INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: September 22, 2011

RE: Precision Propeller Industries, Inc. / 097 - 30550 - 00664

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

Notice of Decision – Approval

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

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

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

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

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

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

Enclosures
FNPER-AM.dot12/3/07

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Bill Boehman
Precision Propeller Industries, Inc.
2427 N. Ritter Avenue
Indianapolis, IN 46218

September 22, 2011

Re: 097-30550-00664
Notice-Only Change to
M097-28135-00664

Dear Mr. Boehman:

Precision Propeller Industries, Inc. was issued a Minor Source Operating Permit (MSOP) No. M097-28135-00664 on June 8, 2010 for a stationary investment casting facility manufacturing primarily propellers and other casting products, located at 2427 North Ritter Avenue, Indianapolis, Indiana. On May 16, 2011, the Office of Air Quality (OAQ) received an application for notice-only change requesting the following:

1. The source requested the addition of natural gas combustion units and two R&D welding units which were inadvertently left out from the existing permit No.: M097-28135-00664. The addition of these units to the permit is considered a notice-only change, since the potential emissions of regulated criteria pollutants and hazardous air pollutants are less than the ranges specified 326 IAC 2-6.1-6(g)(4) and 326 IAC 2-6.1-6(d)(10), respectively. The uncontrolled/unlimited potential to emit of the entire source will continue to be less than the threshold levels specified in 326 IAC 2-7. The addition of these units will not cause the source's potential to emit to be greater than the threshold levels specified in 326 IAC 2-2 or 326 IAC 2-3.

2. The existing emission unit description of one (1) grinding and polishing station, controlled by a 1,200 cfm dust collector, should be listed as one (1) buff and polish station, B17A2, controlled by cyclone. This change at the source is considered a "minor physical change" as defined in 326 IAC 2-1.1-1(6).

3. The source also requested the removal of the repair paint booth (identified as E13) and Shellmaker boiler (identified as E1) from the process and all references to the units to be removed from the permit. This removal of emission units is a notice only change, pursuant to 326 IAC 2-6.1-6, since it is a revision to descriptive information where the revision will not trigger a new applicable requirement or violate a permit term.

4. Additionally, the Permittee also requested that the emission unit descriptions and identifications in the permit be revised to incorporate the identification specific to the building activity and the control device as applicable. This change at the source is considered a "minor physical change" as defined in 326 IAC 2-1.1-1(6). Pursuant to 326 IAC 2-1.1-3(h)(2), minor physical changes to a source do not require a permit revision under 326 IAC 2-6.1-6, if the minor physical change does not increase potential emissions from the source. This change to the permit is considered a notice-only change pursuant to 326 IAC 2-6.1-6(d)(2).

The following natural gas combustion units, buff and polish station and welding stations were inadvertently left out from the existing permit and are added during this notice-only change. The addition of these units will not cause the source's potential to emit to be greater than the threshold levels specified in 326 IAC 2-6.1-6.

(a)

Natural Gas-Fired Unit Locations	Total Capacity (MMBtu/hr)	Installation Date	Stack ID
Bldg 11 Heater (B111 CS2)	4.0	2001	B11CS2
Bldg 13 Warehouse Heater (B13 CS 1-10) (10 units)	0.075	1999	B13CS 1 -10
Bldg 14 Offices (B14C1-B13C10 (2 units)	0.100	2009	B14CS 1 - 6
Bldg 14 Packing (B14 C4,C5) (2 units)	0.200	2004	B14CS4,CS5
Bldg 14 Break room (B14 C3)	0.060	2004	B14CS3
Bldg 14 Shellmaker room (B14 C6)	0.400	2004	B14PS1
Bldg 15 South Grind (B15 C1)	0.200	2009	B15CS1
Bldg 16 Finish Dept (B16 C1- B16 C2) (2 units)	0.200	2009	B16CS1
Bldg 17 TE grind (B17 C1)	0.060	2009	B17CS1
Bldg 17 QC (B17 C2)	0.060	2009	B17CS2
Bldg 17 Filter Press Room (B17 C3)	0.075	2009	B17CS3

NOTE: Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit 100,000 tons per year or more of CO2 equivalent emissions (CO2e). Therefore, CO2e emissions have been calculated for entire source. Based on the calculations the unlimited potential to emit greenhouse gases from the entire source is less than 100,000 tons of CO2e per year (see TSD Appendix A for detailed calculations). This did not require any changes to the permit.

(b) Maintenance and R & D production Welders: One (1) MIG and One (1) TIG welder, exhausting inside the building.

(c) One (1) buff and polish station, identified as B17A2, controlled by a Cyclone dust collector, identified as B14A2DC2, exhausting inside the building.

NOTE: There is no change in particulate emissions due to the change in emission unit description, because particulate emission factors were provided by the source based on the dust collected before control from above emission unit.

State Rule Applicability - combustion units and R&D and Maintenance Welding operation :

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The natural gas-fired heaters, are each not subject to 326 IAC 6-2 as they are not sources of indirect heating.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The space heaters are not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions of sulfur dioxide are less than twenty-five (25) tons per year and ten (10) pounds per hour each.

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

(a) Pursuant to 326 IAC 6-3-1(b)(14), the source-wide space heaters are not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because they each have the potential to emit particulate matter less than 0.551 pounds per hour each.

(b) Pursuant to 326 IAC 6-3-1(b)(9), the one (1) MIG/TIG welding station is exempt from the requirements of 326 IAC 6-3, because the potential to consume welding wire is less than six hundred twenty-five (625) pounds per day each.

(c) Pursuant to 326 IAC 6-3-1(b)(14), the source-wide welding operation is not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because the potential to emit particulate matter is less than 0.551 pounds per hour each.

State Rule Applicability -One (1) buff and polish station, identified as B17A2:

326 IAC 6.5-1-2 Particulate Matter Limitations except Lake County

Pursuant to 326 IAC 6-5.1-2, particulate matter (PM) emission from buff and polish station 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)).

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The table below summarizes the potential to emit of the entire source, after the proposed revision, deleted language as ~~strikeouts~~ and new language **bolded**, after consideration of all enforceable limits established in the effective permits:

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of MSOP (tons/year)									
	PM	*PM10	PM2.5	SO_2	NOx	VOC	CO	**CO2e as GHGs****	Total HAPs	Worst Single HAP
(1) Electric Induction Furnace East Side Furnace #1, B11 P3 (1) Electric Induction Furnace West Side Furnace #2, B11 P3	0.30	0.29	0.29	0.0	0.0	0.0	0.0	0.0	0.04	0.033 lead
(2) Pouring Casting/cooling-B11A1 and B12A1	1.41	0.69	0.33	0.0	0.0	0.0	2.0	0.0	0.0	neg.
(1) Pneumatic and Shakeout unit -B12A2 (4) Cuttoff & Grind Stations B12A3 (1) mechanical and (3) Kelco Airless Shotblasts B12A4	14.40	14.40	14.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(4) Hand Grinding Stations (B6A1) (1) Sand Blast Cabinet	2.73	2.73	2.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Two (2) Vibratory Finish Lines(B16A1)	5.69	0.57	0.57	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grind and Polish Station B03A1	2.72	2.72	2.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(18) Grinding Stations B15A1, B15A2, B17A1, B17A2	3.68	3.68	3.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nine Metal HAPs	0	0	0	0	0	0	0	0.0	~~6.60~~ **6.61**	4.53 (Chromium)
~~Repair Paint Operation~~	~~2.05~~	~~2.05~~	~~2.05~~	~~0.0~~	~~0.0~~	~~12.12~~	~~0.0~~	~~0.0~~	~~8.35~~	~~5.76 (Toluene)~~
Miscellaneous solvent usage	0.02	0.02	0.02	0	0	1.5	0	0.0	0.29	0.25 TEA
Natural gas Combustion	~~0.106~~ **0.148**	~~0.423~~**0.59**1	~~0.423~~**0.59**1	~~0.33~~ **0.047**	~~5.577~~**7.77**	~~0.310~~**4.28**	~~4.68~~ **6.53**	**9,388**	~~0.10~~ **0.14**	~~0.10~~ **0.14** (n-Hexane)
Welders	0.001	0.001	0.001	0.0	0.0	0.0	0.0	0.0	negl.	negl.
Fugitive emissions Paved Roads	0.011	0.011	0.011	0.0	0.0	0.0	0.0	0.0	0	0
Total PTE of Entire Source	~~33.12~~ **31.09**	~~27.58~~ **25.68**	~~27.22~~**25.32**	~~0.030~~**0.047**	~~5.57~~ 7.78	~~13.9~~ **1.91**	~~6.69~~ **8.54**	**9,388**	~~15.39~~ **6.65**	~~5.76~~ **4.53** ~~(Toluene~~**) Chromium**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	100,000	NA	NA

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
The emissions are based on the metal throughput of 669.3 tons per year due to the bottle neck of the vibratory finish lines.
There are no PM2.5 Emission Factors in AP42, PM10 = PM2.5.
The above listed emissions are uncontrolled.
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of MSOP (tons/year)									
	PM	*PM10	PM2.5	SO_2	NOx	VOC	CO	**CO2e as GHGs****	Total HAPs	Worst Single HAP
(1) Electric Induction Furnace East Side Furnace #1 B11P3	0.30	0.29	0.29	0.0	0.0	0.0	0.0	0.0	0.04	0.033 lead
(1) Electric Induction Furnace West Side Furnace #2 B11P3										
(2) Pouring Casting/cooling-B11A1 and B12A1	1.41	0.69	0.33	0.0	0.0	0.0	2.0	0.0	0.0	neg.
(1) Pneumatic and Shakeout unit -B12A2	14.40	14.40	14.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(4) Cuttoff & Grind Stations B12A3										
(1) mechanical and (3) Kelco Airless Shotblasts B12A4										
(4) Hand Grinding Stations (B6A1)	2.73	2.73	2.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(1) Sand Blast Cabinet										
Two (2) Vibratory Finish Lines(B16A1)	5.69	0.57	0.57	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grind and Polish Station B03A1	2.72	2.72	2.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(18) Grinding Stations B15A1, B15A2, B17A1, B17A2	3.68	3.68	3.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nine Metal HAPs	0	0	0	0	0	0	0	0.0	6.61	4.53 (Chromium)
Miscellaneous solvent usage	0.02	0.02	0.02	0	0	1.5	0	0.0	0.29	0.25 TEA
Natural gas Combustion	0.148	591	591	0.047	77	28	6.53	9,388	0.14	0.14 (n-Hexane)
Welders	0.001	0.001	0.001	0.0	0.0	0.0	0.0	0.0	negl.	negl.
Fugitive emissions Paved Roads	0.011	0.011	0.011	0.0	0.0	0.0	0.0	0.0	0	0
Total PTE of Entire Source	**31.09**	**25.68**	**0.32**	**047**	7.78	**1.91**	**8.54**	**9,388**	**6.65**	**4.53 Chromium**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	100,000	NA	NA

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
The emissions are based on the metal throughput of 669.3 tons per year due to the bottle neck of the vibratory finish lines.
There are no PM2.5 Emission Factors in AP42, PM10 = PM2.5.
The above listed emissions are uncontrolled.
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

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

(A) The emission unit descriptions in Sections A.1 and A.2 are updated and related Conditions in Sections D.1, D.2, D.3 and E.1 are revised to include the emission unit descriptions and the modifications.

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary investment casting facility manufaturing ~~precision propeller.~~ **primarily propellers and other casting products.**

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) Induction melt Furnaces:

(1) One (1) electric induction melt furnace, identified as **East Side Induction Furnace #1 (B11P3)**~~F1~~, constructed in ~~1999~~ **2007** with a maximum capacity of ~~200~~ **600** lbs/hr of steel, to manufacture propellers, maximum capacity ~~876~~ **2,628** tons per year of steel, exhausting internally **into the building.**

(2) One (1) electric induction melt furnace, identified as **West Side Induction Furnace #2 (B11P3)**~~F2~~, constructed in ~~2007~~,**1999** with a maximum capacity of ~~600~~ **200** lbs/hr of steel, to manufacture **cast products** ~~propellers,~~ maximum capacity ~~2,628~~ **876** tons per year of steel, exhausting internally **into the building.**

(b) ~~One (1)~~ **Two (2)** pouring, casting and cooling line**s**, **identified as B11A1 and B12A1,** installed in 1999, uncontrolled, maximum capacity of 0.40 tons per hour **combined,** exhausting ~~inside~~ **internally into the building.**

(c) Operations controlled by ~~Baghouse B~~ **Foundry Baghouse (B12BH1):**

(1) One (1) pneumatic shakeout unit, identified as ~~E5~~ **B12A2**, constructed in 1988, with a maximum capacity of 300 lbs of metal per hour, with emissions controlled by ~~baghouse B~~ **Foundry Baghouse (B12BH1)** and exhausting internally **into the building.**

(2) Four (4) Cutoff & Grinding stations, collectively identified as ~~E6~~ **B12A3**, constructed in 1995, with a maximum capacity of 15 lbs of metal per hour combined, with emissions controlled by ~~baghouse B~~ **Foundry Baghouse (B12BH1)**, and exhausting internally **into the building.**

(3) ~~Three (3)~~ **One (1) Mechanical shot blast** Wheelabrator ~~Airless~~ **and three (3) Kelco** ~~Shot~~ **sand** Blasters, **capable of using sand, non metallic grit or steel shot**, collectively identified as ~~E7~~, **B12A4,** constructed in 1996, equipped with **Foundry Baghouse (B12BH1)** to control particulate **emissions**, with a maximum process throughput of 668.3 pounds/hr of ~~propellers~~ **castings** each, including 0.30 pounds of steel shots per hour each, and exhausting internally **into the building.**

(d) Operations **in Building #6 Production** controlled by ~~Baghouse A~~, **Baghouse (B06BH1) exhausting internally into the building.**

(1) Four (4) Off Hand **production** Grinding Stations ~~to repair propellers~~, collectively identified as ~~E11~~ **B6A1**, constructed in 1985, with a maximum throughput of 334 lbs of propellers per hour each, with emissions controlled by ~~baghouse A~~ **Building #6 Baghouse (B06BH1)** and exhausting internally **into the building.**

(2) One (1) Sandblast Cabinet ~~to repair propellers,~~ identified ~~as E12~~ **in Building #6 Production**, constructed in 1995, ~~with a capacity of 20 pieces per hour~~, with a maximum throughput of 334 lbs. per hour ~~of propellers and 950 lbs.~~ of sand blast media per year, equipped with baghouse (B06BH1) **to control particulates** and exhausting internally **into the building.**

(e) Two (2) dry Vibratory Finishing Operations, collectively identified as ~~E9~~ **B16A1 in Finishing,** constructed in 1986, with a maximum capacity of metal propellers processed less than 100.0 lbs per hour each, to remove burrs and imperfections, equipped with a 1,200 cfm dust collector, **identified as B16A1DC1** ~~identified as E-9~~ to control particulates, including 7.52 lbs/hr of polishing media each, and exhausting internally **into the building.**

(f) One (1) Off Hand Grinding ~~and polishing~~ Station **for Maintenance R&D and Production**, identified as **B03A1** ~~E14~~ constructed in 1994, with ~~a capacity of 12 propellers per hour through E14~~, maximum throughput of 200.4 pounds per hour, equipped with one 1,200 cfm dust collector, identified as **B03A1DC1** ~~E-14~~ to control particulates and exhausting internally **into the building.**

~~(g) Fifteen (15) Off Hand Grinding Stations, collectively identified as E8 , constructed in 1985, with a combined maximum capacity of 3,600 lbs per hour, maximum weight of sixteen and seven tenths (16.7) pounds of each propeller, comprised of the following~~:

(g) **Grinding Stations:**

(1) ~~Seven (7)~~ **Eight (8)** grinding stations **in South Grind Shop, identified as B15A1,** controlled by a 3,200 cfm dust collector, identified as **B15A1DC1**~~as E7-3200~~, maximum capacity 240 lbs/hr each, exhausting internally **into the building.**

NOTE: There is no increase in particulate emissions due to increase in number of grinding stations because particulate emission factors were provided by the source based on the dust collected before control from above emission units.

(2) One (1) **Downdraft table accommodating four (4)** grinding stations, **identified as B15A2** controlled by a 4,800 cfm dust collector, identified as ~~E1-4800~~ **B15A2DC2**, maximum capacity 240 lbs/hr, exhausting internally **into the building.**

NOTE: Each grinding station includes a group of hand grind tools. Only one (1) tool per station can be run at once.

(3) ~~Six (6)~~ **Five (5)** grinding stations **in Trail Edge (TE) Department, identified as B17A1** controlled by a 3,200 cfm dust collector, identified as **B17A1DC1** ~~E6-3200~~, maximum capacity 240 lbs/hr each, exhausting internally **into the building**.

~~(4) One (1) grinding and polishing station, controlled by a 1,200 cfm dust collector, identified as E1-1200, maximum capacity 240 lbs/hr, exhausting internally.~~

(4) **One (1) buff and polish station, identified as B17A2, controlled by a Cyclone dust collector, identified as B14A2DC2, exhausting inside the building.**

~~(h) One (1) Propeller Repair Paint Booth, identified as E13, constructed in 1995, equipped with HVLP spray gun, with a capacity of 20 pieces of propellers per hour, with particulate emissions controlled by a dry filter, exhausting to stack S6A~~.

(~~i~~ **h**) Miscellaneous solvent usage:

(a) The mold release sprayed on the molds to release the ~~castings~~ **wax** with 100% VOC.

~~(b) The catalyst used in the mold making operation, with 26.72% VOC.~~

(b) TEA used **in the manual dip and robot slurry tanks for** ~~in~~ the pH adjustment @ **2% concentration mixed with water**, with 100% VOC.

(~~j~~ **i**) Combustion units:

(1) One (1) natural gas-fired Dehumidification System **with a burner**, identified as **B14P1**, constructed in 2005, rated at 0.173 MMBtu/hr, to remove moisture from ~~the wax~~ **ceramic** mold, ~~with a maximum capacity of 40 pounds of wax per hour~~, exhausting to stack ~~S14AA~~ **B14PS1.**

~~(2) One (1) natural gas-fired Shellmaker Boiler, identified as E1, constructed in 2005, rated at 0.400 MMBtu/hr, exhausting to stack S14AA.~~

(2) One (1) natural gas-fired Building ~~7C~~ **11** Dewax Autoclave Boiler, identified as ~~E2~~, **B11P1,** constructed in 2008, with a maximum heat input capacity of 2.095 MMBtu/ hr, exhausting to stack ~~S7CAA~~ **B11 PS1**.

(3) One (1) natural gas-fired Furnace **in Foundry**, identified as ~~E3~~ **B11P2,** constructed in 1999, comprised of two (2) pre-heat ovens with a heat input capacity of 1.5 million British thermal units per hour (MMBtu/hr) each, and one (1) afterburner with a heat input capacity of 0.75 million British thermal units per hour (MMBtu/hr), exhausting to stack ~~S7CC~~ **B11PS2.**

(4) One (1) natural gas-fired air make-up Building ~~7C~~ **11** Roof top unit **in Foundry**, identified as ~~E17~~ **B11C2**, constructed in 2001, with 4.0 million British thermal units per hour (MMBtu/hr), emissions exhausting to stack ~~S7CB~~ **B12CS2**.

