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	Diesel Industrial Engines Emission Factors (lb/hp-hr)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
				6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
				Potential Emissions (TPY)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
R31 / 1747650600	300	403.45	201,724	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.000
Emission Unit ID	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	Diesel Industrial Engines Emission Factors (lb/hp-hr)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
				6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
				Potential Emissions (TPY)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
R55 / 440FDR7 H1HHW	175	235.34	117,672	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Emission Unit ID	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	Diesel Industrial Engines Emission Factors (lb/hp-hr)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
				6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
				Potential Emissions (TPY)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
R35 C.T. / 440FDR 7010CCW	150	201.72	100,862	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Emission Unit ID	Capacity (KW/hr)	Capacity (HP)	hp-hr/yr	Diesel Industrial Engines Emission Factors (lb/hp-hr)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
				6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
				Potential Emissions (TPY)							
				Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
R30 (Lights) / 6207.ZZ/03	14,125	19.00	9,498	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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

Methodology

For HP < 600
HP=KW/hr*1.344825737

hp-hr/yr = hp * 500 hr/yr for emergency generators

Emission Factors are from AP 42, Chapter 3.3, Table 3.3-1, SCC #2-02-001-02 and 2-03-001-01

Emission (tons/yr) = (hp-hr/yr) x Emission Factor (lb/hp-hr)/2,000 lb/ton

Total Potential Emissions							
Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH
0.002	0.001	0.001	0.000	0.002	0.002	0.000	0.008

**TSD Appendix A: Emission Calculations
Natural Gas Fired PreMill Heaters**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Emission Unit ID	Total Heat Input Capacity (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)	Limited Throughput (MMCF/yr)
two (2) 4-Hi mill preheat furnaces - 15 MMBtu/hr each (No. 54 and 58)	30	262.80	219.00
TOTAL	30.00	262.80	219.00

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Uncontrolled Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.25	1.00	1.00	0.08	13.14	0.72	11.04
Limited Emission in tons/yr	0.21	0.83	0.83	0.07	10.95	0.60	9.20

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

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

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

	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	2.759E-04	1.577E-04	9.855E-03	2.365E-01	4.468E-04
Limited Emission in tons/yr	2.300E-04	1.314E-04	8.213E-03	1.971E-01	3.723E-04

	HAPs - Metals					Potential Total HAPs 0.248	Limited Total HAPs 0.207
	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	6.570E-05	1.445E-04	1.840E-04	4.993E-05	2.759E-04		
Limited Emission in tons/yr	5.475E-05	1.205E-04	1.533E-04	4.161E-05	2.300E-04		

Methodology is the same as criteria pollutant calculations above.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	15,768	0.3	0.3
Limited Emission in tons/yr	13,140	0.3	0.2
Summed Potential Emissions in tons/yr	15,769		
Limited Summed Emissions in tons/yr	13,140		
CO2e Total in tons/yr	15,864		
Limited CO2e Total in tons/yr	13,220		

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.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**TSD Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas
2-Stroke Lean-Burn (2SLB) Engines**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Maximum Heat Input Capacity (MMBtu/hr)	3.95
Maximum Hours Operated per Year (hr/yr)	500
Potential Fuel Usage (MMBtu/yr)	1975.319
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	1.94

Emission Unit ID / Model #	Capacity (MMBtu/hr)
R12 / 93A04964-S	1.12401
R45 / 93A04963-S	0.505603
R21 / G15U35	0.21177
R35 M.R. / 97404786-S	1.12401
R25 / 100RZG	0.985245

Criteria Pollutants	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	3.84E-02	4.83E-02	3.84E-02	5.88E-04	3.17E+00	1.20E-01	3.86E-01
Potential Emissions (tons/yr)	0.04	0.05	0.04	0.001	3.13	0.12	0.38

*PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.
 PM2.5 emission factor is filterable PM2.5 + condensable PM.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	7.76E-03	0.008
Acrolein	7.78E-03	0.008
Benzene	1.94E-03	0.002
1,3-Butadiene	8.20E-04	0.001
Ethylbenzene	1.08E-04	0.000
Formaldehyde	5.52E-02	0.055
Methanol	2.48E-03	0.002
Methylene Chloride	1.47E-04	0.000
Hexane	4.45E-04	0.000
Toluene	9.63E-04	0.001
2,2,4-Trimethylpentane	8.46E-04	0.001
Total PAH**	1.34E-04	0.000
Total HAP		0.08

HAP pollutants consist of the twelve highest HAPs included in AP-42 Table 3.2-1.

