INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: June 9, 2006

RE: Federal Mogul Corporation / 141-13714-00065

FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 03/23/06

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MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY

Federal Mogul Corporation
3605 West Cleveland Road
South Bend, Indiana 46628

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

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.

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

Operation Permit No.: MSOP 141-13714-00065	
Issued by: Original Signed By: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: June 9, 2006 Expiration Date: June 9, 2011

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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 secondary aluminum foundry operation manufacturing automotive pistons.

Authorized Individual:	Plant Manager
Source Address:	3605 West Cleveland Road, South Bend, Indiana 46628
Mailing Address:	3605 West Cleveland Road, South Bend, Indiana 46628
General Source Phone:	(574) 272-5900
SIC Code:	3592
County Location:	St. Joseph
Source Location Status:	Basic Nonattainment area for the 8-hour ozone standard Attainment area for all other criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

(a) One (1) reverberatory melt furnace, identified as RF1, constructed in 1994, and modified in 2002, with a maximum metal throughput rate of 5,600 pounds per hour, a maximum ladle dross and bath dross flux usage rate of 120 pounds per day and a maximum maintenance wall flux usage rate of 8.0 pounds per day, equipped with three (3) natural gas-fired burners, each with a maximum heat input capacity of 2.0 million British thermal units (MMBtu) per hour, exhausting through one (1) stack (ID No. R9#2);

(b) Fourteen (14) permanent mold/die casting cells, identified as CC1 through CC14, with CC1 through CC3 constructed in 1987, CC4 and CC5 constructed in 1988, CC6 and CC7 constructed in 1989, CC8 through CC13 constructed in 1994, and CC14 constructed in 2001, with CC1 through CC8 each equipped with three (3) electric resistance furnaces and two (2) natural gas-fired mold heaters each with a maximum heat input capacity of 0.394 MMBtu per hour (DT1 through DT16), CC9 through CC13 each equipped with two (2) electric resistance furnaces and two (2) natural gas-fired mold heaters each with a maximum heat input capacity of 0.394 MMBtu per hour (DT17 through DT26), and CC14 equipped with four (4) electric resistance furnaces and two (2) natural gas-fired mold heaters each with a maximum heat input capacity of 0.394 MMBtu per hour (DT27 and DT28), all exhausting through seven (7) area roof vents (ID Nos. R4#2, R4#3, R4#4, R4#6, R4#9, R8#2, and R8#3). CC1 through CC8 and CC10 through CC13 can also melt aluminum at a maximum combined throughput rate of 5,186.16 pounds per hour, and CC9 and CC14 can also melt aluminum at a maximum combined throughput rate of 1,728.72 pounds per hour. All casting cells combined have a maximum flux usage rate of 282 pounds per day.

(c) Eight (8) natural gas-fired heat treat ovens, identified as HT1, HT2, HT3, HT5, HT6, HT7, HT8, and HT9, with HT1 through HT3 and HT5 through HT7 constructed in 1994, and HT8 and HT9 constructed in 2001, with HT1 through HT3 and HT5 through HT7 each having a maximum heat input capacity of 0.75 MMBtu per hour and HT8 and HT9 each having a maximum heat input capacity of 0.80 MMBtu per hour, each exhausting through one (1) stack (ID Nos. R3#33, R7#11, R7#10, R7#8, R7#9, R7#7, R7#53, and R3#34, respectively);

(d) One (1) rapid prototype operation, identified as RPT, for research and development, consisting of one (1) electric resistance furnace with a maximum metal throughput of 54 pounds per day, and one (1) prototype shell/core machine (PT) with a maximum resin coated sand usage rate of 500 pounds per year, equipped with one (1) natural gas-fired heater with a maximum heat input capacity of 0.06 MMBtu per hour, exhausting through one (1) duct exhaust wall fan (ID No. RPTW-1);

(e) Two (2) die prep tables, identified as DP1 and DP2, constructed in 1987, each equipped with one (1) natural gas-fired heater each with a maximum heat input capacity of 0.40 MMBtu per hour, exhausting through one (1) wall fan (ID No. DPW-1);

(f) Ten (10) machine lines, identified as MCL-1 through MCL-10, with MCL-1 and MCL-2 constructed in 1987, MCL-3 constructed in 1989, MCL-4 constructed in 1990, MCL-5 and MCL-6 constructed in 1995, MCL-7 constructed in 1994, MCL-8 and MCL-9 constructed in 2001, and MCL-10 constructed in 2004, with MCL-1 through MCL-9 having a maximum aged piston throughput rate of 533.3 pounds per hour, and MCL-10 having a maximum aged piston throughput rate of 450 pounds per hour, all using a water based coolant during machining, all exhausting through general plant ventilation;