(5) Numerous natural-gas fired **comfort** space heaters located throughout the facility as follows: ~~collectively identified as unit E16~~:

Natural Gas-Fired Unit Locations	Total Capacity (MMBtu/hr)	Installation Date	Stack ID
~~Bldg 01 Heater~~ **Bldg 1 Heater (B1 CS1)**	0.165	~~1982~~ **1989**	~~S2~~**B1CS1**
~~Bldg 0~~**2 Heater** **Bldg 2 Heater (B2 CS1)**	0.080	~~1982~~ **2000**	~~S2A~~ **B2CS1**
~~Bldg 3 Heater~~ **Bldg 2 Heater (B2 CS2)**	~~0.250~~ **0.080**	~~1973~~ **2000**	~~S3~~ **B2CS2**
~~Bldg 4 Heater~~ **Bldg 3 Heater (B3 CS1)**	~~0.165~~ **0.250**	~~1975~~ **2003**	~~S4~~ **B3 CS1**
~~Bldg 5 Heater~~ **Bldg 4 Heater (B4 CS1)**	~~0.200~~ **0.165**	~~1975~~ **1989**	~~S5~~ **B4CS1**
~~Bldg 6 Heater~~ **Bldg 5 Heater (B5 CS1)**	~~0.250~~ **0.200**	~~1981~~ **1992**	~~S6~~ **B5CS1**
~~Bldg 7A Heater~~ **Bldg 6 Heater (B6 CS1)**	~~0.225~~ **0.310**	~~1981~~ **2010**	~~S7A~~ **B6CS1**
~~Bldg 7C Heater (3)~~ **Bldg 7 Heater (B7 EH1)**	~~0.250~~ **Electric Heat**	1981	~~S7C~~ **B7EH1**
~~Bldg 13Heater (1)~~ **Bldg 8 Heater (B8 CS11)**	~~0.750~~ **0.225**	~~1999~~ **2002**	~~S13A~~ **B8CS1**
~~Bldg 14 Warehouse~~ **Bldg 9 Heater (B9 EH1)**	~~0.400~~ **Electric Heat**	~~2004~~ **1990**	~~S14A~~ **B9EH1**
~~Bldg 14 Restroom Heater~~ **Bldg 10 Heater (B10 EH1)**	~~0.060~~ **Electric Heat**	~~2004~~ **1990**	~~S14B~~ **B10EH1**

~~Heater (2)~~ **Bldg 11 Heater (B111 CS1)**	~~0.40~~ **0.250**	~~2003~~ **1990**	~~S7CB~~ **B11CS1**
Bldg 11 Heater (B111 CS2)	**4.0**	**2001**	**B11CS2**
Bldg 13 Warehouse Heater (B13 CS 1-10) (10 units)	**0.75**	**1999**	**B13CS 1 -10**
Bldg 14 Offices B14C1- B13C10 (2 units)	**0.100**	**2009**	**B14CS 1 - 6**
Bldg 14 Packing B14C4- B14C5 (2 units)	**0.200**	**2004**	**B14CS4,CS5**
Bldg 14 Break room B14C3	**0.060**	**2004**	**B14CS3**
Bldg 14 Shellmaker room B14C6	**0.400**	**2004**	**B14PS1**
Bldg 15 South Grind B15C1	**0.200**	**2009**	**B15CS1**
Bldg 16 Finish Dept. B16C1- B16C2 (2 units)	**0.200**	**2009**	**B16CS1**
Bldg 17 TE Grind B17C1	**0.060**	**2009**	**B17CS1**
Bldg 17 QC Inspection B17C2	**0.060**	**2009**	**B17CS2**
Bldg 17 Filter Press Room B17C3	**0.075**	**2009**	**B17CS3**

~~(k) One (1) MIG/TIG Welding Operation, identified as E10, constructed in 1975, with a maximum capacity of 12 pieces per hour, with a maximum throughput of 200.4 pounds per hour of propellers, and exhausting indoors.~~

(j) **Welders:**

(1) Two (2) TIG welding stations in South Grind Shop, One (1) TIG welding station in TE area and one (1) TIG welding station in Building #6 production area, constructed in 1975, exhausting inside the building.

(2) Maintenance and R & D Production Welders: One (1) MIG and One (1) TIG welder, constructed in 1975, exhausting inside the building.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Induction melt Furnaces;

(1) One (1) electric induction melt furnace, identified as **East Side Induction Furnace #1 (B11P3)** ~~F1~~, constructed in **2007** ~~1999~~, with a maximum capacity of ~~200~~ **600** lbs/hr of steel, to manufacture propellers, maximum capacity ~~876~~ **2,628** tons per year of steel, exhausting internally **into the building.**

(2) One (1) electric induction melt furnace, identified as **West Side Induction Furnace #2 (B11P3)** ~~F2~~, constructed in **1999** ~~2007~~, with a maximum capacity of ~~600~~ **200** lbs/hr of steel, to manufacture propellers, maximum capacity ~~2,628~~ **876** tons per year of steel, exhausting internally **into the building.**

(b) ~~One (1)~~ **Two (2)** pouring, casting and cooling line**s**, **identified as B11A1 and B12A1,** installed in 1999, uncontrolled, with a maximum capacity of 0..40 tons per hour **combined,** exhausting ~~inside~~ **internally into the building.**

(c) Operations controlled by ~~Baghouse B~~ **Foundry Baghouse (B12BH1)**

(1) One (1) pneumatic shakeout unit, identified as ~~E5~~ **B12A2**, constructed in 1988, with a capacity of 300 lbs of

metal per hour, with emissions controlled by **Foundry Baghouse** ~~baghouse B1~~, **B12BH1**and exhausting internally **into the building.**

(2) Four (4) Cutoff & Grinding stations, collectively identified as ~~E6~~ **B12A3**, constructed in 1995, with a capacity of 15 lbs of metal per hour combined, with emissions controlled by **Foundry Baghouse** ~~baghouse B1~~ (**B12BH1)**, and exhausting internally **into the building.**

(3) ~~Three (3)~~ **One (1) Mechanical shot blast** Wheelabrator ~~Airless~~ **and three (3) Kelco** ~~Shot~~ **sand** Blasters **capable of using sand, non metallic grit or steel shot**, collectively identified as ~~E7~~ **B12A4**, constructed in 1996, equipped with **Foundry Baghouse (B12BH1)** to control particulate **emissions**, with a maximum process throughput of 668.3 pounds/hr of ~~propellers~~ **castings** each, including 0.30 pounds of steel shots per hour each, and exhausting internally **into the building.**

(d) Operations **in Building #6 Production** controlled by ~~Baghouse A~~ **Baghouse (B06BH1), exhausting internally into the building.**

(1) Four (4) Off Hand **production** Grinding Stations ~~to repair propellers~~, collectively identified as ~~E11~~ **B6A1**, constructed in 1985, with a maximum throughput of 334 lbs of ~~propellers~~ **product** per hour each, with emissions controlled by ~~baghouse A~~ **Building #6 Baghouse (B06BH1)** and exhausting internally **into the building.**

(2) One (1) Sandblast Cabinet ~~to repair propellers,~~ identified as ~~E12~~ **B06A1 in Building #6 Production**, constructed in 1995, ~~with a capacity of 20 pieces per hour~~, with a maximum throughput of 334 lbs. per hour ~~of propellers and 950 lbs.~~ of sand blast media per year, equipped with Baghouse (B06BH1) **to control particulates** and exhausting internally **into the building**.

(e) Two (2) dry Vibratory Finishing Operations, collectively identified as ~~E9~~ **B16A1 in FInishing**, constructed in 1986, with a maximum capacity of metal propellers processed less than 100.0 lbs per hour each, to remove burrs and imperfections, equipped with a 1,200 cfm dust collector, identified as **B16A1DC1 in Finishing** to control particulates, including 7.52 lbs/hr of polishing media each, and exhausting internally **into the building**.

(f) One (1) Off Hand Grinding ~~and polishing~~ Station **for Maintenance, R & D and Production**, identified as ~~E14~~ **B03A1,** constructed in 1994, with ~~a capacity of 12 propellers per hour through E14~~, maximum throughput of 200.4 pounds per hour, equipped with one 1,200 cfm dust collector, identified ~~as E-14~~ **as B03A1DC1** to control particulates and exhausting internally **into the building.**

~~(g) Fifteen (15) Off Hand Grinding Stations, collectively identified as E8, constructed in 1985, with a combined maximum capacity of 3,600 lbs per hour, maximum weight of sixteen and seven tenths (16.7) pounds of each propeller, comprised of the following:~~

(g) Grinding Stations:

(1) ~~Seven (7)~~ **Eight (8)** grinding stations **in South Grind Shop, identified as B15A1,** controlled by a 3,200 cfm dust collector, identified as ~~E7-3200~~ **B15A1DC1**, maximum capacity 240 lbs/hr each, exhausting interna **into the building.**

(2) One (1) **Downdraft table accommodating four (4)** grinding stations, **identified as B15A2**, controlled by a 4,800 cfm dust collector, identified as ~~E1-4800~~ **B15A2DC2**, maximum capacity 240 lbs/hr, exhausting internally **into the building**. **Each grinding station includes a group of hand grind tools. Only one (1) tool per station can be run at once.**

(3) ~~Six (6)~~ **Five (5)** grinding stations **in Trail Edge (TE) Department, identified as B17A1,** controlled by a 3,200 cfm dust collector, identified as ~~E6-3200~~ **B17A1DC1**, maximum capacity 240 lbs/hr each, exhausting internally **into the building**.

~~(4) One (1) grinding and polishing station, controlled by a 1,200 cfm dust collector, identified as E1-1200, maximum capacity 240 lbs/hr, exhausting internally.~~

(4) **One (1) buff and polish station, identified as B17A2, controlled by a Cyclone dust collector, identified as B17A2DC2, 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 2-6.1-5(a)(1)]

D.1.1 Particulate Matter Limitations except Lake County [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6-5.1-2, particulate matter (PM) emission from each unit listed in the table below 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)).

Control Device	Emission Unit
No Control	(1) electric induction melt furnace **East Side Induction** (**Furnace** #1)
No Control	(1) electric induction melt furnace **West Side Induction** (**Furnace** #2)
No Control	(1) Pouring, casting and cooling **B11A1, B12A1**
~~Baghouse B1~~ **B12 BH1**	(1) pneumatic shakeout unit ~~(E5)~~ **B12 A2**
	(4) Cuttoff & Grind gates -each ~~(E6)~~ **B12A3**
	(~~3~~1) **Mechanical shot blaster and (3) Kelco sand** ~~Wheelabrator Airless~~ Shot Blasters - each ~~(E7)~~ **B12A4**
~~Baghouse A~~ **B2 B06ABH1**	(4) Off Hand Grinding stations-each ~~(E11)~~ **B6A1**
	(1) Sandblast Cabinet ~~(E12)~~ **B6A1**
Dust Collector 1,200 CFM **B16A1DC1**	(2) dry Vibratory finish lines - each ~~(E9)~~ **B16A1**
Dust Collector 1,200 CFM **B03A1DC1**	(1) Off Hand Grinding station ~~(E14)~~ **B03A1**
Dust Collector 3,200 CFM **B15A1DC1**	~~(7)~~ **(8)** grinding stations - each (~~E8)~~ **B15A1**
Dust Collector 4,800 CFM **B15A2DC2**	(1) ~~grinding station~~ ~~(E8)~~ **Downdraft Table B15A2**
Dust Collector 3,200 CFM **B17A1DC1**	~~(6)~~ **(5)** grinding stations - each ~~(E8)~~ **B17A1**
~~Dust Collector 1,200 CFM~~ **Cyclone Dust Collector B17A2DC2**	(1) ~~grinding station (E8)~~ **Buff and Polish Station – B17A2**

Compliance Determination Requirements

D.1.2 Particulate Control

(a) In order to comply with Conditions D.1.1, the ~~baghouse B~~ **Foundry Baghouse (B12BH1)** associated with the shakeout **(B12A2)** ~~(E5),~~ **Cut off and** grind **(B12A3)** ~~(E6)~~ and ~~shotblasting~~ **Weheelabrate and sandblast** operations ~~(E7)~~ **(A12A4)**~~,~~ and the **Finishing** dust collector,~~ E-9~~ **(B16A1DC1)** associated with two (2) Vibratory Finish Lines ~~(E9)~~ **B16A1, and cyclone dust collector B17A2DC2** to control particulate emissions, shall be in operation and control emissions from shakeout, grinding, **buffing** and shotblasting operation and the Vibratory Finish Lines ~~(E9)~~ at all times that the units are in operation.

(b) In the event that ~~baghouse B~~ **Foundry Baghoulse (B12BH1)** and the **Finishing** dust

collector ~~E-9~~ **(B16A1DC1)**, 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.

D.1.3 Cyclone Inspections

An inspection shall be performed each calendar quarter of cyclone B17A2DC2 controlling the buffing and the polishing operation.

D.1.4 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. 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).

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

D.1.~~3~~**5** Parametric Monitoring

(a) The Permittee shall record the total pressure drop across ~~baghouse A~~ **Building #6 Baghouse (B06BH1)** controlling emission units ~~E5, E6 and E7~~ and ~~baghouse B~~ **Foundry Baghouse (B12 BH1)** controlling emission units ~~E11, E12~~ at least once per day when associated units...

...

D.1.~~4~~**6** Broken or Failed Bag Detection

...

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

D.1.~~5~~ **7** Record Keeping Requirements

(a) Pursuant to 326 IAC 2-6.1-5 (a), the metal throughput of 669.3 tons

...

(c) To document the compliance status with Condition D.1.3, the Permittee shall maintain records of the results of the inspections required under Condition D.1.3.

(~~c~~**d**) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(B) The Propeller repair paint booth is removed from the source, therefore, the emission unit description in Section D.2 and all related references to the unit are removed from the permit.

~~**SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS**~~

Emissions Unit Description:

~~(h) One (1) Propeller Repair Paint Booth, identified as E13, constructed in 1995, equipped with HVLP spray gun, with a capacity of 20 pieces of propellers per hour, with particulate emissions controlled by a dry filter, exhausting to stack S6A.~~

~~(i~~**h**~~) Miscellaneous solvent usage:~~

~~(a) The mold release sprayed on the molds to release the castings~~ **Wax** ~~with 100% VOC.~~

(b) ~~The catalyst used in the mold making operation, with 26.72% VOC~~.

(c~~b~~) ~~TEA used in the pH adjustment with 100% VOC.~~

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

~~D.2.1 Particulate [326 IAC 6-5.1-2]~~

~~Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from Propeller repair Paint Booth shall be limited to seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (gr/dscf) of exhaust air.~~

~~D.2.2 VOC Limit [326 IAC 8-2-9]~~

~~The Repair Paint Booth, E13 shall use less than fifteen (15) pounds per day of VOC, including coatings, dilution solvents, and cleaning solvents. Compliance with this limit renders 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) not applicable~~.

Compliance Determination Requirements

~~D.2.3 Volatile Organic Compounds (VOC)[326 IAC 8-1-2] [326 IAC 8-1-4]~~

~~Compliance with the VOC content contained in Condition D.2.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.~~

Record Keeping Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

~~D.2.4 Record Keeping Requirements~~

~~(a) To document compliance with Condition D.2.2, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (3) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit established in Condition D.2.2.~~

~~(1) The VOC content of each coating material and solvent used less water.~~

~~(2) The amount of coating material and solvent used on a daily basis.~~

~~(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.~~

~~(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;~~

~~(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~

~~...~~

~~D.2.5 Reporting Requirements~~

~~A quarterly summary of the information to document the compliance status with Condition D.2.2 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no 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.~~

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(~~j~~ **i**) Combustion units:

(1) One (1) natural gas-fired Dehumidification System **with a burner**, identified as **B14P1**, constructed in 2005, rated at 0.173 MMBtu/hr, to remove moisture from ~~the wax~~ **ceramic** mold, ~~with a maximum capacity of 40 pounds of wax per hour~~, exhausting to stack ~~S14AA~~ **B14PS1.**

(2) One (1) natural gas-fired Building ~~7C~~ **11** Dewax Autoclave Boiler, identified **as B11P1**, constructed in 2008, with a maximum heat input capacity of 2.0 MMBtu/ hr, exhausting to stack **B11PS1**.

(3) One (1) natural gas-fired Furnace **in Foundry**, identified as ~~E3~~ **B11P2**, constructed in 1999, comprised of two (2) pre-heat ovens with a heat input capacity of 1.5 million British thermal units per hour (MMBtu/hr) each, and one (1) afterburner with a heat input capacity of 0.75 million British thermal units per hour (MMBtu/hr), exhausting to stack ~~S7CC~~ **B11PS2**.

(4) One (1) natural gas-fired air make-up Building ~~7C~~ **11** Roof top unit **in Foundry**, identified as ~~E17~~ **B11C2**, constructed in 2001, with 4.0 million British thermal units per hour (MMBtu/hr),emissions exhausting to stack ~~S7CB~~ **B11CS2.**

(5) Numerous natural-gas fired **comfort** space heaters located throughout the facility as follows: ~~collectively identified as unit E16:~~

Natural Gas-Fired Unit Locations	Total Capacity (MMBtu/hr)	Installation Date	Stack ID
~~Bldg 01 Heater~~ **Bldg 1 Heater (B1 CS1)**	0.165	~~1982~~ **1989**	~~S2~~**B1CS1**
~~Bldg 0~~**2 Heater (B2 CS1)**	0.080	~~1982~~ **2000**	~~S2A~~ **B2CS1**
~~Bldg 3 Heater~~ **Bldg 2 Heater (B2 CS2)**	~~0.250~~ **0.080**	~~1973~~ **2000**	~~S3~~ **B2CS2**
~~Bldg 4 Heater~~ **Bldg 3 Heater (B3 CS1)**	~~0.165~~ **0.250**	~~1975~~ **2003**	~~S4~~ **B3 CS1**
~~Bldg 5 Heater~~ **Bldg 4 Heater (B4 CS1)**	~~0.200~~ **0.165**	~~1975~~ **1989**	~~S5~~ **B4CS1**
~~Bldg 6 Heater~~ **Bldg 5 Heater (B5 CS1)**	~~0.250~~ **0.200**	~~1981~~ **1992**	~~S6~~ **B5CS1**
~~Bldg 7A Heater~~ **Bldg 6 Heater (B6 CS1)**	~~0.225~~ **0.310**	~~1981~~ **2010**	~~S7A~~ **B6CS1**
~~Bldg 7C Heater (3)~~ **Bldg 7 Heater (B7 EH1)**	~~0.250~~ **Electric Heat**	1981	~~S7C~~ **B7EH1**
~~Bldg 13Heater (1)~~ **Bldg 8 Heater (B8 CS11)**	~~0.750 0~~**.225**	~~1999~~ **2002**	~~S13A~~ **B8CS1**
~~Bldg~~ ~~14 Warehouse~~ **Bldg 9 Heater (B9 EH1)**	~~0.400~~ **Electric Heat**	~~2004~~ **1990**	~~S14A~~ **B9EH1**
~~Bldg 14 Restroom Heater~~ **Bldg 10 Heater (B10 EH1)**	~~0.060~~ **Electric Heat**	~~2004~~ **1990**	~~S14B~~ **B10EH1**

~~Heater (2)~~ **Bldg 11 Heater (B111 CS1)**	~~0.40~~ **0.250**	~~2003~~ **1990**	~~S7CB~~ **B11CS1**
Bldg 11 Heater (B111 CS2)	**4.0**	**2001**	**B11CS2**
Bldg 13 Warehouse Heater (B13 CS 1-10) (10 units)	**0.75**	**1999**	**B13CS 1 -10**
Bldg 14 Offices B14C1- B13C10 (2 units)	**0.100**	**2009**	**B14CS 1 - 6**
Bldg 14 Packing B14C4- B14C5 (2 units)	**0.200**	**2004**	**B14CS4,CS5**
Bldg 14 Break room B14C3	**0.060**	**2004**	**B14CS3**
Bldg 14 Shellmaker room B14C6	**0.400**	**2004**	**B14PS1**
Bldg 15 South Grind B15C1	**0.200**	**2009**	**B15CS1**
Bldg 16 Finish Dept. B16C1- B16C2 (2 units)	**0.200**	**2009**	**B16CS1**
Bldg 17 TE Grind B17C1	**0.060**	**2009**	**B17CS1**
Bldg 17 QC Inspection B17C2	**0.060**	**2009**	**B17CS2**
Bldg 17 Filter Press Room B17C3	**0.075**	**2009**	**B17CS3**

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

D.~~3~~**2**.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, particulate emissions from one (1) natural gas-fired Building **11 Dwax** Autoclave boiler ~~E2~~ **B11P1**, ~~and one (1) Shellmaker boiler~~ shall be limited by the following:

....