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

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1

Potential Fuel Usage (MMBtu/yr) = [Maximum Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operating per Year (hr/yr)]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Note: Per EPA Memorandum (09/06/1995), potential emissions were calculated based on 500 hours of operation per year since the generators are used solely to provide backup power.

Greenhouse Gases (GHGs)	Greenhouse Gas (GHG)		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu*	110	1.25	2.2
Emission Factor in lb/MMCF**			
Potential Emission in tons/yr	108.64	1.23	0.00
Summed Potential Emissions in tons/yr	109.88		
CO2e Total in tons/yr	135.23		

Methodology

*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

**The N2O emission factor is from AP 42, Table 1.4-2. The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

SO2 = Sulfur Dioxide

NOx = Nitrous Oxides

VOC - Volatile Organic Compounds

CO = Carbon Monoxide

CO2 = Carbon Dioxide

CH4 = Methane

N2O = Nitrous Oxide

CO2e = CO2 equivalent emissions

TSD Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas
2-Stroke Lean-Burn (2SLB) Engines

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Maximum Output Horsepower Rating (hp)	454	Natural Gas Emergency Generator (Generator R-1), 300kW, G300LG
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7500	
Maximum Hours Operated per Year (hr/yr)	500	
Potential Fuel Usage (MMBtu/yr)	1703	
High Heat Value (MMBtu/MMscf)	1020	
Potential Fuel Usage (MMcf/yr)	1.67	

Criteria Pollutants	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	3.84E-02	4.83E-02	4.83E-02	5.88E-04	3.17E+00	1.20E-01	3.86E-01
Potential Emissions (tons/yr)	0.03	0.04	0.04	5.01E-04	2.70	0.10	0.33

*PM emission factor is for filterable PM10. PM10 emission factor is filterable PM10 + condensable PM.
 PM2.5 emission factor is filterable PM2.5 + condensable PM.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	7.76E-03	0.007
Acrolein	7.78E-03	0.007
Benzene	1.94E-03	0.002
1,3-Butadiene	8.20E-04	0.001
Ethylbenzene	1.08E-04	0.000
Formaldehyde	5.52E-02	0.047
Methanol	2.48E-03	0.002
Methylene Chloride	1.47E-04	0.000
Hexane	4.45E-04	0.000
Toluene	9.63E-04	0.001
2,2,4-Trimethylpentane	8.46E-04	0.001
Total PAH**	1.34E-04	0.000
Total		0.07

HAP pollutants consist of the twelve highest HAPs included in AP-42 Table 3.2-1.

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

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-1

Potential Fuel Usage (MMBtu/yr) = [Maximum Output Horsepower Rating (hp)] * [Brake Specific Fuel Consumption (Btu/hp-hr)] * [Maximum Hours Operated per Year (hr/yr)] / [1000000 Btu/MMBtu]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Greenhouse Gases (GHGs)	Greenhouse Gas (GHG)		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu*	110	1.25	
Emission Factor in lb/MMcf**			2.2
Potential Emission in tons/yr	93.64	1.06	0.00
Summed Potential Emissions in tons/yr	94.70		
CO2e Total in tons/yr	116.55		

Methodology

*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

**The N2O emission factor is from AP 42, Table 1.4-2. The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

SO2 = Sulfur Dioxide

NOx = Nitrous Oxides

VOC - Volatile Organic Compounds

CO = Carbon Monoxide

CO2 = Carbon Dioxide

CH4 = Methane

N2O = Nitrous Oxide

CO2e = CO2 equivalent emissions

**TSD Appendix A: Emission Calculations
Gasoline Emergency Generator**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Emission Unit ID / Model #	Capacity (HP)	hp-hr/yr	Gasoline Engine-Driven Generators, < 250 hp - Emission Factors (lb/hp-hr)							
			PM	PM-10	PM-2.5	SOx	NOx	VOC ^a	CO	HAPs
			0.0007	0.0007	0.0007	0.0006	0.011	0.015	0.44	-----
Potential Emissions (TPY)										
PM	PM-10	PM-2.5	SOx	NOx	VOC	CO	HAPs			
R30 / HP4500/M	8.00	4,000	0.001	0.001	0.001	0.001	0.022	0.030	0.878	-----