(g) One (1) Belco phosphate wash line, identified as PWL-1, constructed in 1993, equipped with four (4) natural gas-fired stage heaters, identified as Stage 1, Stage 3, Stage 4, and Stage 6 heaters, with maximum heat input capacities of 0.70, 0.40, 1.3, and 0.30 MMBtu per hour, respectively, and one (1) natural gas-fired drying oven, identified as the Drying Oven, with a maximum heat input capacity of 0.8 MMBtu per hour, processing a maximum of 1200 pistons per hour, with Stage 1 heater exhausting through stack R7#49, Stage 3 heater exhausting through stack R7#45, Stage 4 heater exhausting through stack R7#46, Stage 6 heater exhausting through stack R7#44, and the drying oven exhausting through stack R7#42;

(h) One (1) pad print skirt coat line, identified as SPC-1, constructed in 1993, utilizing a roll coating application method, coating a maximum of 900 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.5 and 0.8 MMBtu per hour, respectively, exhausting through four (4) stacks (ID Nos. R7#35, R7#34, R7#33, and R7#32);

(i) One (1) Niagara phosphate wash line, identified as PWL-2, constructed in 1999, equipped with four (4) natural gas-fired stage heaters, identified as Stage 1, Stage 2, Stage 4, and Stage 6 heaters, with maximum heat input capacities of 0.83, 0.235, 0.44, and 0.235 MMBtu per hour, respectively, and one (1) natural gas-fired drying oven, identified as the Drying Oven, with a maximum heat input capacity of 0.4 MMBtu per hour, processing a maximum of 1200 pistons per hour, with Stage 1, 2, 4, and 6 heaters exhausting through stack R7#51, and the drying oven exhausting through stack R7#50. There is an additional stack exhaust for system water vapor (ID R7#52);

(j) One (1) screen print skirt coat line, identified as SPC-2, constructed in 1999, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R7#39, R7#38, and R7#37);

(k) One (1) Niagara phosphate wash line, identified as PWL-3, constructed in 2002, equipped with one (1) natural gas-fired boiler and one (1) natural gas-fired drying oven, with maximum heat input capacities of 1.3 and 0.4 MMBtu per hour, respectively, processing a maximum of 1200 pistons per hour, with the boiler exhausting through stack R13#7, the drying oven exhausting through stack R13#9, and the wash line exhausting through stack R13#6;

(l) One (1) screen print skirt coat line, identified as SC-3, constructed in 2002, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R13#10, R13#11, and R13#12);

(m) One (1) Niagara phosphate wash line, identified as PWL-4, constructed in 2002, equipped with one (1) natural gas-fired boiler and one (1) natural gas-fired drying oven, with maximum heat input capacities of 1.3 and 0.4 MMBtu per hour, respectively, processing a maximum of 1200 pistons per hour, with the boiler exhausting through stack R13#7, the drying oven exhausting through stack R13#14, and the wash line exhausting through stack R13#13;

(n) One (1) skirt coat line, identified as SC-4, constructed in 2002, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R13#15, R13#16, and R13#17);

(o) Four (4) anodizing lines, identified as A5, A6, A7, and A8, with A5 constructed in 2002, and A6, A7, and A8, constructed in 2004, each using a caustic soda (alkaline) wash and a sulfuric/oxalic acid solution, each exhausting through one (1) stack (ID Nos. R13#5, R13#18, R13#19, and R13#20). Line A5 processes a maximum of 480 pistons per hour and Lines A6, A7, and A8 each process a maximum of 600 pistons per hour.

(p) One (1) Assembly Line 1 pin fit and piston marking operation, identified as WPS-1, constructed in 1995, consisting of the pin fit marking process and the ink jet marking process. The pin fit process utilizes an air atomization spray coating application method, with dry filters for particulate matter control, coating a maximum of 600 pistons per hour, exhausting through one (1) stack (ID No. R7#30). The ink jet process utilizes an air atomization spray coating application method, coating a maximum of 360 pistons per hour, exhausting to the general plant ventilation;

(q) Two (2) 30 gallon parts washers with lids for skirt coat equipment clean-up, identified as PW1 and PW2, constructed in 1994, with a combined VOC solvent throughput rate of 240 gallons per year, and two (2) 30 gallon maintenance parts washers with lids, identified as PW3 and PW4, constructed in 1996, with a mineral spirit cleaning agent throughput rate of 180 gallons per year and an alkaline cleaning agent throughput rate of 180 gallons per year. The one (1) parts washer for the skirt coat equipment clean-up, PW1, has a remote solvent reservoir and the other three (3) parts washers do not have a remote solvent reservoir;