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:
(a) Induction melt Furnaces;

(1) One (1) electric induction melt furnace, identified as **East Side Induction Furnace #1(B11P3)**~~F1~~, constructed in ~~1999~~ **2007** with a maximum capacity of ~~200~~ **600** lbs/hr of steel, to manufacture propellers, maximum capacity ~~876~~ **2,628** tons per year of steel, exhausting internally **into the building.**

(2) One (1) electric induction melt furnace, identified as **West Side Induction Furnace #2 (B11P3)**~~F2~~, constructed in ~~2007~~,**1999** with a maximum capacity of ~~600~~ **200** lbs/hr of steel, to manufacture **cast products** ~~propellers,~~ maximum capacity ~~2,628~~ **876** tons per year of steel, exhausting internally **into the building.**

(b) ~~One (1)~~ **Two (2)** pouring, casting and cooling line**s**, **identified as B11A1 and B12A1** installed in 1999, uncontrolled, exhausting inside, maximum capacity of 0.40 tons per hour **combined,** exhausting ~~inside~~ **internally into the building.**

(c) Operations controlled by ~~Baghouse B~~ **Foundry Baghouse (B12BH1):**

(1) One (1) pneumatic shakeout unit, identified as ~~E5~~ **B12A2**, constructed in 1988, with a maximum capacity of 300 lbs of metal per hour, with emissions controlled by ~~baghouse B1~~ **Foundry Baghouse (B12BH1)** and exhausting internally **into the building.**

(2) Four (4) Cutoff & Grinding stations, collectively identified as ~~E6~~ **B12A3**, constructed in

1995, with a maximum capacity of 15 lbs of metal per hour combined, with emissions controlled by ~~baghouse B1~~ **Foundry Baghouse (B12BH1)**, and exhausting internally **into the building.**

(3) ~~Three (3)~~ **One (1) Mechanical shot blast** Wheelabrator ~~Airless~~ **and three (3) Kelco** ~~Shot~~ **sand** Blasters, **capable of using sand, non metallic grit or steel shot**, collectively identified as ~~E7~~,**B12A4,** constructed in 1996, equipped with **Foundry Baghouse (B12BH1))** to control particulate **emissions**, with a maximum process throughput of 668.3 pounds/hr of ~~propellers~~ **castings** each, including 0.30 pounds of steel shots per hour each, and exhausting internally **into the building.**

(d) Operations **in Building #6 Production** controlled by ~~Baghouse A~~, **Baghouse (B06BH1) exhausting internally into the building.**

(1) Four (4) Off Hand **production** Grinding Stations ~~to repair propellers~~, collectively identified as ~~E11~~ **B6A1**, constructed in 1985, with a maximum throughput of 334 lbs of propellers per hour each, with emissions controlled by ~~baghouse A~~ **Building #6 Baghouse (B06BH1)** and exhausting internally **into the building.**

(2) One (1) Sandblast Cabinet ~~to repair propellers,~~ identified ~~as E12~~ **in Building #6 Production**, constructed in 1995, ~~with a capacity of 20 pieces per hour~~, with a maximum throughput of 334 lbs. per hour ~~of propellers and 950 lbs.~~ of sand blast media per year, equipped with baghouse **to control particulates** and exhausting internally **into the building.**

(e) Two (2) dry Vibratory Finishing Operations, collectively identified as ~~E9~~ **B16A1 in Finishing**, constructed in 1986, with a maximum capacity of metal propellers processed less than 100.0 lbs per hour each, to remove burrs and imperfections, equipped with a 1,200 cfm dust collector, **B16A1DC1 in Finishing** to control particulates, including 7.52 lbs/hr of polishing media each, and exhausting **internally into the building**.

(f) One (1) Off Hand Grinding ~~and polishing~~ Station **for Maintenance, R &D and Production**, identified as ~~E14~~ **B03A1** constructed in 1994, with ~~a capacity of 12 propellers per hour through E14~~, maximum throughput of 200.4 pounds per hour, equipped with one 1,200 cfm dust collector, identified ~~as E-14~~ **as B03A1DC1** to control particulates and exhausting internally **into the building.**

~~(g) Fifteen (15) Off Hand Grinding Stations, collectively identified as E8, constructed in 1985, with a combined maximum capacity of 3,600 lbs per hour, maximum weight of sixteen and seven tenths (16.7) pounds of each propeller, comprised of the following:~~

(g) Grinding Stations:

(1) ~~Seven (7)~~ **Eight (8)** grinding stations **in South Grind Shop, identified as B15A1,** controlled by a 3,200 cfm dust collector, identified as ~~E7-3200~~ **B15A1DC1**, maximum capacity 240 lbs/hr each, exhausting internally **into the building.**

(2) One (1) **Downdraft table accommodating four (4)** grinding stations, identified as B15A2, controlled by a 4,800 cfm dust collector, identified as ~~E1-4800~~ **B15A2DC2**, maximum capacity 240 lbs/hr, exhausting internally **into the building**.

(3) ~~Six (6)~~ **Five (5)** grinding stations **in Trail Edge (TE) Department** controlled by a 3,200 cfm dust collector, identified ~~as E6-3200~~ **as B17A1DC1** , maximum capacity 240 lbs/hr each, exhausting internally**, into the building.**

~~(4) One (1) grinding and polishing station, controlled by a 1,200 cfm dust collector, identified as E1-1200, maximum capacity 240 lbs/hr, exhausting internally.~~

(4) **And one (1) buff and polish station identified as B17A2 controlled by a Cyclone dust collector identified as B14A2DC2, exhausting inside.**

~~(h) One (1) Propeller Repair Paint Booth, identified as E13, constructed in 1995, equipped with HVLP spray gun, with a capacity of 20 pieces of propellers per hour, with particulate emissions~~

~~controlled by a dry filter, exhausting to stack S6A~~.

(~~i~~ **h**) Miscellaneous solvent usage:

(a) The mold release sprayed on the molds to release the ~~castings~~ **wax** with 100% VOC.

~~(b) The catalyst used in the mold making operation, with 26.72% VOC.~~

(~~c~~**b**) TEA used **in the manual dip and robot slurry tanks for** ~~in~~ the pH adjustment @ **2% concentration mixed with water**, with 100% VOC.

(~~j~~ **i**) Combustion units:

(1) One (1) natural gas-fired Dehumidification System **with a burner**, identified as **B14P1**, constructed in 2005, rated at 0.173 MMBtu/hr, to remove moisture from ~~the wax~~ **ceramic** mold, ~~with a maximum capacity of 40 pounds of wax per hour~~, exhausting to stack ~~S14AA~~ **B14PS1.**

(2) ~~One (1) natural gas-fired Shellmaker Boiler, identified as E1, constructed in 2005, rated at 0.400 MMBtu/hr, exhausting to stack S14AA.~~

(3) One (1) natural gas-fired Building ~~7C~~ **11** Dewax Autoclave Boiler, identified as ~~E2~~ **B11P1**, constructed in 2008, with a maximum heat input capacity of 2.0 MMBtu/ hr, exhausting to stack ~~S7CAA.~~ **B11PS1.**

(4) One (1) natural gas-fired Furnace **in Foundry**, identified as ~~E3~~ **B11P2**, constructed in 1999, comprised of two (2) pre-heat ovens with a heat input capacity of 1.5 million British thermal units per hour (MMBtu/hr) each, and one (1) afterburner with a heat input capacity of 0.75 million British thermal units per hour (MMBtu/hr), exhausting to stack ~~S7CC~~ **B11PS2.**

(5) One (1) natural gas-fired air make-up Building ~~7C~~ **11** Roof top unit **in Foundry**, identified as ~~E17~~ **B11C2**, constructed in 2001, with 4.0 million British thermal units per hour (MMBtu/hr), emissions exhausting to stack ~~S7CB.~~ **B12CS2.**

(6) Numerous natural-gas fired **comfort** space heaters located throughout the facility **as follows:** ~~collectively identified as unit E16:~~

Natural Gas-Fired Unit Locations	Total Capacity (MMBtu/hr)	Installation Date	Stack ID
~~Bldg 01 Heater~~ **Bldg 1 Heater (B1 CS1)**	0.165	~~1982~~ **1989**	~~S2~~**B1CS1**
~~Bldg 0~~**2 Heater Bldg 2 Heater (B2 CS1)**	0.080	~~1982~~ **2000**	~~S2A~~ **B2CS1**
~~Bldg 3 Heater~~ **Bldg 2 Heater (B2 CS2)**	~~0.250~~ **0.080**	~~1973~~ **2000**	~~S3~~ **B2CS2**
~~Bldg 4 Heater~~ **Bldg 3 Heater (B3 CS1)**	~~0.165~~ **0.250**	~~1975~~ **2003**	~~S4~~ **B3 CS1**
~~Bldg 5 Heater~~ **Bldg 4 Heater (B4 CS1)**	~~0.200~~ **0.165**	~~1975~~ **1989**	~~S5~~ **B4CS1**
~~Bldg 6 Heater~~ **Bldg 5 Heater (B5 CS1)**	~~0.250~~ **0.200**	~~1981~~ **1992**	~~S6~~ **B5CS1**
~~Bldg 7A Heater~~ **Bldg 6 Heater (B6 CS1)**	~~0.225~~ **0.310**	~~1981~~ **2010**	~~S7A~~ **B6CS1**
~~Bldg 7C Heater (3)~~ **Bldg 7 Heater (B7 EH1)**	~~0.250~~ **Electric Heat**	1981	~~S7C~~ **B7EH1**
~~Bldg 13Heater (1)~~ **Bldg 8 Heater (B8 CS11)**	~~0.750~~ 0**.225**	~~1999~~ **2002**	~~S13A~~ **B8CS1**
~~Bldg 14 Warehouse~~ **Bldg 9 Heater (B9 EH1)**	~~0.400~~ **Electric Heat**	~~2004~~ **1990**	~~S14A~~ **B9EH1**

~~Bldg 14 Restroom Heater~~ **Bldg 10 Heater (B10 EH1)**	~~0.060~~ **Electric Heat**	~~2004~~ **1990**	~~S14B~~ **B10EH1**
~~Heater (2)~~ **Bldg 11 Heater (B111 CS1)**	~~0.40~~ **0.250**	~~2003~~ **1990**	~~S7CB~~ **B11CS1**
Bldg 11 Heater (B111 CS2)	**4.0**	**2001**	**B11CS2**
Bldg 13 Warehouse Heater (B13 CS 1-10) (10 units)	**0.75**	**1999**	**B13CS 1 -10**
Bldg 14 Offices (2 units) B14C1-B13C10	**0.100**	**2009**	**B14CS 1 - 6**
Bldg 14 Packing B14C4- B14C5 (2 units)	**0.200**	**2004**	**B14CS4,CS5**
Bldg 14 Break room B14C3	**0.060**	**2004**	**B14CS3**
Bldg 14 Shellmaker room B14C6	**0.400**	**2004**	**B14PS1**
Bldg 15 South Grind B15C1	**0.200**	**2009**	**B15CS1**
Bldg 16 Finish Dept. B16C1-B16C2 (2 units)	**0.200**	**2009**	**B16CS1**
Bldg 17 TE Grind B17C1	**0.060**	**2009**	**B17CS1**
Bldg 17 QC Inspection B17C2	**0.060**	**2009**	**B17CS2**
Bldg 17 Filter Press Room B17C3	**0.075**	**2009**	**B17CS3**

(j) Welders:

(1) Two (2) TIG welding stations in South Grind Shop, One (1) TIG welding station in TE area and one (1) TIG welding station in Building #6 production area, constructed in 1975, exhausting inside the building.

(2) Maintenance and Production R &D Welders: One (1) MIG and One (1) TIG welder, constructed in 1975, exhausting inside the building.

(k) ~~One (1) MIG/TIG Welding Operation, identified as E10, constructed in 1975, with a maximum capacity of 12 pieces per hour, with a maximum throughput of 200.4 pounds per hour of propellers, and exhausting indoors.~~

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

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~COMPLIANCE AND ENFORCEMENT BRANCH~~
~~Quarterly Report~~

~~Source Name: Precision Propeller Industries, Inc.~~
~~Source Address: 2427 North Ritter Avenue, Indianapolis, IN 46218~~
~~Mailing Address: 2427 North Ritter Avenue, Indianapolis, IN 46218~~
~~MSOP No.: M097-28135-00664~~
~~Facility: Paint Repair Booth~~
~~Parameter: VOC usage~~
~~Limit: 15 lbs per day~~

Month: _____ **Year:** _____

Day		Day	
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on _____

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary investment casting facility manufacturing primarily propellers and other casting products.

Source Address: 2427 North Ritter Avenue, Indianapolis, IN 46218
Mailing Address: 2427 North Ritter Avenue, Indianapolis, IN 46218

....

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

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 Swarna Prabha, of my staff, at 317-234-5376 or 1-800-451-6027, and ask for extension 4-5376.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Revised permit & TSD Appendix A

IC /SP

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

New Source Construction and Minor Source Operating Permit
OFFICE OF AIR QUALITY

Precision Propeller Industries, Inc.
2427 North Ritter Avenue
Indianapolis, IN, Indiana 46218

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

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

Operation Permit No.: M097-28135-00664	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 8, 2010 Expiration Date: June 8, 2015

First Notice Only Change No.: 097-30550-00664	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 22, 2011 Expiration Date: June 8, 2015

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SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary investment casting facility manufacturing primarily propellers and other casting products.

Source Address:	2427 North Ritter Avenue, Indianapolis, IN 46218
General Source Phone Number:	317 545-9080
SIC Code:	3324 (Steel Investment Foundries)
County Location:	Marion
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) Induction melt Furnaces:

(1) One (1) electric induction melt furnace, identified as East Side Induction Furnace #1 (B11P3), constructed in 2007 with a maximum capacity of 600 lbs/hr of steel, to manufacture propellers, maximum capacity 2,628 tons per year of steel, exhausting internally into the building.

(2) One (1) electric induction melt furnace, identified as West Side Induction Furnace #2 (B11P3), constructed in 1999 with a maximum capacity of 200 lbs/hr of steel, to manufacture cast products, maximum capacity 876 tons per year of steel, exhausting internally into the building.

(b) Two (2) pouring, casting and cooling lines, identified as B11A1 and B12A1, installed in 1999, uncontrolled, maximum capacity of 0.40 tons per hour combined, exhausting internally into the building.

(c) Operations controlled by Foundry Baghouse (B12BH1)

(1) One (1) pneumatic shakeout unit, identified as B12A2, constructed in 1988, with a maximum capacity of 300 lbs of metal per hour, with emissions controlled by Foundry Baghouse (B12BH1) and exhausting internally into the building.

(2) Four (4) Cutoff & Grinding stations, collectively identified as B12A3, constructed in 1995, with a maximum capacity of 15 lbs of metal per hour combined, with emissions controlled by Foundry Baghouse (B12BH1), and exhausting internally into the building.

(3) One (1) Mechanical shot blast Wheelabrator and three (3) Kelco sand Blasters, capable of using sand, non metallic grit or steel shot, collectively identified as B12A4 constructed in 1996, equipped with Foundry Baghouse (B12BH1)) to control particulate emissions, with a maximum process throughput of 668.3 pounds/hr of castings each, including 0.30 pounds of steel shots per hour each, and exhausting internally into the building.

(d) Operations in Building #6 Production controlled by Baghouse (B06BH1), exhausting internally into the building.

(1) Four (4) Off Hand production Grinding Stations, collectively identified as B6A1, constructed in 1985, with a maximum throughput of 334 lbs of propellers per hour each, with emissions controlled by Building #6 Baghouse (B06BH1) and exhausting internally into the building.

(2) One (1) Sandblast Cabinet, identified in Building #6 Production, constructed in 1995, with a maximum throughput of 334 lbs. per hour of sand blast media per year, equipped with Baghouse (B06BH1) to control particulates, and exhausting internally into the building.

(e) Two (2) dry Vibratory Finishing Operations, collectively identified as B16A1 in Finishing, constructed in 1986, with a maximum capacity of metal propellers processed less than 100.0 lbs per hour each, to remove burrs and imperfections, equipped with a 1,200 cfm dust collector, identified as B16A1DC1 to control particulates, including 7.52 lbs/hr of polishing media each, and exhausting internally into the building.

(f) One (1) Off Hand Grinding Station for Maintenance R &D and Production, identified as B03A1, constructed in 1994, with maximum throughput of 200.4 pounds per hour, equipped with one 1,200 cfm dust collector, identified as B03A1DC1 to control particulates and exhausting internally into the building.

(g) Grinding Stations:

(1) Eight (8) grinding stations in South Grind Shop, identified as B15A1, controlled by a 3,200 cfm dust collector B15A1DC1, maximum capacity 240 lbs/hr each, exhausting internally into the building.

(2) One (1) Downdraft table accommodating four (4) grinding stations, identified as B15A2, controlled by a 4,800 cfm dust collector, identified as B15A2DC2, maximum capacity 240 lbs/hr, exhausting internally into the building. Each grinding station includes a group of hand grind tools. Only one (1) tool per station can be run at once.

(3) Five (5) grinding stations in Trail Edge (TE) Department, identified as B17A1, controlled by a 3,200 cfm dust collector, identified as B17A1DC1, maximum capacity 240 lbs/hr each, exhausting internally into the building.

(4) One (1) buff and polish station, identified as B17A2 controlled by a Cyclone dust collector, identified as B14A2DC2, exhausting inside the building.

(h) Miscellaneous solvent usage:

(a) The mold release sprayed on the molds to release the wax with 100% VOC.

(b) TEA used in the manual dip and robot slurry tanks for the pH adjustment @ 2% concentration mixed with water, with 100% VOC.

(i) Combustion units:

(1) One (1) natural gas-fired Dehumidification System with a burner, identified as B14P1, constructed in 2005, rated at 0.173 MMBtu/hr, to remove moisture from ceramic mold, exhausting to stack B14PS1.

(2) One (1) natural gas-fired building 11 Dewax Autoclave Boiler, identified as B11P1, constructed in 2008, with a maximum heat input capacity of 2.095 MMBtu/ hr, exhausting to stack B11 PS1.

(3) One (1) natural gas-fired Furnace in Foundry, identified as B11P2, constructed in 1999, comprised of two (2) pre-heat ovens with a heat input capacity of 1.5 million British thermal

units per hour (MMBtu/hr) each, and one (1) afterburner with a heat input capacity of 0.75 million British thermal units per hour (MMBtu/hr), exhausting to stack B11PS2.

(4) One (1) natural gas-fired air make-up Building 11 Roof top unit in Foundry, identified as B11C2, constructed in 2001, with 4.0 million British thermal units per hour (MMBtu/hr), emissions exhausting to stack B12CS2.

(5) Numerous natural-gas fired comfort space heaters located throughout the facility as follows:

Natural Gas-Fired Unit Locations	Total Capacity (MMBtu/hr)	Installation Date	Stack ID
Bldg 1 Heater (B1 CS1)	0.165	1989	B1CS1
Bldg 2 Heater (B2 CS1)	0.080	2000	B2CS1
Bldg 2 Heater (B2 CS2)	0.080	2000	B2CS2
Bldg 3 Heater (B3 CS1)	0.250	2003	B3 CS1
Bldg 4 Heater (B4 CS1)	0.165	1989	B4CS1
Bldg 5 Heater (B5 CS1)	0.200	1992	B5CS1
Bldg 6 Heater (B6 CS1)	0.310	2010	6CS1
Bldg 7 Heater (B7 EH1)	Electric Heat	1981	B7EH1
Bldg 8 Heater (B8 CS11)	0.225	2002	B8CS1
Bldg 9 Heater (B9 EH1)	Electric Heat	1990	B9EH1
Bldg 10 Heater (B10 EH1)	Electric Heat	1990	B10EH1
Bldg 11 Heater (B111 CS1)	0.250	1990	B11CS1
Bldg 11 Heater (B111 CS2)	4.0	2001	B11CS2
Bldg 13 Warehouse Heater (B13 CS 1-10) (10 units)	0.75	1999	B13CS 1-10
Bldg 14 Offices B14C1- B13C10 (2 units)	0.100	2009	B14CS 1- 6
Bldg 14 Packing B14C4- B14C5 (2 units)	0.200	2004	B14CS4,CS5
Bldg 14 Break room B14C3	0.060	2004	B14CS3
Bldg 14 Shellmaker room B14C6	0.400	2004	B14PS1
Bldg 15 South Grind B15C1	0.200	2009	B15CS1
Bldg 16 Finish Dept. B16C1- B16C2 (2 units)	0.200	2009	B16CS1
Bldg 17 TE Grind B17C1	0.060	2009	B17CS1
Bldg 17 QC Inspection B17C2	0.060	2009	B17CS2
Bldg 17 Filter Press Room B17C3	0.075	2009	B17CS3

(j) Welders:

(1) Two (2) TIG welding stations in South Grind Shop, One (1) TIG welding station in TE area and one (1) TIG welding station in Building #6 production area, constructed in 1975, exhausting inside the building.

(2) Maintenance and R & D Production Welders: One (1) MIG and One (1) TIG welder, constructed in1975, exhausting inside the building.

SECTION B GENERAL CONDITIONS

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

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 2-1.1-1) shall prevail.

B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit 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.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, M097-28135-00664, 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, until the renewal permit has been issued or denied.

B.5 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.6 Enforceability

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.7 Severability

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.8 Property Rights or Exclusive Privilege

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

B.9 Duty to Provide Information

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.10 Reserved

B.11 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

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

(c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.12 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit, for the source as described in 326 IAC 1-6-3.