^a Total non-methane VOCs

AP-42 (10/96)

Fuel: Unleaded Gasoline

Methodology

hp-hr/yr = hp * 500 hr/yr for emergency generators

Emission Factors are from AP 42, Chapter 3.3, Table 3.3-1, SCC 2-02-003-01, 2-03-003-01

Emission (tons/yr) = (hp-hr/yr) x Emission Factor (lb/hp-hr)/2,000 lb/ton

Note: Per EPA Memorandum (09/06/1995), potential emissions were calculated based on 500 hours of operation per year since the generators are used solely to provide backup power.

Emission Unit ID	Pollutant			Summed Potential Emissions in tons/yr	2.32
	CO2	CH4	N2O		
R30 (Lights) / 6207.ZZ/03	CO2	CH4	N2O	Summed Potential Emissions in tons/yr	2.32
Emission Factor in lb/hp-hr	1.16	6.35E-05	9.30E-06	CO2e Total in tons/yr	2.33
Potential Emission in tons/yr	2.32	1.27E-04	1.86E-05		

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Emission Unit ID	Total Heat Input Capacity (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)	Limited Total Maximum Throughput (MMCF/yr)
Boiler 3 (equipped with low NOx burner)	15	131.40	
Boiler 4 (equipped with low NOx burner)	15	131.40	
Four (4) 3-Hi Mill preheat furnaces - 10.35 MMBtu/hr each	41.40	362.66	
One (1) 2-Hi Mill preheat furnace	22	192.72	
One (1) annealing furnace #6	14.80	129.65	
One (1) annealing furnace #16	16	140.16	
One (1) annealing furnace #20 (replaced in 2014)	20	175.20	
Five (5) 4-Hi mill preheat furnaces - 15 MMBtu/hr each	75	657.00	
Two (2) 4-Hi mill steckle furnaces - 20 MMBtu/hr each	40	350.40	780.00
One (1) strip annealing furnace A&K line	10	87.60	
TOTAL	269.20	2358.19	2043.19

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	**see below NOx	VOC	CO
Uncontrolled Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100	5.5	84
Low NOx Burner Emission Factor in lb/MMCF					50		
(Boilers 3 and 4 NOx) Potential Emission in tons/yr					6.57		
Total NOx Emissions					104.8		
Potential Emission in tons/yr	2.24	8.96	8.96	0.71	111.34	6.49	99.04
(Boilers 3 and 4 NOx) Potential Emission in tons/yr					6.57		
Total NOx Emissions					89.0		
Total Limited PTE including 3 limited units	1.94	7.76	7.76	0.61	95.59	5.62	85.81

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Total Potential Emission in tons/yr	2.48E-03	1.41E-03	8.84E-02	2.12E+00	4.01E-03
Total Limited PTE for 3 limited units only	2.15E-03	1.23E-03	7.66E-02	1.84E+00	3.47E-03

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Total Potential Emission in tons/yr	5.90E-04	1.30E-03	1.65E-03	4.48E-04	2.48E-03
Total Limited PTE including 3 limited units	5.11E-04	1.12E-03	1.43E-03	3.88E-04	2.15E-03

Methodology is the same as criteria pollutant calculations above
 The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Total HAPs	2.225
Limited Total HAPs	1.928

Emission Factor in lb/MMcf	Greenhouse Gas			Unlimited & Limited Units - Greenhouse Gas		
	CO2	CH4	N2O	CO2	CH4	N2O
	120,000	2.3	2.2	120,000	2.3	2.2
Potential Emission in tons/yr	141,492	2.7	2.6	122,592	2.3	2.2
Summed Potential Emissions in tons/yr	141,497			122,596		
CO2e Total in tons/yr	142,353			123,338		

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.
 Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