(r) One (1) Tin plate line, identified as TP-1, constructed in 1989, processing pistons at a maximum rate of 1300 pounds per hour, using a sodium stannate solution bath, exhausting through one (1) stack (ID No. TPS-1) and equipped with one (1) natural gas-fired hot water heater, identified as WBH-1, with a maximum heat input capacity of 0.225 MMBtu per hour, exhausting through one (1) stack (ID No. TPS-2);

(s) One (1) assembly line, identified as Assembly Line 2, constructed in 1999, consisting of conveyor, piston marking system, pin and ring groove oiling system, ring installers, wrist pin inserter, quality control/inspection equipment (ring, pin and visual) and tray loader robot, processing a maximum of 750 pistons per hour, exhausting to the general plant ventilation;

(t) One (1) assembly line, identified as Assembly Line 3, constructed in 2001, consisting of ring expanders, inspection areas, wrist pin installation, piston data marker, pin lube, and two (2) pin marker stations, processing a maximum of 770 pistons per hour, exhausting to the general plant ventilation;

(u) One (1) assembly line, identified as Assembly Line 4, constructed in 2001, consisting of inspection areas, wrist pin installation, piston data marker, pin lube, and a pin marker, processing a maximum of 770 pistons per hour, exhausting to the general plant ventilation;

(v) One (1) assembly line, identified as Assembly Line 5, constructed in 2004, consisting of a tray conveyor, tray wrist pin loader (2 stations), marking system (not yet installed), quality control inspection station and tray label system (label laser printer), processing a maximum of 600 pistons per hour, exhausting to the general plant ventilation;

(w) One (1) assembly line, identified as Assembly Line 6, constructed in 2003, consisting of inspection areas, wrist pin installation, piston data marker, pin lube, and a pin marker, processing a maximum of 600 pistons per hour, exhausting to the general plant ventilation;

(x) Two (2) natural gas-fired sanitary water heaters, identified as WH1 and WH2, both constructed in 1993, each with a maximum heat input capacity of 0.199 MMBtu per hour;

(y) Two (2) natural gas-fired makeup air units, identified as 87-MAU and 87-MAU2, constructed in 1987, with 87-MAU having a maximum heat input capacity of 0.6 MMBtu per hour and 87-MAU2 having a maximum heat input capacity of 3.17 MMBtu per hour;

(z) Four (4) natural gas-fired building heaters, identified as 87-RTU1a through 87-RTU4a, constructed in 1987, with 87-RTU1a having a maximum heat input capacity of 0.235 MMBtu per hour, 87-RTU2a having a maximum heat input capacity of 0.074 MMBtu per hour, 87-RTU3a having a maximum heat input capacity of 0.48 MMBtu per hour, and 87-RTU4a having a maximum heat input capacity of 0.231 MMBtu per hour;

(aa) Four (4) natural gas-fired building heaters, identified as 87-RTU1, 87-RTU3, 87-RTU4, and 87-RTU5, constructed in 1987, with 87-RTU1 having a maximum heat input capacity of 0.36 MMBtu per hour and 87-RTU3 through 87-RTU5 each having a maximum heat input capacity of 0.5 MMBtu per hour;

(bb) Five (5) natural gas-fired air handling units, identified as 94-AHU1 through 94-AHU5, constructed in 1994, each with a maximum heat input capacity of 0.777 MMBtu per hour;

(cc) One (1) natural gas-fired makeup air unit, identified as 94-MAU1, constructed in 1994, with a maximum heat input capacity of 6.5 MMBtu per hour;

(dd) Ten (10) natural gas-fired building heaters, identified as 94-UH10 through 94-UH19, constructed in 1994, each with a maximum heat input capacity of 0.1 MMBtu per hour;

(ee) Three (3) natural gas-fired building heaters, identified as 93-UH7 through 93-UH9, constructed in 1993, with 93-UH7 having a maximum heat input capacity of 0.09 MMBtu per hour and 93-UH8 and 93-UH9 each having a maximum heat input capacity of 0.13 MMBtu per hour;

(ff) Eight (8) natural gas-fired building heaters, identified as 00-RTU1 through 00-RTU8, constructed in 2000, with 00-RTU1 through 00-RTU4 each having a maximum heat input capacity of 0.636 MMBtu per hour, 00-RTU5 and 00-RTU6 each having a maximum heat input capacity of 0.328 MMBtu per hour, and 00-RTU7 and 00-RTU8 each having a maximum heat input capacity of 0.2 MMBtu per hour,

(gg) One (1) natural gas-fired building heater, identified as 00-MAU2, constructed in 2000, with a maximum heat input capacity of 4.95 MMBtu per hour;

(hh) One (1) natural gas-fired emergency generator, identified as GEN1, constructed in 2005, with a maximum heat input capacity of 0.4029 MMBtu per hour;

(ii) One (1) polycarbonate bead blasting unit, identified as Blast 1, to be installed in 2006, processing pistons at a maximum rate of 26.4 pounds per hour, with particulate emissions controlled by a HEPA filtration system, exhausting to the general plant ventilation.