At a minimum, the PMPs shall include:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

(90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

(a) All terms and conditions of permits established prior to M097-28135-00664 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-6.1-7(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 one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.15 Permit Renewal [326 IAC 2-6.1-7]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

(b) A timely renewal application is one that is:

(1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.16 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

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

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

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

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.17 Source Modification Requirement

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

B.18 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.19 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

B.20 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees due within thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.

(b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.21 Credible Evidence [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.

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SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Permit Revocation [326 IAC 2-1.1-9]

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

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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 thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

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

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

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

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected 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.

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

C.8 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.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Reserved

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

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

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

C.13 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation 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.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

C.15 Malfunctions Report [326 IAC 1-6-2]

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

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made

available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

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

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up 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.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required by conditions in Section D of this permit shall be submitted to:

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

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

(c) Reserved

(d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Induction melt Furnaces:

(1) One (1) electric induction melt furnace, identified as East Side Induction Furnace #1 (B11P3), constructed in 2007 with a maximum capacity of 600 lbs/hr of steel, to manufacture propellers, maximum capacity 2,628 tons per year of steel, exhausting internally into the building.

(2) One (1) electric induction melt furnace, identified as West Side Induction Furnace #2 (B11P3) constructed in 1999 with a maximum capacity of 200 lbs/hr of steel, to manufacture cast products, maximum 876 tons per year of steel, exhausting internally into the building.

(b) Two (2) pouring, casting and cooling lines, identified as B11A1 and B12A1, installed in 1999, uncontrolled, with a maximum capacity of 0.40 tons per hour combined, exhausting internally into the building.

(c) Operations controlled by Foundry Baghouse (B12BH1)

(1) One (1) pneumatic shakeout unit, identified as B12A2, constructed in 1988, with a maximum capacity of 300 lbs of metal per hour, with emissions controlled by Foundry Baghouse (B12BH1) and exhausting internally into the building.

(2) Four (4) Cutoff & Grinding stations, collectively identified as B12A3, constructed in 1995, with a maximum capacity of 15 lbs of metal per hour combined, with emissions controlled by Foundry Baghouse (B12BH1), and exhausting internally into the building.

(3) One (1) Mechanical shot blast Wheelabrator and three (3) Kelco sand Blasters, capable of using sand, non metallic grit or steel shot, collectively identified as B12A4, constructed in 1996, equipped with Foundry Baghouse (B12BH1) to control particulate emissions, with a maximum process throughput of 668.3 pounds/hr of castings each, including 0.30 pounds of steel shots per hour each, and exhausting internally into the building.

(d) Operations in Building #6 Production controlled by Baghouse (B06BH1) exhausting internally into the building.

(1) Four (4) Off Hand production Grinding Stations, collectively identified B6A1, constructed in 1985, with a maximum throughput of 334 lbs of propellers per hour each, with emissions controlled by Building #6 Baghouse (B06BH1) and exhausting internally into the building.

(2) One (1) Sandblast Cabinet, identified in Building #6 Production, constructed in 1995, with a maximum throughput of 334 lbs. per hour of sand blast media per year, equipped with Baghouse (B06BH1) to control particulates, and exhausting internally into the building.

(e) Two (2) dry Vibratory Finishing Operations, collectively identified as B16A1 in Finishing, constructed in 1986, with a maximum capacity of metal propellers processed less than 100.0 lbs per hour each, to remove burrs and imperfections, equipped with a 1,200 cfm dust collector, identified as B16A1DC1 to control particulates, including 7.52 lbs/hr of polishing media each, and exhausting internally into the building.

(f) One (1) Off Hand Grinding Station for Maintenance R &D and Production, identified as B03A1, constructed in 1994, with maximum throughput of 200.4 pounds per hour, equipped with one 1,200 cfm dust collector, identified as B03A1DC1 to control particulates and exhausting internally into the building.

(g) Grinding Stations:

(1) Eight (8) grinding stations in South Grind Shop, identified as B15A1, controlled by a 3,200 cfm dust collector B15A1DC1, maximum capacity 240 lbs/hr each, exhausting internally into the building.

(2) One (1) Downdraft table accommodating four (4) grinding stations, identified as B15A2, controlled by a 4,800 cfm dust collector, identified as B15A2DC2, maximum capacity 240 lbs/hr, exhausting internally into the building. Each grinding station includes a group of hand grind tools. Only one (1) tool per station can be run at once.

(3) Five (5) grinding stations in Trail Edge (TE) Department, identified as B17A1, controlled by a 3,200 cfm dust collector, identified as B17A1DC1, maximum capacity 240 lbs/hr each, exhausting internally into the building.

(4) One (1) buff and polish stations identified as B17A2 controlled by a Cyclone dust collector, B14A2DC2, 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 2-6.1-5(a)(1)]

D.1.1 Particulate Matter Limitations except Lake County [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6-5.1-2, particulate matter (PM) emission from each unit listed in the table below 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)).

Control Device	Emission Unit
No Control	(1) electric induction melt furnace East Side Induction (Furnace #1)
No Control	(1) electric induction melt furnace West Side Induction (Furnace #2)
No Control	(2) Pouring, casting and cooling Lines B11A1 and B12A1
B12 BH1	(1) pneumatic shakeout unit B12A2
	(4) Cuttoff & Grind Stations -each B12A3
	(1) Mechanical shot blaster and (3) Kelco sand Shot Blasters - each B12A4
B06ABH1	(4) Off Hand Grinding stations-each B6A1
	(1) Sandblast Cabinet B6A1
Dust Collector 1,200 CFM B16A1DC1	(2) dry Vibratory Finish lines - each B16A1
Dust Collector 1,200 CFM B03A1DC1	(1) Off Hand Grinding station B03A1
Dust Collector 3,200 CFM B15A1DC1	(8) grinding stations - each B15A1
Dust Collector 4,800 CFM B15A2DC2	(1) Downdraft Table-B15A2
Dust Collector 3,200 CFM B17A1DC1	(5) grinding stations - each B17A1
Cyclone Dust Collector B17A2DC2	(1) Buff and Polish Station – B17A2

Compliance Determination Requirements

D.1.2 Particulate Control

(a) In order to comply with Condition D.1.1, the Foundry Baghouse (B12BH1) associated with the shakeout (B12A2) Cut off and grind (B12A3) and Weheelabrate and sandblast operations (A12A4), and the Finishing dust collector, (B16A1DC1) associated with two (2) Vibratory Finish Lines B16A1, and cyclone dust collector B17A2DC2 to control particulate emissions, shall be in operation and control emissions from shakeout, grinding, buffing and shotblasting operation and the Vibratory Finish Lines at all times that the units are in operation.

(b) In the event that Foundry Baghouse (B12BH1) and the Finishing dust collector (B16A1DC1), 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.

D.1.3 Cyclone Inspections

An inspection shall be performed each calendar quarter of cyclone B17A2DC2 controlling the buffing and the polishing operation.

D.1.4 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. 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).

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

D.1.5 Parametric Monitoring

(a) The Permittee shall record the total pressure drop across Building #6 Baghouse (B06BH1) controlling emission units and Foundry Baghouse (B12 BH1) controlling emission units at least once per day when associated units are in operation. When for any one reading, the pressure drop across both the baghouses is outside the normal range of 0.2 and 3.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response**.** 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 shall be considered a deviation from this permit.

(b) The Permittee shall record the total pressure drop across all the dust collectors when an emission unit that it controls is in operation, at least once per day when associated units are in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range of 0.2 and 3.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response. 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.

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.1.6 Broken or Failed Bag Detection

For a single compartment baghouses or dust collectors, 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 line. Section C- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

Bag or dust collector 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, dust traces or triboflows.

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

D.1.7 Record Keeping Requirements

(a) Pursuant to 326 IAC 2-6.1-5 (a), the metal throughput of 669.3 tons per year was determined to be the maximum capacity of the entire source. The Permittee shall maintain records of the total amount of metal processed through the entire source, per twelve (12) consecutive month period with compliance determined at the end of each month. This information shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) To document the compliance status with Condition D.1.5, the Permittee shall maintain daily records of the pressure drop during normal operation. The Permittee shall include in its daily records 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).

(c) To document the compliance status with Condition D.1.3, the Permittee shall maintain records of the results of the inspections required under Condition D.1.3.

(d) Section C - General Record Keeping Requirements of this permit contains the Permittee’s obligations with regard to the records required by this condition.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(i) Combustion units:

(1) One (1) natural gas-fired Dehumidification System, constructed in 2005, rated at 0.173 MMBtu/hr, to remove moisture from ceramic mold, exhausting to stack B14PS1.

(2) One (1) natural gas-fired Building 11 Dewax Autoclave Boiler, identified as B11P1, constructed in 2008, with a maximum heat input capacity of 2.095 MMBtu/ hr, exhausting to stack B11PS1.

(3) One (1) natural gas-fired Furnace in Foundry, identified as B11P2, constructed in 1999, comprised of two (2) pre-heat ovens with a heat input capacity of 1.5 million British thermal units per hour (MMBtu/hr) each, and one (1) afterburner with a heat input capacity of 0.75 million British thermal units per hour (MMBtu/hr), exhausting to stack B11PS2.

(4) One (1) natural gas-fired air make-up Building 11 Roof top unit in Foundry, identified as B11C2, constructed in 2001, with 4.0 million British thermal units per hour), (MMBtu/hr emissions exhausting to stack B11CS2.

(5) Numerous natural-gas fired comfort space heaters located throughout the facility as follows:

Natural Gas-Fired Unit Locations	Total Capacity (MMBtu/hr)	Installation Date	Stack ID
Bldg 1 Heater (B1 CS1)	0.165	1989	B1CS1
Bldg 2 Heater (B2 CS1)	0.080	2000	B2CS1
Bldg 2 Heater (B2 CS2)	0.080	2000	B2CS2
Bldg 3 Heater (B3 CS1)	0.250	2003	B3 CS1
Bldg 4 Heater (B4 CS1)	0.165	1989	B4CS1
Bldg 5 Heater (B5 CS1)	0.200	1992	B5CS1
Bldg 6 Heater (B6 CS1)	0.310	2010	B6CS1
Bldg 7 Heater (B7 EH1)	Electric Heat	1981	B7EH1
Bldg 8 Heater (B8CS11)	0.225	2002	B8CS1
Bldg 9 Heater (B9 EH1)	Electric Heat	1990	B9EH1
Bldg 10 Heater (B10 EH1)	Electric Heat	1990	B10EH1
Bldg 11 Heater (B111 CS1)	0.250	1990	B11CS1
Bldg 11 Heater (B111 CS2)	4.0	2001	B11CS2
Bldg 13 Warehouse Heater (B13 CS 1-10) (10 units)	0.75	1999	B13CS 1-10
Bldg 14 Offices B14C1- B13C10 (2 units)	0.100	2009	B14CS 1- 6
Bldg 14 Packing B14C4- B14C5 (2 units)	0.200	2004	B14CS4,CS5
Bldg 14 Break room B14C3	0.060	2004	B14CS3
Bldg 14 Shellmaker room B14C6	0.400	2004	B14PS1
Bldg 15 South Grind B15C1	0.200	2009	B15CS1
Bldg 16 Finish Dept. B16C1- B16C2 (2 units)	0.200	2009	B16CS1
Bldg 17 TE Grind B17C1	0.060	2009	B17CS1
Bldg 17 QC Inspection B17C2	0.060	2009	B17CS2
Bldg 17 Filter Press Room B17C3	0.075	2009	B17CS3

(j) Welders:

(1) Two (2) TIG welding stations in South Grind Shop, One (1) TIG welding station in TE area and one (1) TIG welding station in Building #6 production area, constructed in 1975, exhausting inside the building.

(2) Maintenance and R & D Production Welders: One (1) MIG and One (1) TIG welder, constructed in1975, 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.)

D.2.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, particulate emissions from one (1) natural gas-fired Building 11 Dwax Autoclave boiler shall be limited by the following:

$Pt = 1.09/Q^{0.26}$

Pt shall not exceed 0.6 lb/MMBtu for Q less than 10 MMBtu/hr

where Pt = pounds of particulate matter emitted per million Btu (MMBtu) heat input
Q = Total source maximum operation capacity rating in MMBtu/hr

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Induction melt Furnaces:

(1) One (1) electric induction melt furnace, identified as East Side Induction Furnace #1 (B11P3), constructed in 2007 with a maximum capacity of 600 lbs/hr of steel, to manufacture propellers, maximum capacity 2,628 tons per year of steel, exhausting internally into the building.

(2) One (1) electric induction melt furnace, identified as West Side Induction Furnace #2 (B11P3), constructed in 1999 with a maximum capacity of 200 lbs/hr of steel, to manufacture cast products, maximum capacity 876 tons per year of steel, exhausting internally into the building.

(b) Two (2) pouring, casting and cooling lines, identified as B11A1 and B12A1, installed in 1999, uncontrolled, maximum capacity of 0.40 tons per hour combined, exhausting internally into the building.

(c) Operations controlled by Foundry Baghouse (B12BH1)

(1) One (1) pneumatic shakeout unit, identified as B12A2, constructed in 1988, with a maximum capacity of 300 lbs of metal per hour, with emissions controlled by Foundry Baghouse (B12BH1) and exhausting internally into the building.

(2) Four (4) Cutoff & Grinding stations, collectively identified as B12A3, constructed in 1995, with a maximum capacity of 15 lbs of metal per hour combined, with emissions controlled by Foundry Baghouse (B12BH1), and exhausting internally into the building.

(3) One (1) Mechanical shot blast Wheelabrator and Three (3) Kelco sand Blasters capable of using sand, non metallic grit or steel shot, collectively identified as B12A4 constructed in 1996, equipped with Foundry Baghouse (B12BH1)) to control particulate emissions, with a maximum process throughput of 668.3 pounds/hr of castings each including 0.30 pounds of steel shots per hour each, and exhausting internally into the building.

(d) Operations in Building #6 Production controlled by Baghouse (B06BH1), exhausting internally into the building.

(1) Four (4) Off Hand production Grinding Stations, collectively identified as B6A1, constructed in 1985, with a maximum throughput of 334 lbs of propellers per hour each, with emissions controlled by Building #6 Baghouse (B06BH1) and exhausting internally into the building.

(2) One (1) Sandblast Cabinet, identified in Building #6 Production, constructed in 1995, with a maximum throughput of 334 lbs. per hour of sand blast media per year, equipped with Baghouse (B06BH1) to control particulates, and exhausting internally into the building.

(e) Two (2) dry Vibratory Finishing Operations, collectively identified as B16A1 in Finishing, constructed in 1986, with a maximum capacity of metal propellers processed less than100.0 lbs per hour each, to remove burrs and imperfections, equipped with a 1,200 cfm dust collector, identified as B16A1DC1 in Finishing, to control particulates, including 7.52 lbs/hr of polishing media each, and exhausting internally \ into the building.

(f) One (1) Off Hand Grinding Station for Maintenance R &D and Production, identified as B03A1, constructed in 1994, with maximum throughput of 200.4 pounds per hour, equipped with one 1,200 cfm dust collector, identified as B03A1DC1 to control particulates and exhausting internally into the building.

(g) Grinding Stations:

(1) Eight (8) grinding stations in South Grind Shop, identified as B15A1, controlled by a 3,200 cfm

dust collector B15A1DC1, maximum capacity 240 lbs/hr each, exhausting internally into the building.

(2) One (1) Downdraft table accommodating four (4) grinding stations, identified as B15A2, controlled by a 4,800 cfm dust collector, identified as B15A2DC2, maximum capacity 240 lbs/hr, exhausting internally into the building. Each grinding station includes a group of hand grind tools. Only one (1) tool per station can be run at once.

(3) Five (5) grinding stations in Trail Edge (TE) Department, identified as B17A1, controlled by a 3,200 cfm dust collector, identified as B17A1DC1, maximum capacity 240 lbs/hr each, exhausting internally into the building.

(4) One (1) buff and polish station, identified as B17A2 controlled by a Cyclone dust collector, B14A2DC2, exhausting inside the building.

(h) Miscellaneous solvent usage:

(a) The mold release sprayed on the molds to release the wax with 100% VOC.

(b) TEA used in the manual dip and robot slurry tanks for the pH adjustment @ 2% concentration mixed with water, with 100% VOC.

(i) Combustion units:

(1) One (1) natural gas-fired Dehumidification System with a burner, identified as B14P1, constructed in 2005, rated at 0.173 MMBtu/hr, to remove moisture from ceramic mold, exhausting to stack B14PS1.

(2) One (1) natural gas-fired Building 11Dewax Autoclave Boiler, identified as B11P1, constructed in 2008, with a maximum heat input capacity of 2.095 MMBtu/ hr, exhausting to stack B11 PS1.

(3) One (1) natural gas-fired Furnace in Foundry, identified as B11P2, constructed in 1999, comprised of two (2) pre-heat ovens with a heat input capacity of 1.5 million British thermal units per hour (MMBtu/hr) each, and one (1) afterburner with a heat input capacity of 0.75 million British thermal units per hour (MMBtu/hr), exhausting to stack B11PS2.

(4) One (1) natural gas-fired air make-up Building 11 Roof top unit, identified B11C2, constructed in 2001, with 4.0 million British thermal units per hour (MMBtu/hr), emissions exhausting to stack B12CS2.

(5) Numerous natural-gas fired comfort space heaters located throughout the facility as follows:

Natural Gas-Fired Unit Locations	Total Capacity (MMBtu/hr)	Installation Date	Stack ID
Bldg 1 Heater (B1 CS1)	0.165	1989	B1CS1
Bldg 2 Heater (B2 CS1)	0.080	2000	B2CS1
Bldg 2 Heater (B2 CS2)	0.080	2000	B2CS2
Bldg 3 Heater (B3 CS1)	0.250	2003	B3 CS1
Bldg 4 Heater (B4 CS1)	0.165	1989	B4CS1
Bldg 5 Heater (B5 CS1)	0.200	1992	B5CS1
Bldg 6 Heater (B6 CS1)	0.310	2010	B6CS1
Bldg 7 Heater (B7 EH1)	Electric Heat	1981	B7EH1
Bldg 8 Heater (B8CS11)	0.225	2002	B8CS1
Bldg 9 Heater (B9 EH1)	Electric Heat	1990	B9EH1
Bldg 10 Heater (B10 EH1)	Electric Heat	1990	B10EH1
Bldg 11 Heater (B111 CS1)	0.250	1990	B11CS1

Bldg 11 Heater (B111 CS2)	4.0	2001	B11CS2
Bldg 13 Warehouse Heater (B13 CS 1-10) (10 units)	0.75	1999	B13CS 1-10
Bldg 14 Offices B14C1- B13C10 (2 units)	0.100	2009	B14CS 1- 6
Bldg 14 Packing B14C4- B14C5 (2 units)	0.200	2004	B14CS4,CS5
Bldg 14 Break room B14C3	0.060	2004	B14CS3
Bldg 14 Shellmaker room B14C6	0.400	2004	B14PS1
Bldg 15 South Grind B15C1	0.200	2009	B15CS1
Bldg 16 Finish Dept. B16C1- B16C2 (2 units)	0.200	2009	B16CS1
Bldg 17 TE Grind B17C1	0.060	2009	B17CS1
Bldg 17 QC Inspection B17C2	0.060	2009	B17CS2
Bldg 17 Filter Press Room B17C3	0.075	2009	B17CS3

(j) Welders:

(1) Two (2) TIG welding stations in South Grind Shop, One (1) TIG welding station in TE area and one (1) TIG welding station in Building #6 production area, constructed in 1975, exhausting inside.

(2) Maintenance and R & D Production Welders: One (1) MIG and One (1) TIG welder, constructed in1975, 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.)

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63 the permittee shall comply with the provisions of 40 CFR 63 Subpart ZZZZZ (Iron and Steel Foundry Area source) for the existing small iron and steel foundries, specified in Attachment A.

(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, IN 46204-2251

E.1.2 Iron and steel foundry NESHAP [40 CFR 63.10880]

The Permittee which engages in iron and steel foundries area source operation shall comply with the provisions of 40 CFR Part 63, Subpart ZZZZZ (included as Attachment A of this permit). It is an existing affected iron and steel foundry area source because it commenced construction before September 17, 2007. Pursuant to 40 CFR 63.10880 the Permittee shall be in compliance with the following requirements in this NESHAP under small foundries.