TSD Appendix A: Emission Calculations
Insignificant Activity: Vacuum Furnace

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Vacuum Furnace (Insignificant Activity)		LBS/HR		TON/HR		Control Device: N/A	
Metal Throughput		2000		1		Control Efficiency:	
TYPE OF MATERIAL							
Metal	PM lb/ton metal	PM10/PM2.5 lb/ton metal	SOx lb/ton metal	NOx lb/ton metal	VOC lb/ton metal	CO lbs/ton metal	Lead lbs/ton metal
	0.9	0.86	0.00	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions lbs/hr	0.08	0.86	0.00	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions tons/year	0.03	0.03	0.00	0.00	0.00	0.00	0.00

Note: PM and PM10/PM2.5 emission factors are from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24.
The only emissions from this unit are fugitive (resulting from the furnace door being opened a maximum of 5 minutes twice a day).
Potential hourly emissions are calculated assuming an open door for 5 minutes during that hour.
Potential annual emissions are calculated based on the furnace door being opened 10 minutes per day for 365 days per year or 60.83 hours.
Emissions (lbs/hr) = emission factor (lb/ton) * throughput (tons/hr) * period the door is open (5min/60min)
Emissions (tons/yr) = emission factor (lb/ton) * throughput (tons/hr) * period the door is open (60.83 hr/yr) / 2000 (lb/ton)

**TSD Appendix A: Emission Calculations
Welding and Thermal Cutting**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING												
Submerged Arc (Spot)	4	1		0.036	0.011			0.144	0.044	0.000	0	0.044
Metal Inert Gas (MIG)(carbon steel)	1	1		0.0055	0.0005			0.006	0.001	0.000	0	0.001
Stick (E7018 electrode)	4	2		0.0211	0.0009			0.169	0.007	0.000	0	0.007
Tungsten Inert Gas (TIG)(carbon steel)	2	1.5		0.0055	0.0005			0.017	0.002	0.000	0	0.002
Oxyacetylene(carbon steel)	0			0.0055	0.0005			0.000	0.000	0.000	0	0.000
FLAME CUTTING												
	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene (Carbon Arc)	3	1	12	0.1622	0.0005	0.0001	0.0003	0.350	0.001	0.000	0.001	0.002
Oxymethane (Powder Torch)	1	25	12	0.0815	0.0002		0.0002	1.467	0.004	0.000	0.004	0.007
Plasma**	18	1	12	0.0039				0.051	0.000	0.000	0.000	0.000
Uncontrolled Emission Totals												
Potential Emissions lbs/hr								2.20	0.06	0.00	0.00	0.06
Potential Emissions lbs/day								52.86	1.39	0.01	0.10	1.50
Potential Emissions tons/year								9.65	0.25	0.00	0.02	0.27
Controlled Emission Totals												
Potential Emissions tons/year								9.58	0.25	0.00	0.02	0.27

Note:

The flame cutting Oxymethane (powder torch) is being controlled by DC-38. Control Efficiency for Baghouse DC-38 is 99.00% for PM.
 Assumed PM = PM2.5 and PM10

Methodology:

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculating the emissions.

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick
 Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)
 Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)
 Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
 Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
 Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.
 Controlled Potential Emissions (tons/yr) = Uncontrolled Potential Emission of all welding units (tons/yr) - ((Uncontrolled Potential Emission (lb/hr) * 8760 / 2000 * (1 - Control Efficiency))

WELDING

BUILDING #	NUMBER OF WELDING STATIONS	TYPE (MIG, TIG, STICK, SUBMERGED ARC)	MAX. ELECTRODE CONSUMPTION (LBS/HR)
R-1	none	-	-
R-18	none	-	-
R-24	none	-	-
R-30	none	-	-
R-31	3	3-STICK	1.5 TOTAL
R-35	5	1 Stick, 2 Spot, 2 TIG	.5 lbs.
R-45	none	-	-
R-36	3	1-MIG, 2-SPOT	1.5 TOTAL
R-55	none	-	-