(jj) The following storage tanks:

(1) One (1) virgin coolant make-up tank, with a maximum storage capacity of 3500 gallons, constructed in 2002;
(2) One (1) dirty process water tank, with a maximum storage capacity of 6400 gallons;
(3) One (1) recovered coolant tank, with a maximum storage capacity of 1000 gallons;
(4) Four (4) oil tanks, each with a maximum storage capacity of 500 gallons;
(5) One (1) equalization tank, T1, with a maximum storage capacity of 9,297 gallons;
(6) One (1) spent acid tank, T2, with a maximum storage capacity of 6,470 gallons;
(7) One (1) bulk sodium hydroxide tank, T6, with a maximum storage capacity of 6,470 gallons;
(8) One (1) spent alkaline tank, T3, with a maximum storage capacity of 6,464 gallons;
(9) One (1) spare conical bottom tank, T4, with a maximum storage capacity of 1,183 gallons;
(10) One (1) wastewater treatment filter effluent transfer tank, T5, with a maximum storage capacity of 175 gallons;
(11) Four (4) reagent tanks, each with a maximum storage capacity of 500 gallons;
(12) Two (2) pH adjust tanks, N1 and N2, each with a maximum storage capacity of 2,094 gallons;
(13) One (1) polymer add tank, F1, with a maximum storage capacity of 454 gallons;
(14) One (1) sludge thickener tank with a maximum storage capacity of 5,911 gallons; and
(15) One (1) final pH adjust tank, N3, with a maximum storage capacity of 1,885 gallons.

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Definitions

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 Effective Date of the Permit [IC13-15-5-3]

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

B.3 Permit Term and Renewal [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5]

This permit 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 of this permit do not affect the expiration date.

The Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date. If a timely and sufficient permit application for a renewal has been made, this permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.5 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:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
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.6 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare, maintain, and implement Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each emissions unit:

(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

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) A copy of the PMP's 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 PMP whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.7 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) Permit revisions are governed by the requirements of 326 IAC 2-6.1-6.

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

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

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

(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.8 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] [IC13-17-3-2][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 this title or the conditions of this permit or any operating permit revisions;

(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 processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(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.9 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

(c) The Permittee may implement 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.10 Annual Fee Payment [326 IAC 2-1.1-7]

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

(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.11 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.

B.12 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.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to 141-13714-00065 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.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

C.3 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.4 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
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements

C.5 Performance Testing [326 IAC 3-6]

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

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

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

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14 days) prior to the actual date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by the 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.6 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

C.7 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.8 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

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

C.9 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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected emissions unit while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that re-testing in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the re-testing deadline.

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

The response action documents submitted pursuant to this condition do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.10 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.11 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, all record keeping requirements not already legally required shall be implemented when operation begins.

C.12 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 Data Section, Office of Air Quality
100 North Senate Avenue
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) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

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

SECTION D.1 EMISSIONS UNITS OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) reverberatory melt furnace, identified as RF1, constructed in 1994, and modified in 2002, with a maximum metal throughput rate of 5,600 pounds per hour, a maximum ladle dross and bath dross flux usage rate of 120 pounds per day and a maximum maintenance wall flux usage rate of 8.0 pounds per day, equipped with three (3) natural gas-fired burners, each with a maximum heat input capacity of 2.0 million British thermal units (MMBtu) per hour, exhausting through one (1) stack (ID No. R9#2);