The existing iron and steel foundry is subject to the following portions of 40 CFR 63, Subpart ZZZZZ. Non applicable portions of the NESHAP will not be included in the permit. Applicable portions of the NESHAPs are the following:

40 CFR 63.10880
40 CFR 63.10881(a)(1)
40 CFR 63.10881(a)(2)
40 CFR 63.10881(d)(1)

40 CFR 63.10881(e)
40 CFR 63.10885(a)
40 CFR 63.10885(a)(1)
40 CFR 63.10885(b)(4)
40 CFR 63.10885(c)(4)
40 CFR 63.10890(a)
40 CFR 63.10890(b)
40 CFR 63.10890(c)
40 CFR 63.10890(c)(1)
40 CFR 63.10890(c)(2)
40 CFR 63.10890(d)
40 CFR 63.10890 (e)(1)
40 CFR 63.10890(e)(2)
40 CFR 63.10890(e)(7)
40 CFR 63.10890(f)
40 CFR 63.10890(g)
40 CFR 63.10890(h)
40 CFR 63.10890(i)
40 CFR 63.10905
40 CFR 63.10906

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

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

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

Company Name:	Precision Propeller Industries, Inc.
Address:	2427 North Ritter Avenue
City:	Indianapolis, IN 46218
Phone #:	317 545-9080
MSOP #:	M097-28135-00664

I hereby certify that Precision Propeller Industries, Inc. is:
□ still in operation.
□ no longer in operation.

I hereby certify that Precision Propeller Industries, Inc. is:
□ in compliance with the requirements of MSOP M097-28135-00664.
□ not in compliance with the requirements of MSOP M097-28135-00664.

Authorized Individual (typed):
Title:
Signature:
Date:

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

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER: (317) 233-6865

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

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

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

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

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

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

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ AM/PM

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

_____
_____

Attachment A

Subpart ZZZZZ—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources

Source: 73 FR 252, Jan. 2, 2008, unless otherwise noted.

Applicability and Compliance Dates

§ 63.10880 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an iron and steel foundry that is an area source of hazardous air pollutant (HAP) emissions.

(b) This subpart applies to each new or existing affected source. The affected source is each iron and steel foundry.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source before September 17, 2007.

(2) An affected source is new if you commenced construction or reconstruction of the affected source on or after September 17, 2007. If an affected source is not new pursuant to the preceding sentence, it is not new as a result of a change in its compliance obligations pursuant to §63.10881(d).

(c) On and after January 2, 2008, if your iron and steel foundry becomes a major source as defined in §63.2, you must meet the requirements of 40 CFR part 63, subpart EEEEE.

(d) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act.

(e) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

(f) If you own or operate an existing affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's metal melt production for calendar year 2008. If the metal melt production for calendar year 2008 is 20,000 tons or less, your area source is a small foundry. If your metal melt production for calendar year 2008 is greater than 20,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than January 2, 2009.

(g) If you own or operate a new affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's annual metal melting capacity at startup. If the annual metal melting capacity is 10,000 tons or less, your area source is a small foundry. If the annual metal melting capacity is greater than 10,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than 120 days after startup.

§ 63.10881 What are my compliance dates?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions of this subpart by the dates in paragraphs (a)(1) through (3) of this section.

(1) Not later than January 2, 2009 for the pollution prevention management practices for metallic scrap in §63.10885(a) and binder formulations in §63.10886.

(2) Not later than January 4, 2010 for the pollution prevention management practices for mercury in §63.10885(b).

(3) Except as provided in paragraph (d) of this section, not later than 2 years after the date of your large foundry's notification of the initial determination required in §63.10880(f) for the standards and management practices in §63.10895.

(b) If you have a new affected source for which the initial startup date is on or before January 2, 2008, you must achieve compliance with the provisions of this subpart not later than January 2, 2008.

(c) If you own or operate a new affected source for which the initial startup date is after January 2, 2008, you must achieve compliance with the provisions of this subpart upon startup of your affected source.

(d) Following the initial determination for an existing affected source required in §63.10880(f),

(1) Beginning January 1, 2010, if the annual metal melt production of your small foundry exceeds 20,000 tons during the preceding calendar year, you must submit a notification of foundry reclassification to the Administrator within 30 days and comply with the requirements in paragraphs (d)(1)(i) or (ii) of this section, as applicable.

(i) If your small foundry has never been classified as a large foundry, you must comply with the requirements for a large foundry no later than 2 years after the date of your foundry's notification that the annual metal melt production exceeded 20,000 tons.

(ii) If your small foundry had previously been classified as a large foundry, you must comply with the requirements for a large foundry no later than the date of your foundry's most recent notification that the annual metal melt production exceeded 20,000 tons.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry, even if your annual metal melt production falls below 20,000 tons. After 3 years, you may reclassify your facility as a small foundry provided your annual metal melt production for the preceding calendar year was 20,000 tons or less. If you reclassify your large foundry as a small foundry, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a small foundry no later than the date you notify the Administrator of the reclassification. If the annual metal melt production exceeds 20,000 tons during a subsequent year, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the date you notify the Administrator of the reclassification.

(e) Following the initial determination for a new affected source required in §63.10880(g),

(1) If you increase the annual metal melt capacity of your small foundry to exceed 10,000 tons, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the startup date for the new equipment, if applicable, or the date of issuance for your revised State or Federal operating permit.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry. After 3 years, you may reclassify your facility as a small foundry provided your most recent annual metal melt capacity is 10,000 tons or less. If you reclassify your large foundry as a small foundry, you must notify the Administrator within 30 days and comply with the requirements for a small foundry no later than the date your melting equipment was removed or taken out of service, if applicable, or the date of issuance for your revised State or Federal operating permit.

Pollution Prevention Management Practices for New and Existing Affected Sources

§ 63.10885 What are my management practices for metallic scrap and mercury switches?

(a) *Metallic scrap management program.* For each segregated metallic scrap storage area, bin or pile, you must comply with the materials acquisition requirements in paragraph (a)(1) or (2) of this section. You must keep a copy of the material specifications onsite and readily available to all personnel with material acquisition duties, and provide a copy to each of your scrap providers. You may have certain scrap subject to paragraph (a)(1) of this section and other scrap subject to paragraph (a)(2) of this section at your facility provided the metallic scrap remains segregated until charge make-up.

(1) *Restricted metallic scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, chlorinated plastics, or free liquids. For the purpose of this subpart, “free liquids” is defined as material that fails the paint filter test by EPA Method 9095B, “Paint Filter Liquids Test” (revision 2), November 2004 (incorporated by reference—see §63.14). The requirements for no free liquids do not apply if the owner or operator can demonstrate that the free liquid is water that resulted from scrap exposure to rain.

(2) *General iron and steel scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only iron and steel scrap that has been depleted (to the extent practicable) of organics and HAP metals in the charge materials used by the iron and steel foundry. The materials specifications must include at minimum the information specified in paragraph (a)(2)(i) or (ii) of this section.

(i) Except as provided in paragraph (a)(2)(ii) of this section, specifications for metallic scrap materials charged to a scrap preheater or metal melting furnace to be depleted (to the extent practicable) of the presence of used oil filters, chlorinated plastic parts, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(ii) For scrap charged to a cupola metal melting furnace that is equipped with an afterburner, specifications for metallic scrap materials to be depleted (to the extent practicable) of the presence of chlorinated plastics, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(b) *Mercury requirements.* For scrap containing motor vehicle scrap, you must procure the scrap pursuant to one of the compliance options in paragraphs (b)(1), (2), or (3) of this section for each scrap provider, contract, or shipment. For scrap that does not contain motor vehicle scrap, you must procure the scrap pursuant to the requirements in paragraph (b)(4) of this section for each scrap provider, contract, or shipment. You may have one scrap provider, contract, or shipment subject to one compliance provision and others subject to another compliance provision.

(1) *Site-specific plan for mercury switches.* You must comply with the requirements in paragraphs (b)(1)(i) through (v) of this section.

(i) You must include a requirement in your scrap specifications for removal of mercury switches from vehicle bodies used to make the scrap.

(ii) You must prepare and operate according to a plan demonstrating how your facility will implement the scrap specification in paragraph (b)(1)(i) of this section for removal of mercury switches. You must submit the plan to the Administrator for approval. You must operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the Administrator or delegated authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the Administrator or delegated authority. The Administrator or delegated authority may change the approval status of the plan upon 90-days written notice based upon the semiannual report or other information. The plan must include:

(A) A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and the need to ensure the proper management of the mercury switches removed from the scrap as required under the rules implementing

subtitle C of the Resource Conservation and Recovery Act (RCRA) (40 CFR parts 261 through 265 and 268). The plan must include documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols;

(B) Provisions for obtaining assurance from scrap providers motor vehicle scrap provided to the facility meet the scrap specification;

(C) Provisions for periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap and that the mercury switches removed are being properly managed, including the minimum frequency such means of corroboration will be implemented; and

(D) Provisions for taking corrective actions (i.e., actions resulting in scrap providers removing a higher percentage of mercury switches or other mercury-containing components) if needed, based on the results of procedures implemented in paragraph (b)(1)(ii)(C) of this section).

(iii) You must require each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to the facility during the previous year and the basis for the estimate. The Administrator may request documentation or additional information at any time.

(iv) You must establish a goal for each scrap supplier to remove at least 80 percent of the mercury switches. Although a site-specific plan approved under paragraph (b)(1) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal.

(v) For each scrap provider, you must submit semiannual progress reports to the Administrator that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches removed, and certification that the removed mercury switches were recycled at RCRA-permitted facilities or otherwise properly managed pursuant to RCRA subtitle C regulations referenced in paragraph (b)(1)(ii)(A) of this section. This information can be submitted in aggregate form and does not have to be submitted for each shipment. The Administrator may change the approval status of a site-specific plan following 90-days notice based on the progress reports or other information.

(2) *Option for approved mercury programs.* You must certify in your notification of compliance status that you participate in and purchase motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. If you purchase motor vehicle scrap from a broker, you must certify that all scrap received from that broker was obtained from other scrap providers who participate in a program for the removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. The National Mercury Switch Recovery Program and the State of Maine Mercury Switch Removal Program are EPA-approved programs under paragraph (b)(2) of this section unless and until the Administrator disapproves the program (in part or in whole) under paragraph (b)(2)(iii) of this section.

(i) The program includes outreach that informs the dismantlers of the need for removal of mercury switches and provides training and guidance for removing mercury switches;

(ii) The program has a goal to remove at least 80 percent of mercury switches from motor vehicle scrap the scrap provider processes. Although a program approved under paragraph (b)(2) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-

locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal; and

(iii) The program sponsor agrees to submit progress reports to the Administrator no less frequently than once every year that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and certification that the recovered mercury switches were recycled at facilities with permits as required under the rules implementing subtitle C of RCRA (40 CFR parts 261 through 265 and 268). The progress reports must be based on a database that includes data for each program participant; however, data may be aggregated at the State level for progress reports that will be publicly available. The Administrator may change the approval status of a program or portion of a program (e.g., at the State level) following 90-days notice based on the progress reports or on other information.

(iv) You must develop and maintain onsite a plan demonstrating the manner through which your facility is participating in the EPA-approved program.

(A) The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.

(B) You must provide in the plan documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal or mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.

(C) You must conduct periodic inspections or other means of corroboration to ensure that scrap providers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

(3) *Option for specialty metal scrap.* You must certify in your notification of compliance status and maintain records of documentation that the only materials from motor vehicles in the scrap are materials recovered for their specialty alloy (including, but not limited to, chromium, nickel, molybdenum, or other alloys) content (such as certain exhaust systems) and, based on the nature of the scrap and purchase specifications, that the type of scrap is not reasonably expected to contain mercury switches.

(4) *Scrap that does not contain motor vehicle scrap.* For scrap not subject to the requirements in paragraphs (b)(1) through (3) of this section, you must certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap.

§ 63.10886 What are my management practices for binder formulations?

For each furfuryl alcohol warm box mold or core making line at a new or existing iron and steel foundry, you must use a binder chemical formulation that does not use methanol as a specific ingredient of the catalyst formulation. This requirement does not apply to the resin portion of the binder system.

Requirements for New and Existing Affected Sources Classified as Small Foundries

§ 63.10890 What are my management practices and compliance requirements?

(a) You must comply with the pollution prevention management practices for metallic scrap and mercury switches in §63.10885 and binder formulations in §63.10886.

(b) You must submit an initial notification of applicability according to §63.9(b)(2).

(c) You must submit a notification of compliance status according to §63.9(h)(1)(i). You must send the notification of compliance status before the close of business on the 30th day after the applicable

compliance date specified in §63.10881. The notification must include the following compliance certifications, as applicable:

(1) “This facility has prepared, and will operate by, written material specifications for metallic scrap according to §63.10885(a)(1)” and/or “This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to §63.10885(a)(2).”

(2) “This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to §63.10885(b)(1) and/or “This facility participates in and purchases motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator according to §63.10885(b)(2) and has prepared a plan for participation in the EPA-approved program according to §63.10885(b)(2)(iv)” and/or “The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with §63.10885(b)(3) which are not reasonably expected to contain mercury switches” and/or “This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with §63.10885(b)(4).”

(3) “This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to §63.10886.”

(d) As required by §63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(e) You must maintain records of the information specified in paragraphs (e)(1) through (7) of this section according to the requirements in §63.10(b)(1).

(1) Records supporting your initial notification of applicability and your notification of compliance status according to §63.10(b)(2)(xiv).

(2) Records of your written materials specifications according to §63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in §63.10885(a)(1) and/or for the use of general scrap in §63.10885(a)(2) and for mercury in §63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with §63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(3) If you are subject to the requirements for a site-specific plan for mercury switch removal under §63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under §63.10885(b)(1)(ii)(C). You must identify which option in paragraph §63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (f) of this section.

(4) If you are subject to the option for approved mercury programs under §63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If you purchase motor vehicle scrap from a broker, you must

maintain records identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.

(5) Records to document use of binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by §63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(6) Records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provides information on the binder or coating materials used.

(7) Records of metal melt production for each calendar year.

(f) You must submit semiannual compliance reports to the Administrator according to the requirements in §63.10(e). The report must clearly identify any deviation from the pollution prevention management practices in §§63.10885 or 63.10886 and the corrective action taken.

(g) You must submit a written notification to the Administrator of the initial classification of your facility as a small foundry as required in §63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in §63.10881(d)(1) or (e), as applicable.

(h) Following the initial determination for an existing affected source as a small foundry, if the annual metal melt production exceeds 20,000 tons during the preceding year, you must comply with the requirements for large foundries by the applicable dates in §63.10881(d)(1)(i) or (d)(1)(ii). Following the initial determination for a new affected source as a small foundry, if you increase the annual metal melt capacity to exceed 10,000 tons, you must comply with the requirements for a large foundry by the applicable dates in §63.10881(e)(1).

(i) You must comply with the following requirements of the General Provisions (40 CFR part 63, subpart A): §§63.1 through 63.5; §63.6(a), (b), (c), and (e)(1); §63.9; §63.10(a), (b)(1), (b)(2)(xiv), (b)(3), (d)(1), (d)(4), and (f); and §§63.13 through 63.16. Requirements of the General Provisions not cited in the preceding sentence do not apply to the owner or operator of a new or existing affected source that is classified as a small foundry.

Requirements for New and Existing Affected Sources Classified as Large Iron and Steel Foundries

§ 63.10895 What are my standards and management practices?

(a) If you own or operate an affected source that is a large foundry as defined in §63.10906, you must comply with the pollution prevention management practices in §§63.10885 and 63.10886, the requirements in paragraphs (b) through (e) of this section, and the requirements in §§63.10896 through 63.10900.

(b) You must operate a capture and collection system for each metal melting furnace at a new or existing iron and steel foundry unless that furnace is specifically uncontrolled as part of an emissions averaging group. Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

(c) You must not discharge to the atmosphere emissions from any metal melting furnace or group of all metal melting furnaces that exceed the applicable limit in paragraph (c)(1) or (2) of this section. When an alternative emissions limit is provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limit is used to demonstrate compliance.

(1) For an existing iron and steel foundry, 0.8 pounds of particulate matter (PM) per ton of metal charged or 0.06 pounds of total metal HAP per ton of metal charged.

(2) For a new iron and steel foundry, 0.1 pounds of PM per ton of metal charged or 0.008 pounds of total metal HAP per ton of metal charged.

(d) If you own or operate a new affected source, you must comply with each control device parameter operating limit in paragraphs (d)(1) and (2) of this section that applies to you.

(1) For each wet scrubber applied to emissions from a metal melting furnace, you must maintain the 3-hour average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance test.

(2) For each electrostatic precipitator applied to emissions from a metal melting furnace, you must maintain the voltage and secondary current (or total power input) to the control device at or above the level established during the initial or subsequent performance test.

(e) If you own or operate a new or existing iron and steel foundry, you must not discharge to the atmosphere fugitive emissions from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 30 percent.

§ 63.10896 What are my operation and maintenance requirements?

(a) You must prepare and operate at all times according to a written operation and maintenance (O&M) plan for each control device for an emissions source subject to a PM, metal HAP, or opacity emissions limit in §63.10895. You must maintain a copy of the O&M plan at the facility and make it available for review upon request. At a minimum, each plan must contain the following information:

(1) General facility and contact information;

(2) Positions responsible for inspecting, maintaining, and repairing emissions control devices which are used to comply with this subpart;

(3) Description of items, equipment, and conditions that will be inspected, including an inspection schedule for the items, equipment, and conditions. For baghouses that are equipped with bag leak detection systems, the O&M plan must include the site-specific monitoring plan required in §63.10897(d)(2).

(4) Identity and estimated quantity of the replacement parts that will be maintained in inventory; and

(5) For a new affected source, procedures for operating and maintaining a CPMS in accordance with manufacturer's specifications.

(b) You may use any other O&M, preventative maintenance, or similar plan which addresses the requirements in paragraph (a)(1) through (5) of this section to demonstrate compliance with the requirements for an O&M plan.

§ 63.10897 What are my monitoring requirements?

(a) You must conduct an initial inspection of each PM control device for a metal melting furnace at an existing affected source. You must conduct each initial inspection no later than 60 days after your applicable compliance date for each installed control device which has been operated within 60 days of the compliance date. For an installed control device which has not operated within 60 days of the compliance date, you must conduct an initial inspection prior to startup of the control device. Following the initial inspections, you must perform periodic inspections and maintenance of each PM control device for a metal melting furnace at an existing affected source. You must perform the initial and periodic inspections according to the requirements in paragraphs (a)(1) through (4) of this section. You must record the results of each initial and periodic inspection and any maintenance action in the logbook required in §63.10899(b)(13).

(1) For the initial inspection of each baghouse, you must visually inspect the system ductwork and baghouse units for leaks. You must also inspect the inside of each baghouse for structural integrity and fabric filter condition. Following the initial inspections, you must inspect and maintain each baghouse according to the requirements in paragraphs (a)(1)(i) and (ii) of this section.

(i) You must conduct monthly visual inspections of the system ductwork for leaks.

(ii) You must conduct inspections of the interior of the baghouse for structural integrity and to determine the condition of the fabric filter every 6 months.

(2) For the initial inspection of each dry electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold. You must also visually inspect the system ductwork and electrostatic housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each dry electrostatic precipitator according to the requirements in paragraphs (a)(2)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold.

(ii) You must conduct monthly visual inspections of the system ductwork, housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

(3) For the initial inspection of each wet electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present. You must also visually inspect the system ductwork and electrostatic precipitator housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each wet electrostatic precipitator according to the requirements in paragraphs (a)(3)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present.

(ii) You must conduct monthly visual inspections of the system ductwork, electrostatic precipitator housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates every 24 months.

(4) For the initial inspection of each wet scrubber, you must verify the presence of water flow to the scrubber. You must also visually inspect the system ductwork and scrubber unit for leaks and inspect the interior of the scrubber for structural integrity and the condition of the demister and spray nozzle. Following the initial inspection, you must inspect and maintain each wet scrubber according to the requirements in paragraphs (a)(4)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the presence of water flow to the scrubber.

(ii) You must conduct monthly visual inspections of the system ductwork and scrubber unit for leaks.

(iii) You must conduct inspections of the interior of the scrubber to determine the structural integrity and condition of the demister and spray nozzle every 12 months.

(b) For each wet scrubber applied to emissions from a metal melting furnace at a new affected source, you must use a continuous parameter monitoring system (CPMS) to measure and record the 3-hour average pressure drop and scrubber water flow rate.

(c) For each electrostatic precipitator applied to emissions from a metal melting furnace at a new affected source, you must measure and record the hourly average voltage and secondary current (or total power input) using a CPMS.