FLAME CUTTING

BUILDING #	NUMBER OF STATIONS	TYPE (PLASMA, OXYACETYLENE, OXYMETHANE)	MAX. METAL THICKNESS (inches)	MAX. CUTTING RATE (inches/min.)
R-1	none	-	-	-
R-18	none	-	-	-
R-24	2	1-PLASMA, 1-POWDER TORCH	1" FOR PLASMA, 25" FOR POWDER TORCH	12
R-30	1	1-PLASMA	1.0"	12
R-31	3	3-CARBON ARC	0.5"	12
R-35	7	7-PLASMA	0.3"	12
R-36	3	3-PLASMA	1.0"	12
R-25	3	3-PLASMA	1.0"	12
R-55	none	-	-	-

**TSD Appendix A: Emission Calculations
Natural Gas Fired Combustion Units**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Emission Unit ID	Total Heat Input Capacity (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Four (4) 24 inch bar mill preheat furnaces - 9.0 MMBtu/hr each	36.00	315.36
One (1) car bottom annealing furnace	5.40	47.3
Two (2) 10 inch bar mill preheat furnaces - 9.0 MMBtu/hr each	18.00	157.68
Five (5) forge shop preheat furnaces - 7.8 MMBtu/hr each	39.00	341.64
One (1) forge shop preheat furnace	9.00	78.84
One (1) annealing furnace	7.80	68.33
One (1) car bottom annealing furnace	4.00	35.04
One (1) R1 pickle tank boiler	2.10	18.40
One (1) R1 Kolene Tank Heater	8.10	70.96
One (1) R35 pickle line boiler	1.50	13.14
One (1) R36 Kolene tank heater	5.50	48.18
One (1) R42 steam heating boiler	1.05	9.20
Three (3) air make-up units	14.70	128.77
TOTAL	152.15	1332.83

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tons/yr	1.27	5.06	5.06	0.40	66.64	3.67	55.98

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 combined.

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

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.399E-03	7.997E-04	4.998E-02	1.200E+00	2.266E-03

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	3.332E-04	7.331E-04	9.330E-04	2.532E-04	1.399E-03

Methodology is the same as criteria pollutant calculations above
 The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Total HAPs
1.258

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
Potential Emission in tons/yr	79,970	1.5	1.5
Summed Potential Emissions in tons/yr	79,973		
CO2e Total in tons/yr	80,457		

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.
 Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

TSD Appendix A: Emission Calculations
Natural Gas Fired Combustion Units continued...

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Emission Unit ID	Total Heat Input Capacity (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Bld R-35 RU354-OU-50 (two (2) units at 3.00 MMBtu/hr, each)	6.00	52.56
Bld R-36 RU354-OU-30 (three (3) units at 4.98 MMBtu/hr, each)	14.94	130.87
Bld R-36 RU366-OU-50	7.90	69.20
TOTAL	28.84	252.64

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tons/yr	0.24	0.96	0.96	0.08	12.63	0.69	10.61

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

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

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

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.653E-04	1.516E-04	9.474E-03	2.274E-01	4.295E-04

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	6.316E-05	1.390E-04	1.768E-04	4.800E-05	2.653E-04

Methodology is the same as criteria pollutant calculations above

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Total HAPs
0.238

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
Potential Emission in tons/yr	15,158	0.3	0.3
Summed Potential Emissions in tons/yr	15,159		
CO2e Total in tons/yr	15,251		

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.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**TSD Appendix A: Emission Calculations
Natural Gas Fired Combustion Units**

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

Emission Unit ID	Total Heat Input Capacity (MMBtu/hr)	Total Maximum Potential Throughput (MMCF/yr)
Seventeen (17) insignificant / exempt hot water heaters (listed individually in Attachment F, to Title V Permit No.: T067-30930-00009	5.17	45.32
Two hundred fifty-two (252) insignificant/ exempt comfort heating units (listed individually in Attachment F, to Title V Permit No.: T067-30930-00009	84.82	743.0
TOTAL	89.99	788.29

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.7	3.0	3.0	0.2	39.4	2.2	33.1

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 combined.