(d) If you own or operate an existing affected source, you may install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse as an alternative to the baghouse inspection requirements in paragraph (a)(1) of this section. If you own or operate a new affected source, you must install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse. You must install, operate, and maintain each bag leak detection system according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the requirements in paragraphs (d)(1)(i) through (vii) of this section.

(i) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using a strip chart recorder, data logger, or other means.

(iii) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm set point established in the operation and maintenance plan, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points. If the system is equipped with an alarm delay time feature, you also must adjust the alarm delay time.

(v) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonable effects including temperature and humidity according to the procedures in the monitoring plan required by paragraph (d)(2) of this section.

(vi) For negative pressure baghouses, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector sensor must be installed downstream of the baghouse and upstream of any wet scrubber.

(vii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) You must prepare a site-specific monitoring plan for each bag leak detection system to be incorporated in your O&M plan. You must operate and maintain each bag leak detection system according to the plan at all times. Each plan must address all of the items identified in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system.

(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established.

(iii) Operation of the bag leak detection system including quality assurance procedures.

(iv) Maintenance of the bag leak detection system including a routine maintenance schedule and spare parts inventory list.

(v) How the bag leak detection system output will be recorded and stored.

(vi) Procedures for determining what corrective actions are necessary in the event of a bag leak detection alarm as required in paragraph (d)(3) of this section.

(3) In the event that a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete corrective action as soon as practicable, but no later than 10 calendar days from the date of the alarm. You must record the date and time of each valid alarm, the time you initiated corrective action, the correction action taken, and the date on which corrective action was completed. Corrective actions may include, but are not limited to:

(i) Inspecting the bag house for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse department.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions.

(e) You must make monthly inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). You must repair any defect or deficiency in the capture system as soon as practicable, but no later than 90 days. You must record the date and results of each inspection and the date of repair of any defect or deficiency.

(f) You must install, operate, and maintain each CPMS or other measurement device according to your O&M plan. You must record all information needed to document conformance with these requirements.

(g) In the event of an exceedance of an established emissions limitation (including an operating limit), you must restore operation of the emissions source (including the control device and associated capture system) to its normal or usual manner or 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 exceedance. You must record the date and time correction action was initiated, the correction action taken, and the date corrective action was completed.

(h) If you choose to comply with an emissions limit in §63.10895(c) using emissions averaging, you must calculate and record for each calendar month the pounds of PM or total metal HAP per ton of metal melted from the group of all metal melting furnaces at your foundry. You must calculate and record the weighted average pounds per ton emissions rate for the group of all metal melting furnaces at the foundry determined from the performance test procedures in §63.10898(d) and (e).

§ 63.10898 What are my performance test requirements?

(a) You must conduct a performance test to demonstrate initial compliance with the applicable emissions limits for each metal melting furnace or group of all metal melting furnaces that is subject to an emissions limit in §63.10895(c) and for each building or structure housing foundry operations that is subject to the opacity limit for fugitive emissions in §63.10895(e). You must conduct the test within 180 days of your compliance date and report the results in your notification of compliance status.

(1) If you own or operate an existing iron and steel foundry, you may choose to submit the results of a prior performance test for PM or total metal HAP that demonstrates compliance with the applicable emissions limit for a metal melting furnace or group of all metal melting furnaces provided the test was conducted within the last 5 years using the methods and procedures specified in this subpart and either no process changes have been made since the test, or you can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance with the applicable emissions limit despite such process changes.

(2) If you own or operate an existing iron and steel foundry and you choose to submit the results of a prior performance test according to paragraph (a)(1) of this section, you must submit a written notification to the Administrator of your intent to use the previous test data no later than 60 days after your compliance date. The notification must contain a full copy of the performance test and contain information to demonstrate, if applicable, that either no process changes have been made since the test, or that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite such process changes.

(3) If you have an electric induction furnace equipped with an emissions control device at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in §63.10895(c) provided the furnaces are similar with respect to the type of emission control device that is used, the composition of the scrap charged, furnace size, and furnace melting temperature.

(4) If you have an uncontrolled electric induction furnace at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in §63.10895(c) provided the test results are prior to any control device and the electric induction furnaces are similar with respect to the composition of the scrap charged, furnace size, and furnace melting temperature.

(5) For electric induction furnaces that do not have emission capture systems, you may install a temporary enclosure for the purpose of representative sampling of emissions. A permanent enclosure and capture system is not required for the purpose of the performance test.

(b) You must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emissions limits in §63.10895(c) for a metal melting furnace or group of all metal melting furnaces no less frequently than every 5 years and each time you elect to change an operating limit or make a process change likely to increase HAP emissions.

(c) You must conduct each performance test according to the requirements in §63.7(e)(1), Table 1 to this subpart, and paragraphs (d) through (g) of this section.

(d) To determine compliance with the applicable PM or total metal HAP emissions limit in §63.10895(c) for a metal melting furnace in a lb/ton of metal charged format, compute the process-weighted mass emissions (E^p) for each test run using Equation 1 of this section:

$$E_P = \frac{C \times Q \times T}{P \times K} \qquad (Eq\ 1)$$

Where:

E_p= Process-weighted mass emissions rate of PM or total metal HAP, pounds of PM or total metal HAP per ton (lb/ton) of metal charged;

C = Concentration of PM or total metal HAP measured during performance test run, grains per dry standard cubic foot (gr/dscf);

Q = Volumetric flow rate of exhaust gas, dry standard cubic feet per hour (dscf/hr);

T = Total time during a test run that a sample is withdrawn from the stack during melt production cycle, hr;

P = Total amount of metal charged during the test run, tons; and

K = Conversion factor, 7,000 grains per pound.

(e) To determine compliance with the applicable emissions limit in §63.10895(c) for a group of all metal melting furnaces using emissions averaging,

(1) Determine and record the monthly average charge rate for each metal melting furnace at your iron and steel foundry for the previous calendar month; and

(2) Compute the mass-weighted PM or total metal HAP using Equation 2 of this section.

$$E_c = \frac{\sum_{i=1}^{n}\left(E_{pi} \times T_{ti}\right)}{\sum_{i=1}^{n} T_{ti}} \qquad (Eq.\ 2)$$

Where:

E_C= The mass-weighted PM or total metal HAP emissions for the group of all metal melting furnaces at the foundry, pounds of PM or total metal HAP per ton of metal charged;

E_{pi}= Process-weighted mass emissions of PM or total metal HAP for individual emission unit i as determined from the performance test and calculated using Equation 1 of this section, pounds of PM or total metal HAP per ton of metal charged;

T_{ti}= Total tons of metal charged for individual emission unit i for the calendar month prior to the performance test, tons; and

n = The total number of metal melting furnaces at the iron and steel foundry.

(3) For an uncontrolled electric induction furnace that is not equipped with a capture system and has not been previously tested for PM or total metal HAP, you may assume an emissions factor of 2 pounds per ton of PM or 0.13 pounds of total metal HAP per ton of metal melted in Equation 2 of this section instead of a measured test value. If the uncontrolled electric induction furnace is equipped with a capture system, you must use a measured test value.

(f) To determine compliance with the applicable PM or total metal HAP emissions limit for a metal melting furnace in §63.10895(c) when emissions from one or more regulated furnaces are combined with other non-regulated emissions sources, you may demonstrate compliance using the procedures in paragraphs (f)(1) through (3) of this section.

(1) Determine the PM or total metal HAP process-weighted mass emissions for each of the regulated streams prior to the combination with other exhaust streams or control device.

(2) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 3 of this section.

$$\%\ \text{reduction} = \frac{E_i - E_o}{E_i} \times 100\% \qquad (\text{Eq. 3})$$

Where:

E_i= Mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr;

E_o= Mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(3) Meet the applicable emissions limit based on the calculated PM or total metal HAP process-weighted mass emissions for the regulated emissions source using Equation 4 of this section:

$$E_{p1\_\_\_} E_{p1} \times \left(1 - \frac{\%\ \text{reduction}}{100}\right) \qquad (\text{Eq. 4})$$

Where:

$E_{p1released}$= Calculated process-weighted mass emissions of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, pounds of PM or total metal HAP per ton of metal charged; and

E_{p1i}= Process-weighted mass emissions of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, pounds of PM or total metal HAP per ton of metal charged.

(g) To determine compliance with an emissions limit for situations when multiple sources are controlled by a single control device, but only one source operates at a time or other situations that are not expressly considered in paragraphs (d) through (f) of this section, you must submit a site-specific test plan to the Administrator for approval according to the requirements in §63.7(c)(2) and (3).

(h) You must conduct each opacity test for fugitive emissions according to the requirements in §63.6(h)(5) and Table 1 to this subpart.

(i) You must conduct subsequent performance tests to demonstrate compliance with the opacity limit in §63.10895(e) no less frequently than every 6 months and each time you make a process change likely to increase fugitive emissions.

(j) In your performance test report, you must certify that the capture system operated normally during the performance test.

(k) You must establish operating limits for a new affected source during the initial performance test according to the requirements in Table 2 of this subpart.

(l) You may change the operating limits for a wet scrubber, electrostatic precipitator, or baghouse if you meet the requirements in paragraphs (l)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your plan to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in §63.10895(c).

(3) Establish revised operating limits according to the applicable procedures in Table 2 to this subpart.

§ 63.10899 What are my recordkeeping and reporting requirements?

(a) As required by §63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(b) In addition to the records required by 40 CFR 63.10, you must keep records of the information specified in paragraphs (b)(1) through (13) of this section.

(1) You must keep records of your written materials specifications according to §63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in §63.10885(a)(1) and/or for the use of general scrap in §63.10885(a)(2) and for mercury in §63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with §63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(2) If you are subject to the requirements for a site-specific plan for mercury under §63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under §63.10885(b)(1)(ii)(C). You must identify which option in §63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (c) of this section.

(3) If you are subject to the option for approved mercury programs under §63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If your scrap provider is a broker, you must maintain records identifying each of the broker's scrap suppliers and documenting the scrap supplier's participation in an approved mercury switch removal program.

(4) You must keep records to document use of any binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by §63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(5) You must keep records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provide information on the binder or coating materials used.

(6) You must keep records of monthly metal melt production for each calendar year.

(7) You must keep a copy of the operation and maintenance plan as required by §63.10896(a) and records that demonstrate compliance with plan requirements.

(8) If you use emissions averaging, you must keep records of the monthly metal melting rate for each furnace at your iron and steel foundry, and records of the calculated pounds of PM or total metal HAP per ton of metal melted for the group of all metal melting furnaces required by §63.10897(h).

(9) If applicable, you must keep records for bag leak detection systems as follows:

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

(10) You must keep records of capture system inspections and repairs as required by §63.10897(e).

(11) You must keep records demonstrating conformance with your specifications for the operation of CPMS as required by §63.10897(f).

(12) You must keep records of corrective action(s) for exceedances and excursions as required by §63.10897(g).

(13) You must record the results of each inspection and maintenance required by §63.10897(a) for PM control devices in a logbook (written or electronic format). You must keep the logbook onsite and make the logbook available to the Administrator upon request. You must keep records of the information specified in paragraphs (b)(13)(i) through (iii) of this section.

(i) The date and time of each recorded action for a fabric filter, the results of each inspection, and the results of any maintenance performed on the bag filters.

(ii) The date and time of each recorded action for a wet or dry electrostatic precipitator (including ductwork), the results of each inspection, and the results of any maintenance performed for the electrostatic precipitator.

(iii) The date and time of each recorded action for a wet scrubber (including ductwork), the results of each inspection, and the results of any maintenance performed on the wet scrubber.

(c) You must submit semiannual compliance reports to the Administrator according to the requirements in §63.10(e). The reports must include, at a minimum, the following information as applicable:

(1) Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken;

(2) Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable); and

(3) Summary information on any deviation from the pollution prevention management practices in §§63.10885 and 63.10886 and the operation and maintenance requirements §63.10896 and the corrective action taken.

(d) You must submit written notification to the Administrator of the initial classification of your new or existing affected source as a large iron and steel facility as required in §63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in §63.10881(d) or (e), as applicable.

§ 63.10900 What parts of the General Provisions apply to my large foundry?

(a) If you own or operate a new or existing affected source that is classified as a large foundry, you must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 3 of this subpart.

(b) If you own or operator a new or existing affected source that is classified as a large foundry, your notification of compliance status required by §63.9(h) must include each applicable certification of compliance, signed by a responsible official, in Table 4 of this subpart.

Other Requirements and Information

§ 63.10905 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by EPA or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (6) of this section.

(1) Approval of an alternative non-opacity emissions standard under 40 CFR 63.6(g).

(2) Approval of an alternative opacity emissions standard under §63.6(h)(9).

(3) Approval of a major change to test methods under §63.7(e)(2)(ii) and (f). A “major change to test method” is defined in §63.90.

(4) Approval of a major change to monitoring under §63.8(f). A “major change to monitoring” under is defined in §63.90.

(5) Approval of a major change to recordkeeping and reporting under §63.10(f). A “major change to recordkeeping/reporting” is defined in §63.90.

(6) Approval of a local, State, or national mercury switch removal program under §63.10885(b)(2).

§ 63.10906 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2, and in this section.

Annual metal melt capacity means the lower of the total metal melting furnace equipment melt rate capacity assuming 8,760 operating hours per year summed for all metal melting furnaces at the foundry or, if applicable, the maximum permitted metal melt production rate for the iron and steel foundry calculated on an annual basis. Unless otherwise specified in the permit, permitted metal melt production rates that are not specified on an annual basis must be annualized assuming 24 hours per day, 365 days per year of

operation. If the permit limits the operating hours of the furnace(s) or foundry, then the permitted operating hours are used to annualize the maximum permitted metal melt production rate.

Annual metal melt production means the quantity of metal melted in a metal melting furnace or group of all metal melting furnaces at the iron and steel foundry in a given calendar year. For the purposes of this subpart, metal melt production is determined on the basis on the quantity of metal charged to each metal melting furnace; the sum of the metal melt production for each furnace in a given calendar year is the annual metal melt production of the foundry.

Bag leak detection system means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

Binder chemical means a component of a system of chemicals used to bind sand together into molds, mold sections, and cores through chemical reaction as opposed to pressure.

Capture system means the collection of components used to capture gases and fumes released from one or more emissions points and then convey the captured gas stream to a control device or to the atmosphere. A capture system may include, but is not limited to, the following components as applicable to a given capture system design: Duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.

Chlorinated plastics means solid polymeric materials that contain chlorine in the polymer chain, such as polyvinyl chloride (PVC) and PVC copolymers.

Control device means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by a metal melting furnace.

Cupola means a vertical cylindrical shaft furnace that uses coke and forms of iron and steel such as scrap and foundry returns as the primary charge components and melts the iron and steel through combustion of the coke by a forced upward flow of heated air.

Deviation means any instance in which an affected source or an owner or operator of such an affected source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emissions limitation (including operating limits), management practice, or operation and maintenance requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any iron and steel foundry required to obtain such a permit; or

(3) Fails to meet any emissions limitation (including operating limits) or management standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Electric arc furnace means a vessel in which forms of iron and steel such as scrap and foundry returns are melted through resistance heating by an electric current flowing through the arcs formed between the electrodes and the surface of the metal and also flowing through the metal between the arc paths.

Electric induction furnace means a vessel in which forms of iron and steel such as scrap and foundry returns are melted though resistance heating by an electric current that is induced in the metal by passing an alternating current through a coil surrounding the metal charge or surrounding a pool of molten metal at the bottom of the vessel.

Exhaust stream means gases emitted from a process through a conveyance as defined in this subpart.

Foundry operations mean all process equipment and practices used to produce metal castings for shipment. *Foundry operations* include: Mold or core making and coating; scrap handling and preheating; metal melting and inoculation; pouring, cooling, and shakeout; shotblasting, grinding, and other metal finishing operations; and sand handling.

Free liquids means material that fails the paint filter liquids test by EPA Method 9095B, Revision 2, November 1994 (incorporated by reference—see §63.14). That is, if any portion of the material passes through and drops from the filter within the 5-minute test period, the material contains *free liquids* .

Fugitive emissions means any pollutant released to the atmosphere that is not discharged through a system of equipment that is specifically designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. *Fugitive emissions* include pollutants released to the atmosphere through windows, doors, vents, or other building openings. *Fugitive emissions* also include pollutants released to the atmosphere through other general building ventilation or exhaust systems not specifically designed to capture pollutants at the source.

Furfuryl alcohol warm box mold or core making line means a mold or core making line in which the binder chemical system used is that system commonly designated as a furfuryl alcohol warm box system by the foundry industry.

Iron and steel foundry means a facility or portion of a facility that melts scrap, ingot, and/or other forms of iron and/or steel and pours the resulting molten metal into molds to produce final or near final shape products for introduction into commerce. Research and development facilities, operations that only produce non-commercial castings, and operations associated with nonferrous metal production are not included in this definition.

Large foundry means, for an existing affected source, an iron and steel foundry with an annual metal melt production greater than 20,000 tons. For a new affected source, *large foundry* means an iron and steel foundry with an annual metal melt capacity greater than 10,000 tons.

Mercury switch means each mercury-containing capsule or switch assembly that is part of a convenience light switch mechanism installed in a vehicle.

Metal charged means the quantity of scrap metal, pig iron, metal returns, alloy materials, and other solid forms of iron and steel placed into a metal melting furnace. Metal charged does not include the quantity of fluxing agents or, in the case of a cupola, the quantity of coke that is placed into the metal melting furnace.

Metal melting furnace means a cupola, electric arc furnace, electric induction furnace, or similar device that converts scrap, foundry returns, and/or other solid forms of iron and/or steel to a liquid state. This definition does not include a holding furnace, an argon oxygen decarburization vessel, or ladle that receives molten metal from a metal melting furnace, to which metal ingots or other material may be added to adjust the metal chemistry.

Mold or core making line means the collection of equipment that is used to mix an aggregate of sand and binder chemicals, form the aggregate into final shape, and harden the formed aggregate. This definition does not include a line for making greensand molds or cores.

Motor vehicle means an automotive vehicle not operated on rails and usually is operated with rubber tires for use on highways.

Motor vehicle scrap means vehicle or automobile bodies, including automobile body hulks, that have been processed through a shredder. *Motor vehicle scrap* does not include automobile manufacturing bundles, or miscellaneous vehicle parts, such as wheels, bumpers, or other components that do not contain mercury switches.

Nonferrous metal means any pure metal other than iron or any metal alloy for which an element other than iron is its major constituent in percent by weight.

On blast means those periods of cupola operation when combustion (blast) air is introduced to the cupola furnace and the furnace is capable of producing molten metal. On blast conditions are characterized by both blast air introduction and molten metal production.

Responsible official means responsible official as defined in §63.2.

Scrap preheater means a vessel or other piece of equipment in which metal scrap that is to be used as melting furnace feed is heated to a temperature high enough to eliminate volatile impurities or other tramp materials by direct flame heating or similar means of heating. Scrap dryers, which solely remove moisture from metal scrap, are not considered to be scrap preheaters for purposes of this subpart.

Scrap provider means the person (including a broker) who contracts directly with an iron and steel foundry to provide motor vehicle scrap. Scrap processors such as shredder operators or vehicle dismantlers that do not sell scrap directly to a foundry are not *scrap providers* .

Scrubber blowdown means liquor or slurry discharged from a wet scrubber that is either removed as a waste stream or processed to remove impurities or adjust its composition or pH.

Small foundry means, for an existing affected source, an iron and steel foundry that has an annual metal melt production of 20,000 tons or less. For a new affected source, *small foundry* means an iron and steel foundry that has an annual metal melt capacity of 10,000 tons or less.

Total metal HAP means, for the purposes of this subpart, the sum of the concentrations of compounds of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium as measured by EPA Method 29 (40 CFR part 60, appendix A–8). Only the measured concentration of the listed analytes that are present at concentrations exceeding one-half the quantitation limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantitation limit of the analytical method, the concentration of those analytes will be assumed to be zero for the purposes of calculating the total metal HAP for this subpart.

Table 1 to Subpart ZZZZZ of Part 63—Performance Test Requirements for New and Existing Affected Sources Classified as Large Foundries

As required in §63.10898(c) and (h), you must conduct performance tests according to the test methods and procedures in the following table:

For. . .	You must. . .	According to the following requirements. . .
1. Each metal melting furnace subject to a PM or total metal HAP limit in §63.10895(c)	a. Select sampling port locations and the number of traverse points in each stack or duct using EPA Method 1 or 1A (40 CFR part 60, appendix A) b. Determine volumetric flow rate of the stack gas using Method 2, 2A, 2C, 2D, 2F, or 2G (40 CFR part 60, appendix A) c. Determine dry molecular weight of the stack gas using EPA Method 3, 3A, or 3B (40	Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere. i. Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch. ii. For Method 29, only the

	CFR part 60, appendix A).[1] d. Measure moisture content of the stack gas using EPA Method 4 (40 CFR part 60, A) e. Determine PM concentration using EPA Method 5, 5B, 5D, 5F, or 5I, as applicable or total metal HAP concentration using EPA Method 29 (40 CFR part 60, appendix A)	measured concentration of the listed metal HAP analytes that are present at concentrations exceeding one-half the quantification limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantification limit of the analytical method, the concentration of those analytes is assumed to be zero for the purposes of calculating the total metal HAP.
		iii. A minimum of three valid test runs are needed to comprise a PM or total metal HAP performance test.
		iv. For cupola metal melting furnaces, sample PM or total metal HAP only during times when the cupola is on blast.
		v. For electric arc and electric induction metal melting furnaces, sample PM or total metal HAP only during normal melt production conditions, which may include, but are not limited to the following operations: Charging, melting, alloying, refining, slagging, and tapping.
		vi. Determine and record the total combined weight of tons of metal charged during the duration of each test run. You must compute the process-weighted mass emissions of PM according to Equation 1 of §63.10898(d) for an individual furnace or Equation 2 of §63.10898(e) for the group of all metal melting furnaces at the foundry.

2. Fugitive emissions from buildings or structures housing any iron and steel foundry emissions sources subject to opacity limit in §63.10895(e)	a. Using a certified observer, conduct each opacity test according to EPA Method 9 (40 CFR part 60, appendix A–4) and 40 CFR 63.6(h)(5)	i. The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.
		ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the opacity test such that the opacity observations are recorded during the PM or total metal HAP performance tests.
	b. As alternative to Method 9 performance test, conduct visible emissions test by Method 22 (40 CFR part 60, appendix A–7). The test is successful if no visible emissions are observed for 90 percent of the readings over 1 hour. If VE is observed greater than 10 percent of the time over 1 hour, then the facility must conduct another performance test as soon as possible, but no later than 15 calendar days after the Method 22 test, using Method 9 (40 CFR part 60, appendix A–4)	i. The observer may identify a limited number of openings or vents that appear to have the highest visible emissions and perform observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single observation for the entire building or structure may be performed, if the fugitive release points afford such an observation. ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the visible emissions test such that the observations are recorded during the PM or total metal HAP performance tests.

[1]You may also use as an alternative to EPA Method 3B (40 CFR part 60, appendix A), the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas, ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses" (incorporated by reference—see §63.14).

Table 2 to Subpart ZZZZZ of Part 63—Procedures for Establishing Operating Limits for New Affected Sources Classified as Large Foundries

As required in §63.10898(k), you must establish operating limits using the procedures in the following table:

For . . .	You must . . .
1. Each wet scrubber subject to the operating limits in §63.10895(d)(1) for pressure drop and scrubber water flow rate.	Using the CPMS required in §63.10897(b), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the average pressure drop and average scrubber water flow rate for all the valid sampling runs in which the applicable emissions limit is met.
2. Each electrostatic precipitator subject to operating limits in §63.10895(d)(2) for voltage and secondary current (or total power input).	Using the CPMS required in §63.10897(c), measure and record voltage and secondary current (or total power input) in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the minimum hourly average voltage and secondary current (or total power input) from all the readings for each valid sampling run in which the applicable emissions limit is met.

Table 3 to Subpart ZZZZZ of Part 63—Applicability of General Provisions to New and Existing Affected Sources Classified as Large Foundries

As required in §63.10900(a), you must meet each requirement in the following table that applies to you:

Citation	Subject	Applies to large foundry?	Explanation
63.1	Applicability	Yes.	
63.2	Definitions	Yes.	
63.3	Units and abbreviations	Yes.	
63.4	Prohibited activities	Yes.	
63.5	Construction/reconstruction	Yes.	
63.6(a)–(g)	Compliance with standards and maintenance requirements	Yes.	

63.6(h)	Opacity and visible emissions standards	Yes.	
63.6(i)(i)–(j)	Compliance extension and Presidential compliance exemption	Yes.	
63.7(a)(3), (b)–(h)	Performance testing requirements	Yes.	
63.7(a)(1)–(a)(2)	Applicability and performance test dates	No	Subpart ZZZZZ specifies applicability and performance test dates.
63.8(a)(1)–(a)(3), (b), (c)(1)–(c)(3), (c)(6)–(c)(8), (d), (e), (f)(1)–(f)(6), (g)(1)–(g)(4)	Monitoring requirements	Yes.	
63.8(a)(4)	Additional monitoring requirements for control devices in §63.11	No.	
63.8(c)(4)	Continuous monitoring system (CMS) requirements	No.	
63.8(c)(5)	Continuous opacity monitoring system (COMS) minimum procedures	No.	
63.8(g)(5)	Data reduction	No.	
63.9	Notification requirements	Yes.	
63.10(a), (b)(1)–(b)(2)(xii) – (b)(2)(xiv), (b)(3), (d)(1)–(2), (e)(1)–(2), (f)	Recordkeeping and reporting requirements	Yes.	
63.10(c)(1)–(6), (c)(9)–(15)	Additional records for continuous monitoring systems	No.	
63.10(c)(7)–(8)	Records of excess emissions and parameter monitoring exceedances for CMS	Yes.	
63.10(d)(3)	Reporting opacity or visible emissions observations	Yes.	
63.10(e)(3)	Excess emissions reports	Yes.	
63.10(e)(4)	Reporting COMS data	No.	
63.11	Control device requirements	No.	

63.12	State authority and delegations	Yes.	
63.13–63.16	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality. Performance track provisions	Yes.	

Table 4 to Subpart ZZZZZ of Part 63—Compliance Certifications for New and Existing Affected Sources Classified as Large Iron and Steel Foundries

As required by §63.10900(b), your notification of compliance status must include certifications of compliance according to the following table:

For. . .	Your notification of compliance status required by §63.9(h) must include this certification of compliance, signed by a responsible official:
Each new or existing affected source classified as a large foundry and subject to scrap management requirements in §63.10885(a)(1) and/or (2)	"This facility has prepared, and will operate by, written material specifications for metallic scrap according to §63.10885(a)(1)" and/or "This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to §63.10885(a)(2)."
Each new or existing affected source classified as a large foundry and subject to mercury switch removal requirements in §63.10885(b)	"This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to §63.10885(b)(1)" and/or "This facility participates in and purchases motor vehicles scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the EPA Administrator according to §63.10885(b)(2) and have prepared a plan for participation in the EPA approved program according to §63.10885(b)(2)(iv)" and/or "The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with §63.10885(b)(3) which are not reasonably expected to contain mercury switches" and/or "This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with §63.10885(b)(4)."
Each new or existing affected source classified as a large	"This facility complies with the no methanol requirement for the catalyst portion of each binder chemical

foundry and subject to §63.10886	formulation for a furfuryl alcohol warm box mold or core making line according to §63.10886."
Each new or existing affected source classified as a large foundry and subject to §63.10895(b)	"This facility operates a capture and collection system for each emissions source subject to this subpart according to §63.10895(b)."
Each existing affected source classified as a large foundry and subject to §63.10895(c)(1)	"This facility complies with the PM or total metal HAP emissions limit in §63.10895(c) for each metal melting furnace or group of all metal melting furnaces based on a previous performance test in accordance with §63.10898(a)(1)."
Each new or existing affected source classified as a large foundry and subject to §63.10896(a)	"This facility has prepared and will operate by an operation and maintenance plan according to §63.10896(a)."
Each new or existing (if applicable) affected source classified as a large foundry and subject to §63.10897(d)	"This facility has prepared and will operate by a site-specific monitoring plan for each bag leak detection system and submitted the plan to the Administrator for approval according to §63.10897(d)(2)."

Appendix A: Emissions Calculations
Emission Summary

Company Name: Precision Propeller Industries, Inc.
Address City IN Zip: 2427 North Ritter Avenue
MSOP No: M097-28135-00664
Notice Only Change No.: M097-30550-00664
Reviewer: Swarna Prabha

		Uncontrolled Potential Emissions (tons/year)												
		Emissions Generating Activity												
Category	Pollutant	(2) Induction Furnaces (B11 P3)	Pouring casting (B11 A1, B12A1)/cooling	Baghouse (B12 BH1)	Baghouse (B06 BH1)	Grind and Polish (B03 A1)	(2) Vibratory Finish lines (B16 A1)	(17) Grinding stations (1) Buff / Polish station (B15 A1- A2, B17 A1- A2)	Nine Metal Haps	Miscellaneous solvent usage	Natural gas Combustion	Welders	Fugitive Emissions Paved Roads	**TOTAL**
Criteria Pollutants	PM	0.30	1.41	14.40	2.73	2.72	5.69	3.68	0.00	0.00	0.148	0.004	0.011	31.09
	PM10	0.29	0.69	14.40	2.73	2.72	0.57	3.68	0.00	0.00	0.591	0.004	0.0219	25.68
	PM2.5	0.29	0.33	14.40	2.73	2.72	0.57	3.68	0.00	0.00	0.591	0.00	0.02	25.32
	SO2	0	0	0	0	0	0	0	0.00	0	0.047	0.00	0.00	46.7E-3
	NOx	0	0	0	0	0	0	0	0.00	0	7.776	0.00	0.00	7.78
	VOC	0	0	0	0	0	0	0	0.00	1.48	0.428	0.00	0.00	1.91
	CO2e		0	0	0	0	0	0	0.00	0.00	9,387.76	0.00	0.00	9,387.76
	CO	0	2.01	0	0	0	0	0	0.00	0	6.532	0.00	0.00	8.54
Hazardous Air Pollutants	Ethylbenzene	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	Xylenes	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	Benzene	0	0	0	0	0	0	0	0.00	0.00	000.0E+0	0.00	0.00	000.0E+0
	MeOH	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	000.0E+0
	Formaldehyde	0	0	0	0	0	0	0	0.00	0.00	0.00E+00	0.00	0.00	000.0E+0
	n-Hexane	0	0	0	0	0	0	0	0.00	0.00	1.40E-01	0.00	0.00	140.0E-3
	Toluene	0	0	0	0	0	0	0	0.00	0.00	0.00E+00	0.00	0.00	0.00
	Lead	3.35E-02	0	0	0	0	0	0	4.38E-01	0.00	0.00E+00	0.00	0.00	471.9E-3
	Zinc	0.00E+00	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	000.0E+0
	Chromium	7.70E-05	0	0	0	0	0	0	4.53E+00	0.00	0E+00	0	0	4.5E+0
	Manganese	7.53E-03	0	0	0	0	0	0	1.75E-01	0.00	0.00E+00	350.4E-6	0	183.3E-3
	MIBK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	000.0E+0	0	0	000.0E+0
	Isocyanates	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	000.0E+0
	TEA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	000.0E+0
	Nickel	1.34E-04	0.00	0.00	0.00	0.00	0.00	0.00	1.5E+0	0.00	000.0E+0	0	0	1.46
	Totals	4.12E-02							6.61	0.00	0.00	3.50E-04		6.65
													Worse Case HAP	**4.53**

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

	Controlled Potential Emissions (tons/year)													
		Emissions Generating Activity												
Category	Pollutant	(2) Induction FurnaceS (B11 P3)	Pouring casting (B11 A1, B11A12)/cooling	Baghouse (B12 BH1)	Baghouse (B06 BH1)	Grind and Polish (B03 A1)	(2) Vibratory Finish lines (B16 A1)	(17) Grinding stations (1) Buff / Polish station (B15 A1- A2, B17 A1- A2)	Nine Metal Haps	Miscellaneous solvent usage	Natural gas Combustion	Welders	Fugitive Emissions Paved Roads	**TOTAL**
Criteria Pollutants	PM	0.30	0.014	0.14	0.027	0.027	0.057	0.037	0.00	0.00	0.148	0.00	0.01	0.76
	PM10	0.29	0.007	0.14	0.027	0.027	0.006	0.037	0.00	0.00	0.591	0.00	0.02	1.13
	PM2.5	0.29	0.003	0.14	0.027	0.027	0.006	0.037	0.00	0.00	0.591	0.00	0.02	1.13
	SO2	0	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.047	0.00	0.00	0.05
	NOx	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.776	0.00	0.00	7.78
	VOC	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48	0.428	0.00	0.00	1.91
	CO2e	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,387.76	0.00	0.00	9,387.76
	CO	0	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.532	0.00	0.00	8.54
Hazardous Air Pollut	Ethylbenzene	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	Xylenes	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00
	Benzene	0	0	0	0	0	0	0	0.00	0.00	0.00E+00	0.00	0.00	0.00E+00
	MeOH	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00E+00
	Formaldehyde	0	0	0	0	0	0	0	0.00	0.00	0.00E+00	0.00	0.00	0.00E+00
	n-Hexane	0	0	0	0	0	0	0	0.00	0.00	1.40E-01	0.00	0.00	1.40E-01
	Toluene	0	0	0	0	0	0	0	0.00	0.00	0.00E+00	0.00	0.00	0.00
	Lead	3.35E-02	0	0	0	0	0	0	4.38E-03	0.00	0.00E+00	0.00	0.00	3.78E-02
	Zinc	0.00	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00E+00
	Chromium	7.70E-05	0	0	0	0	0	0	4.53E-02	0.00	0.00E+00	0.00	0.00	4.54E-02
	Manganese	7.53E-03	0	0	0	0	0	0	1.75E-03	0.00	0.00E+00	3.50E-04	0.00	9.63E-03
	MIBK	0.00	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00E+00
	Isocyanates	0.00	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00E+00
	TEA	0.00	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00E+00
	Nickel	1.34E-04	0	0	0	0	0	0	1.46E-02	0.00	0.00E+00	0.00	0.00	0.01
	Totals	**41.2E-3**							0.07	0.00	0.00	3.50E-04		0.25
													Worse Case HAP	0.14

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

1. On May 8, 2008 U. S. EPA promulgated the new requirements for Prevention Of Significant Deterioration (PSD) for PM 2.5 emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC2-2, to include those requirements. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions.

2. There are no emission factors in AP42 for PM2.5, PM10 = PM2.5

Appendix A: Emissions Calculations
Particulate, HAPs

Induction Furnace melting, Foundry operation and Grinding

Company Name: Precision Propeller Industries, Inc.
Address City IN Zip: 2427 North Ritter Avenue
MSOP No: M097-28135-00664
Notice Only Change No.: M097-30550-00664
Reviewer: Swarna Prabha

Emissions from melting Metal

Process: B11P3	*Rate (tons steel/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)
Melting - 2 Electric	0.076	PM	0.90	0.30	none	0.00%	0.30
Induction Furnaces		PM-10	0.86	0.29	none	0.00%	0.29
Source of Criteria		SO2	0.00	0.00			
Pollutant Factors:		NOx	0.00	0.00			
EPA SCC# 3-04-003-03		VOC	0.00	0.00			
FIRE 6.01		CO	0.00	0.00			
AP-42 Ch. 12.10		chromium	0.00023	0.00008	none	0.00%	7.70E-05
Fifth edition 1995		cobalt	0.00002	0.00001	none	0.00%	6.69E-06
		nickel	0.00040	0.00013	none	0.00%	1.34E-04
		arsenic	0.00008	0.00003	none	0.00%	2.68E-05
		cadmium	0.00004	0.00001	none	0.00%	1.34E-05
	FIRE 6.01	manganese	0.02250	0.00753	none	0.00%	7.53E-03
		selenium	0.00001	0.00000	none	0.00%	3.35E-06
		Lead	0.10000	0.03347	none	0.00%	0.03347
						Total HAPs	0.04

NOTES:
1. Emission factors from AP42 Table 12.10-5, SCC 3-04-003-03, No Data is available for CO, SO2, NOx and VOC.
* Rate (Process throughput) is based on 669.3 tons/yr of metal melted for both furnaces combined, due to the bottleneck from Vibratory finishing lines
There is no control on the melting furnaces.

Pouring, and cooling SCC-3-04-003-18 (gray foundries) AP-42- Table 12.10-7

Process	Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/ton)	Uncontrolled Emission (lbs/hr)	Uncontrolled Emission (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
Pouring/Cooling	PM	0.076	4.2	0.321	1.406	0.990	0.003	0.014
	PM-10	0.076	2.06	0.157	0.689	0.990	0.002	0.007
	PM-2.5	0.076	1	0.076	0.335	0.990	0.001	0.003
	**CO	0.076	6	0.458	2.008	0.000	0.458	2.008

**The CO emission factor for pouring/castings, and shakeout (PCS) operations used is 6.0 lbs per ton of metal charge based on the August 11, 2006 Indiana Department of Environmental Management (IDEM) document, "Notice of Self-Disclosure for CO Emissions from PCS Operations within the Foundry Sector".

Emissions Controlled with Baghouse B12 BH1 (4,800 CFM)- Foundry Operation- shakeout, grinding, and shotblasting operation.

Process	Pollutant	Maximum Rate (tons/hr)	***Emission Factor (lbs/ton)	Uncontrolled Emission (lbs/hr)	Uncontrolled Emission (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
One (1) Pneumatic shakeout unit (B12 A2)	PM	0.076	43.020	3.287	14.397	0.990	0.033	0.144
Four (4) Cuttoff & Grind Stations (B12 A3)	PM-10	0.076	43.020	3.287	14.397	0.990	0.033	0.144
One (1) Wheelabrator / Three 3 Kelco Sandblasters (B12 A4)	PM-2.5	0.076	43.020	3.287	14.397	0.990	0.033	0.144

Emissions controlled with Baghouse B06BH1 (3,200cfm)

Process	Pollutant	Maximum Rate (tons/hr)	***Emission Factor (lbs/ton)	Uncontrolled Emission (lbs/hr)	Uncontrolled Emission (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
Four (4) Hand Grinding Stations (B06 A1)	PM	0.076	8.170	0.624	2.734	0.990	0.006	0.027
One (1) Sand Blast Cabinet (B06 A1)	PM-10	0.076	8.170	0.624	2.734	0.990	0.006	0.027
	PM-2.5	0.076	8.170	0.624	2.734	0.990	0.006	0.027

*** Emission factors for Baghouses were provided by the source based on the dust collected before control during a month period (9/2/09-10/02/09)

Appendix A: Emissions Calculations
Particulate, HAPs
Induction Furnace melting, Foundry operation and Grinding

Company Name: Precision Propeller Industries, Inc.
Address City IN Zip: 2427 North Ritter Avenue
MSOP No: M097-28135-00664
M097-30550-00664
Reviewer: Swarna Prabha

Emissions Controlled with (one) 1200 CFM Collector B03 DC1, associated with B03 A1.

Process/control	Pollutant	Maximum Rate (tons/hr)	*** Emission Factor (lbs/ton)	Uncontrolled Emission (lbs/hr)	Uncontrolled Emission (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
Grind and Polish (B03 A1)	PM	0.076	8.140	0.622	2.724	0.990	0.006	0.027
	PM-10	0.076	8.140	0.622	2.724	0.990	0.006	0.027
	PM-2.5	0.076	8.140	0.622	2.724	0.990	0.006	0.027

Emissions Controlled with (one) 1200 CFM Collector (B16 DC1)) associated with two VFL (B16 A1)

Process/control	Pollutant	Maximum Rate (tons/hr)	(1) Emission Factor (lbs/ton)	Uncontrolled Emission (lbs/hr)	Uncontrolled Emission (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
** (2) Vibratory Finish Lines (B16 A1)	PM	0.076	17.000	1.299	5.689	0.990	0.013	0.057
	PM-10	0.076	1.700	0.130	0.569	0.990	0.001	0.006
	PM-2.5	0.076	1.700	0.130	0.569	0.990	0.001	0.006

** This process has three finishing steps in the process. Two steps of finishing operation are wet operations (negl. emissions), and the third step is a dry operation.
(1) EPA WebFIRE PM and PM10 emission factors for Grey Iron Foundries - Grinding/Cleaning (Table 12.10-7, SCC#30400340)

Grinding operations B15 A1 A2, B17 A1 A2 /Process with control filters

Process/Control	Pollutant	Maximum Rate (tons/hr)	***Emission Factor (lbs/ton)	Uncontrolled Emission (lbs/hr)	Uncontrolled Emission (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
(8) Grinding Station B 15 A1 (3200 CFM)	PM	0.076	9.950	0.760	3.330	0.990	0.008	
B15 A1	PM-10	0.076	9.950	0.760	3.330	0.990	0.008	0.033
	PM-2.5	0.076	9.950	0.760	3.330	0.990	0.008	0.033
(4) Grinding Station B15 A2 (4,800CFM)	PM	0.076	0.270	0.021	0.090	0.990	0.000	0.001
B15 A2	PM-10	0.076	0.270	0.021	0.090	0.990	0.000	0.001
	PM-2.5	0.076	0.270	0.021	0.090	0.990	0.000	0.001
(1) Buff and Polish Station B17 A2 (1,200CFM)	PM	0.076	0.210	0.016	0.070	0.990	0.000	0.001
B17 A2	PM-10	0.076	0.210	0.016	0.070	0.990	0.000	0.001
	PM-2.5	0.076	0.210	0.016	0.070	0.990	0.000	0.001
(5) Grinding Station B17 A1 (3,200CFM)	PM	0.076	0.580	0.044	0.194	0.990	0.000	0.002
B17 A1	PM-10	0.076	0.580	0.044	0.194	0.990	0.000	0.002
	PM-2.5	0.076	0.580	0.044	0.194	0.990	0.000	0.002
Total tons/yr	PM			0.841	3.684			0.037
Total tons/yr	PM-10			0.841	3.684			0.037
Total tons/yr	PM-2.5			0.841	3.684			0.037

NOTE:
*** Emission factors for Grinding and Polishing operation controlled by dust collector E-14, Units E8 (grinders) consisting of dust collectors E7-3200, E1-4800, E1-1200, and E6-3200 , were provided by the source based on the dust collected before control during a month period (9/2/09-10/02/09).