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

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

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

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	8.277E-04	4.730E-04	2.956E-02	7.095E-01	1.340E-03

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.971E-04	4.336E-04	5.518E-04	1.498E-04	8.277E-04

Methodology is the same as criteria pollutant calculations above

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Total HAPs
0.744

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	47,298	0.9	0.9
Summed Potential Emissions in tons/yr	47,299		
CO2e Total in tons/yr	47,586		

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.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

TSD Appendix A: Emission Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Moulik

	Heat Input Capacity	HHV	Potential Throughput
	MMBtu/hr	mmBtu	
annealing furnace (CAP furnace)	20.00	mmscf	MMCF/yr
Kolene tank heater	4.25		
	24.25	1020	

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
Potential Emission in tons/yr	0.20	0.79	0.79	0.06	**see below	0.57	8.75

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

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

Hazardous Air Pollutants (HAPs)	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Total - Organics
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	2.2E-04	1.2E-04	7.8E-03	0.19	3.5E-04	0.20

Hazardous Air Pollutants (HAPs)	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	Total - Metals
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	5.2E-05	1.1E-04	1.5E-04	4.0E-05	2.2E-04	5.7E-04

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Total HAPs	0.20
Worst HAP	0.19

Greenhouse Gases (GHGs)	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	12,496	0.24	0.23
Summed Potential Emissions in tons/yr	12,496		
CO2e Total in tons/yr	12,570		

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 (25) + N2O Potential Emission ton/yr x N2O GWP (298).

TSD Appendix A: Emission Calculations
Insignificant Activity: Cold Rolling Mill Operation

Company Name: Haynes International, Inc.
Address City IN Zip: 2000 West Deffenbaugh Street, Kokomo, IN 46902
Part 70 Operating Permit Renewal No.: T067-30930-00009
Significant Source Modification No.: 067-36203-00009
Significant Permit Modification No.: 067-36247-00009
Reviewer: Madhurima Mouluk

Cold Rolling Mill Operation (MKW 90 and 100) (Insignificant Activity)								
		TON/HR		TON/YR			Control Device:	N/A
	Metal Throughput	6		52,560			Control Efficiency:	
	PM lb/ton metal	PM10 lb/ton metal	PM2.5 lb/ton metal	SOx lb/ton metal	NOx lb/ton metal	VOC lb/ton metal	CO lbs/ton metal	Lead lbs/ton metal
Emission Factor	0.140	0.140	0.140	0.00	0.00	0.05	0.00	0.00
Potential Uncontrolled Emissions lbs/hr	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions tons/year	3.68	3.68	3.68	0.00	0.00	0.00	0.00	0.00

Note:

The emission factor is based on 0.188 pounds of oil usage per ton of metal, of which 85% is PM and the rest is VOC

Emissions (lbs/hr) = emission factor (lb/ton) * throughput (tons/hr)

Emissions (tons/yr) = emission factor (lb/ton) * throughput (tons/hr) * 8760 (hr/yr) / 2000 (lb/ton)

Limited Emissions (tons/yr) = emission factor (lb/ton) * throughput (tons/yr) / 2000 (lb/ton)



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

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

TO: Greg Morrow
Haynes International, Inc.
2000 W Defenbaugh St
Kokomo, IN 46902

DATE: February 4, 2016

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

SUBJECT: Final Decision
Title V SSM
061-36203-00009

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.

Final Applicant Cover letter.dot 8/27/2015



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

February 4, 2016

TO: Kokomo Howard Co Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Haynes International Inc.
Permit Number: 067-36203-00009

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 8/27/2015

Mail Code 61-53

IDEM Staff	CDENNY 2/4/2016 Haynes International, Inc. 067-36203-00009 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	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		

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3		Kokomo City Council and Mayors Office City Hall, 100 S. Union Street Kokomo IN 46901 (Local Official)									
4		Kokomo Howard Co Public Library 220 N Union St Kokomo IN 46901-4600 (Library)									
5		Howard County Commissioners 220 North Main Kokomo IN 46901-4624 (Local Official)									
6		Howard County Health Department 120 E. Mulberry St, Suite 206 Kokomo IN 46901-4657 (Health Department)									
7		Mr. Leslie Ellison Howard County Council, District 3 408 East Mulberry Street Kokomo IN 46901 (Affected Party)									
8		Walter Koucky Cornerstone Environmental 880 Lennox Court Zionsville IN 46077 (Consultant)									
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