1. The potential emissions are calculated based on 668.3 lbs/hr of metal melted for both furnaces combined, due to the bottleneck from Vibratory Finish lines
2. There is no control on melting furnaces.

There are no emissions for PM2.5 in AP42, PM10 = PM2.5.

METHODOLOGY

Uncontrolled Emission Rate (lbs/hr) = Maximum Rate (tons/hr) x Emissions (lbs/ton)
Uncontrolled Emission Rate (tons/yr) = Throughput (lbs/hr) x 1 ton/2000 lbs x Emissions (lbs/ton) x 8760 (hrs/yr) / 2000 (lbs/ton)
Controlled Emission Rate (lbs/hr) = Uncontrolled Emission Rate (lbs/hr) x (1-Control Eff)
Controlled Emission Rate (tons/yr) = Uncontrolled Emission Rate (tons/yr) x (1-Control Eff)

Appendix A: Process Particulate Emissions
Potential Metal Hazardous Air Pollutant Process Emissions (MHAP)
from the Machining Operations

Company Name: Precision Propeller Industries, Inc.
Address City IN Zip: 2427 North Ritter Avenue
MSOP No: M097-28135-00664
Notice Only Change No.: M097-30550-00664
Reviewer: Swarna Prabha

Unit ID	* Total Uncontrolled Potential Particulate (PM) (tons/yr)	Weight % Chromium Compounds	Weight % Lead Compounds	Weight % Manganese Compounds	Weight % Nickel Compounds	Chromium Compounds Emissions (ton/yr)	Lead Compounds Emissions (ton/yr)	Manganese Compounds Emissions (ton/yr)	Nickel Compounds Emissions (ton/yr)
shakeout, grinding and shotblasting operarion									
One (1) Pneumatic shakeout unit (B12 A2) Four (4) Cuttoff & Grind Gate (B12 A3) One (1) Wheelabrator and Three (3) Kelco sandblasters (B12 A4)	14.397	15.50%	1.50%	0.60%	5.00%	2.231	0.216	0.086	0.720
Four (4) Hand Grinding Stations (E11) One (1) Sand Blast Cabinet (B06 A1)	2.734	15.50%	1.50%	0.60%	5.00%	0.423784028	0.041011358	0.016404543	0.136704525
Grind and Polish (E14)	2.72	15.50%	1.50%	0.60%	5.00%	0.422227905	0.040860765	0.016344306	0.13620255
** (2) Vibratory Finish Lines (B16 A1)	5.69	15.50%	1.50%	0.60%	5.00%	0.88180275	0.08533575	0.0341343	0.2844525
Grinding Stations E8	3.68	15.50%	1.50%	0.60%	5.00%	0.571096958	0.055267448	0.022106979	0.184224825
					Total Uncontrolled Potential Emissions (tons/yr)	**4.53**	**0.44**	**0.18**	**1.46**
					Control Efficiency (%)	**99%**			
					Controlled Potential Emissions (tons/year)	**0.045303913**	**0.00438425**	**0.0017537**	**0.014614166**

Methodology:
Uncontrolled Potential Emissions (tons/yr) = Total Potential Particulate (tons/yr) * Weight % Metal HAP
Controlled Potential Emissions (tons/yr) = Uncontrolled Potential Emissions (tons/yr) *(1 - Control Efficiency (%))

Total Combined HAPs (tons/yr)	**6.61**
Controlled Potential Emissions (tons/year)	**0.07**

Notes:
Total emissions based on rated capacity at 8,760 hours/year.
* The Total Uncontrolled Potential Particulate (PM) Process Emissions from the InductionFurnace melting, Foundry operation and Grinding, taken from page 3 and 4 of 9, of this Appendix.
Potential emissions for the metallic HAPs, including: Chromium, Lead, Manganese and Nickel, were determined using a "worst case" content from the various materials used by the source, taken from MSDSs provided by the source.
> Metal HAPS, including Cadmium, Chromium, Lead, Manganese and Nickel, are particulate in nature and can be controlled using a control device.

Appendix A: Emissions Calculations
VOCs, Particulate, HAPs
Misc. Solvent Usage

Company Name: Precision Propeller Industries, Inc.
Address City IN Zip: 2427 North Ritter Avenue
MSOP No: M097-28135-00664
Notice Only Change No.: M097-30550-00664
Reviewer: Swarna Prabha

PTE of PM and VOC from Propeller misc. solvent usage

Potential Uncontrolled Emissions:

Material (as applied)	Density (Lb/Gal)	Weight % Volatile (H20& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	maximum usage (gal/hr)	Maximum (gal/yr)	Maximum (gal/yr)* (actual)	Pounds VOC per gallon of coating less water	PTE of VOC lbs/hour	Actual PTE of VOC* lbs/ day	PTE of VOC lbs/ day**	PTE of VOC tons/ year	PTE of PM/PM10 before control ton/yr	PTE of PM/PM10 after control ton/yr	Transfer Efficiency
Mold release	7.01	100.00%	0.00%	75.00%	0.00%	0.00%	0.04075	356.97	163.00	5.26	0.214	3.428	5.14	0.94	0	0.00	50.00%
TEA	6.06	100.00%	0.00%	100.00%	0.00%	0.00%	0.020421	178.8861	81.68	6.06	0.12375	1.98	2.97	0.54	0	0.00	50.00%
Total											0.34	5.40789	8.11	1.48	0.00	0.00	

* Facility operates 4,000 hours per year (or 16 hours/day).
** facility operating 24 hours per day.

NOTE: Mold release is sprayed on the molds to release the castings
TEA is used for pH balance

METHODOLOGY
Maximum Usage *(gals/hour) = [Maximum Capacity (unit/hr)] x [Maximum Capacity (gal/unit)]
VOC (lbs/gal) = [Density (lbs/gal)] x [Weight % VOC/100%]
PTE of VOC (lbs/hr) = [Maximum Usage (lbs/hr)] * [Weight % VOC/100%]
PTE of VOC (lbs/day) = [PTE of VOC (lbs/hr)] * [24 hours/day]
PTE of VOC (tons/yr) = [PTE of VOC (lbs/hr)] * [(8760 hours/yr)] * [1 ton/2000 lbs]
PTE PM/PM10 (lbs/hr) = [Maximum Usage (gals/hour] x [Weight % solids/100%]
PTE of PM/PM10 Before Controls (tons/year) = [PTE PM/PM10 (lbs/hour)] x[8760 (hours/year]) x [1 ton/2000 lbs] x [1 - Transfer Efficiency %]
PTE PM/PM10 After Controls (tons/yr) = [PTE of PM/PM10 (tons/yr)] x [1-(% control efficiency/100%)]

VOCs, Particulate, HAPs
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Precision Propeller Industries, Inc.
Address City IN Zip: 2427 North Ritter Avenue
MSOP No: M097-28135-00664
Notice Only Change No.: M097-30550-00664
Reviewer: Swarna Prabha

Pollutant	PM*	PM10*	PM2.5	SO2	NOx**	VOC	CO	DCB	Formaldehyde	Hexane	Toluene	Cd	Cr	Ni
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100	5.5	84	1.2E-3	75.0E-3	1.8E+0	3.4E-3	1.1E-3	1.4E-3	2.1E-3

Emission Unit	Number of Units	Unit Heat Input Capacity MMBtu/hr	Combined Total Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission tons/yr													
					PM*	PM10*	PM2.5	SO2	NOx**	VOC	CO	DCB	Formaldehyde	Hexane	Toluene	Cd	Cr	Ni
Bldg 14 Dehumidifier (B14 PS1)	1	0.173	0.173	1.52	0.001	0.006	0.006	0.000	0.076	0.004	0.064	0.0	57E-6	1E-3	3E-6	833.5E-9	1.1E-6	1.6E-6
Bldg 11 Autoclave Boiler (B11 PS1)	1	2	2	17.52	0.017	0.067	0.067	0.005	0.876	0.048	0.736	0.0	657E-6	16E-3	000E+0	000.0E+0	000.0E+0	000.0E+0
Bldg 7C Pre-Heat Furnace (E3)	1	3	3	26.28	0.025	0.100	0.100	0.008	1.314	0.072	1.104	0.0	986E-6	24E-3	45E-6	14.5E-6	18.4E-6	27.6E-6
Bldg 11 Afterburner (E3)	1	0.75	0.75	6.57	0.006	0.025	0.025	0.002	0.329	0.018	0.276	0.0	246E-6	6E-3	000E+0	000.0E+0	000.0E+0	000.0E+0
Bldg 11Roof Top Unit (B11 CS2)	1	4	4	35.04	0.033	0.133	0.133	0.011	1.752	0.096	1.472	0.0	1E-3	32E-3	60E-6	19.3E-6	24.5E-6	36.8E-6
Bldg 1 Heater (B1 CS1)	1	0.165	0.165	1.45	0.001	0.005	0.005	0.000	0.072	0.004	0.061	0.0	54E-6	1E-3	000E+0	000.0E+0	000.0E+0	000.0E+0
Bldg 2 Heater (B2 CS1)	1	0.08	0.08	0.70	0.001	0.003	0.003	0.000	0.035	0.002	0.029	0.0	26E-6	631E-6	1E-6	385.4E-9	490.6E-9	735.8E-9
Bldg 2 Heater (B2 CS2)	1	0.08	0.08	0.70	0.001	0.003	0.003	0.000	0.035	0.002	0.029	0.0	26E-6	631E-6	000E+0	000.0E+0	000.0E+0	000.0E+0
Bldg 3 Heater (B3 CS1)	1	0.25	0.25	2.19	0.002	0.008	0.008	0.001	0.110	0.006	0.092	0.0	82E-6	2E-3	4E-6	1.2E-6	1.5E-6	2.3E-6
Bldg 4 Heater (B4 CS1)	1	0.165	0.165	1.45	0.001	0.005	0.005	0.000	0.072	0.004	0.061	0.0	54E-6	1E-3	000E+0	000.0E+0	000.0E+0	000.0E+0
Bldg 5 Heater (B5 CS1)	1	0.2	0.2	1.75	0.002	0.007	0.007	0.001	0.088	0.005	0.074	0.0	66E-6	2E-3	3E-6	963.6E-9	1.2E-6	1.8E-6
Bldg 6 Heater (B6 CS1)	1	0.31	0.31	2.72	0.003	0.010	0.010	0.001	0.136	0.007	0.114	0.0	102E-6	2E-3	000E+0	000.0E+0	000.0E+0	000.0E+0
Bldg 7 Heater (B7 EH1)	1	Electric Heat											000E+0	000E+0	000E+0	000.0E+0	000.0E+0	000.0E+0
Bldg 8 Heater (B8 CS11)	1	0.225	0.225	1.97	0.002	0.007	0.007	0.001	0.099	0.005	0.083	0.0	74E-6	2E-3	000E+0	000.0E+0	000.0E+0	000.0E+0
Bldg 9 Heater (B9 EH1)	1	Electric Heat																
Bldg 10 Heater (B10 EH1)	1	Electric Heat																
Bldg 11 Heater (B111 CS1)	1	0.25	0.25	2.19	0.002	0.008	0.008	0.001	0.110	0.006	0.092	0.0	82E-6	2E-3	4E-6	1.2E-6	1.5E-6	2.3E-6
Bldg 11 Heater (B111 CS2)	1	4	4	35.04	0.03	0.13	0.13	0.01	1.75	0.10	1.47	0.0	1E-3	32E-3	000E+0	000.0E+0	000.0E+0	000.0E+0
Bldg 13 Warehouse Heater (B13 CS 1-10)	10	0.075	0.75	6.57	0.006	0.025	0.025	0.002	0.329	0.018	0.276	0.0	246E-6	6E-3	11E-6	3.6E-6	4.6E-6	6.9E-6
Bldg 14 Offices (B14CS 1-6)	2	0.05	0.1	0.88	0.001	0.003	0.003	0.000	0.044	0.002	0.037	0.0	33E-6	788E-6	000E+0	000E+0	000.0E+0	000.0E+0
Bldg 14 Packing (B14 CS4, CS5)	2	0.1	0.2	1.75	0.002	0.007	0.007	0.001	0.088	0.005	0.074	0.0	66E-6	2E-3	000E+0	000E+0	0.00	0.00
Bldg 14 Break room (B14 CS3)	1	0.06	0.06	0.53	0.000	0.002	0.002	0.000	0.026	0.001	0.022	0.0	20E-6	473E-6	000E+0	000E+0	0.00	0.00
Bldg 14 Shellmaker room (B14 PS1	1	0.4	0.4	3.50	0.003	0.013	0.013	0.001	0.175	0.010	0.147	0.0	131E-6	3E-3	000E+0	000E+0	0.00	0.00
Bldg 15 South Grind (B15 CS1)	1	0.2	0.2	1.75	0.002	0.007	0.007	0.001	0.088	0.005	0.074	0.0	66E-6	2E-3	000E+0	000E+0	0.00	0.00
Bldg 16 Finish Dept (B16 CS1)	2	0.1	0.2	1.75	0.002	0.007	0.007	0.001	0.088	0.005	0.074	0.0	66E-6	2E-3	000E+0	000E+0	0.00	0.00
Bldg 17 TE grind (B17 CS1)	1	0.06	0.06	0.53	0.000	0.002	0.002	0.000	0.026	0.001	0.022	0.0	20E-6	473E-6	000E+0	000E+0	0.00	0.00
Bldg 17 QC (B17 CS2)	1	0.06	0.06	0.53	0.000	0.002	0.002	0.000	0.026	0.001	0.022	0.0	20E-6	473E-6	000E+0	000E+0	0.00	0.00
Bldg 17 Filter Press Room (B17 CS3)	1	0.075	0.075	0.66	0.001	0.002	0.002	0.000	0.033	0.002	0.028	0.0	25E-6	591E-6	000E+0	000E+0	0.00	0.00
Totals	**40**	**16.828**	**17.753**	**155.516**	**0.15**	**0.59**	**0.59**	**0.05**	**7.78**	**0.43**	**6.53**	**93.3E-6**	**5.8E-3**	**140.0E-3**	**129.6E-6**	**41.9E-6**	**61.1E-6**	**91.6E-6**

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.
There are no emissions for PM2.5 in AP42, PM10 = PM2.5.

Methodology
Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) * 8,760 hrs/yr * 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) / 2,000 lb/ton
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
DCB = Dichlorobenzene
Pb = Lead
Cd = Cadmium
Cr = Chromium
Mn = Manganese
Ni = Nickel

VOCs, Particulate, HAPs
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: **Precision Propeller Industries, Inc.**
Address City IN Zip: **2427 North Ritter Avenue**
MSOP No: **M097-28135-00664**
M097-30550-00664
Reviewer: **Swarna Prabha**

	Greenhouse Gas		
Emission Factor in lb/MMcf	CO2 120,000	CH4 2.3	N2O 2.2
Potential Emission in tons/yr	9,331	0.2	0.2
Summed Potential Emissions in tons/yr	9,331		
CO2e Total in tons/yr	9,388		

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). updated 7/11

Appendix A: Emissions Calculations
Welding

Company Name: Precision Propeller Industries, Inc.
Address City IN Zip: 2427 North Ritter Avenue
Permit No. : M097-28135-00664
Notice Only Change No.: M097-30550-00664
Reviewer: Swarna Prabha

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Max. electrode consumption (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
WELDING				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Tungsten Inert Gas (TIG)(carbon steel)	5	0.032	0.16	0.0055	0.0005			0.00088	0.00008	0	0	0.00008
								0	0	0	0	0
	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)
FLAME CUTTING				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene												
Oxymethane												
Plasma**												
EMISSION TOTALS												
Potential Emissions lbs/hr								8.80E-04	8.00E-05	0	0	0.00008
Potential Emissions lbs/day								2.11E-02	1.92E-03	0.00	0.00	0.00192
Potential Emissions tons/year								3.85E-03	3.50E-04	0.00	0.00	0.0003504

METHODOLOGY
Calculations are conservative since these are maintenance welders and are seldom used.
*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
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.

Appendix A: Emissions Calculations
Fugitive Emissions from Paved Roads

Company Name: Precision Propeller Industries, Inc.
Address City IN Zip: 2427 North Ritter Avenue
MSOP No: M097-28135-00664
Notice Only Change No.: M097-30550-00664
Reviewer: Swarna Prabha

Paved Roads (see AP-42 for more information)

Maximum Vehicular Speed: 10 mph
Average Distance of Haul: 0.25 miles

Vehicle Type	No. of One Way Trips per Hour	Weight
Dump Truck	1	40
total	1	

Weighted Average Gross Weight: 40 tons
VMT= 2190 (miles/yr)

According to AP-42, Chapter 13.2.1 - Paved Roads (1/11), the PM/PM10 emission factors for paved roads can be estimated from the following equation:

Calculations:

$$E = (k \times (sL)^{0.91} \times (w/)^{1.02}$$

where:

E = emission factor (lb/vehicle mile traveled)
sL = road surface silt loading (g/m^2) = 0.015 (g/m^2) (AP-42, Table 13.2.1-3)
w = mean vehicle weight (tons) = 40.00 tons from above table
k = empirical constant = 0.011 for PM and 0.0022 for PM10

PM Emission Factor = $(0.011 \times (0.015)^{0.91} \times (40)^{1.02}$ = **0.01** lbs/VMT

PM10 Emission Factor = $(0.022 \times (0.015)^{0.91} \times (40)^{1.02}$ = **0.02** lbs/VMT

Length of Paved Roads in One Direction = **0.12** miles

Potential PM Emissions (ton/yr) = Emission factor (lbs/VMT) * VMT / 2000 (lbs/ton)

Potential PM Emissions (ton/yr) = 0.011 tons/yr
Potential PM10 Emissions (ton/yr) = 0.0219 tons/yr
Potential PM2.5 Emissions (ton/yr) = 0.0219 tons/yr

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Bill Boehman
Precision Propeller Industries, Inc.
2427 N Ritter Ave
Indianapolis, IN 46218

DATE: September 22, 2011

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

SUBJECT: Final Decision
MSOP - Notice-Only Change
097 - 30550 - 00664

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.

Mail Code 61-53

IDEM Staff	LPOGOST 9/21/2011 Precision Propeller Industries, Inc. 097 - 30550 - 00664 final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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1		Bill Boehman Precision Propeller Industries, Inc. 2427 N Ritter Ave Indianapolis IN 46218 (Source CAATS) Via confirmed delivery									
2		Marion County Health Department 3838 N, Rural St Indianapolis IN 46205-2930 *(Health Department)*									
3		Mrs. Sandra Lee Watson 7834 E 100 S Marion IN 46953 *(Affected Party)*									
4		Indianapolis City Council and Mayors Office 200 East Washington Street, Room E Indianapolis IN 46204 *(Local Official)*									
5		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 *(Local Official)*									
6		Matt Mosier Office of Sustainability 2700 South Belmont Ave. Administration Bldg. Indianapolis IN 46221 *(Local Official)*									
7		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 *(Affected Party)*									
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