(b) Fourteen (14) permanent mold/die casting cells, identified as CC1 through CC14, with CC1 through CC3 constructed in 1987, CC4 and CC5 constructed in 1988, CC6 and CC7 constructed in 1989, CC8 through CC13 constructed in 1994, and CC14 constructed in 2001, with CC1 through CC8 each equipped with three (3) electric resistance furnaces and two (2) natural gas-fired mold heaters each with a maximum heat input capacity of 0.394 MMBtu per hour (DT1 through DT16), CC9 through CC13 each equipped with two (2) electric resistance furnaces and two (2) natural gas-fired mold heaters each with a maximum heat input capacity of 0.394 MMBtu per hour (DT17 through DT26), and CC14 equipped with four (4) electric resistance furnaces and two (2) natural gas-fired mold heaters each with a maximum heat input capacity of 0.394 MMBtu per hour (DT27 and DT28), all exhausting through seven (7) area roof vents (ID Nos. R4#2, R4#3, R4#4, R4#6, R4#9, R8#2, and R8#3). CC1 through CC8 and CC10 through CC13 can also melt aluminum at a maximum combined throughput rate of 5,186.16 pounds per hour, and CC9 and CC14 can also melt aluminum at a maximum combined throughput rate of 1,728.72 pounds per hour. All casting cells combined have a maximum flux usage rate of 282 pounds per day.

(c) Eight (8) natural gas-fired heat treat ovens, identified as HT1, HT2, HT3, HT5, HT6, HT7, HT8, and HT9, with HT1 through HT3 and HT5 through HT7 constructed in 1994, and HT8 and HT9 constructed in 2001, with HT1 through HT3 and HT5 through HT7 each having a maximum heat input capacity of 0.75 MMBtu per hour and HT8 and HT9 each having a maximum heat input capacity of 0.80 MMBtu per hour, each exhausting through one (1) stack (ID Nos. R3#33, R7#11, R7#10, R7#8, R7#9, R7#7, R7#53, and R3#34, respectively);

(d) One (1) rapid prototype operation, identified as RPT, for research and development, consisting of one (1) electric resistance furnace with a maximum metal throughput of 54 pounds per day, and one (1) prototype shell/core machine (PT) with a maximum resin coated sand usage rate of 500 pounds per year, equipped with one (1) natural gas-fired heater with a maximum heat input capacity of 0.06 MMBtu per hour, exhausting through one (1) duct exhaust wall fan (ID No. RPTW-1);

(e) Two (2) die prep tables, identified as DP1 and DP2, constructed in 1987, each equipped with one (1) natural gas-fired heater each with a maximum heat input capacity of 0.40 MMBtu per hour, exhausting through one (1) wall fan (ID No. DPW-1);

(f) Ten (10) machine lines, identified as MCL-1 through MCL-10, with MCL-1 and MCL-2 constructed in 1987, MCL-3 constructed in 1989, MCL-4 constructed in 1990, MCL-5 and MCL-6 constructed in 1995, MCL-7 constructed in 1994, MCL-8 and MCL-9 constructed in 2001, and MCL-10 constructed in 2004, with MCL-1 through MCL-9 having a maximum aged piston throughput rate of 533.3 pounds per hour, and MCL-10 having a maximum aged piston throughput rate of 450 pounds per hour, all using a water based coolant during machining, all exhausting through general plant ventilation;

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

Emission Limitations and Standards

D.1.1 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the reverberatory melt furnace (RF1), each of the casting cells (CC1 through CC14), each of the heat treat ovens (HT1 through HT3 and HT5 through HT9), and the rapid prototype operation (RPT) shall not exceed 0.03 grain per dry standard cubic foot of exhaust air.

D.1.2 Secondary Aluminum NESHAP [40 CFR 63, Subpart RRR]

The reverberatory melt furnace and the casting cells shall only melt clean charge, customer returns, or internal scrap as defined under 40 CFR 63.1503. Therefore, the requirements of 40 CFR 63, Subpart RRR do not apply.

D.1.3 Flux usage limit [326 IAC 2-2]

(a) The input of all solid flux to the reverberatory melt furnace shall not exceed 46,720 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The input of metal to the reverberatory melt furnace shall not exceed 24,528 tons per 12 consecutive month period, with compliance determined at the end of each month.

(c) The input of solid flux to the fourteen (14) permanent mold/die casting cells shall not exceed 102,930 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) The input of metal to the fourteen (14) permanent mold/die casting cells shall not exceed 30,287 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(e) Emissions of PM from the reverberatory melt furnace shall not exceed 0.912 pound per ton of metal and flux throughput.

(f) Emissions of PM10 from the reverberatory melt furnace shall not exceed 0.9856 pound per ton of metal and flux throughput.

(g) Emissions of PM from metal melting in the fourteen (14) permanent mold/die casting cells shall not exceed 1.9 pounds per ton of metal throughput.

(h) Emissions of PM10 from metal melting in the fourteen (14) permanent mold/die casting cells shall not exceed 1.7 pounds per ton of metal throughput.

(i) Emissions of PM from fluxing in the fourteen (14) permanent mold/die casting cells shall not exceed 180 pounds per ton of flux throughput.

(j) Emissions of PM10 from fluxing in the fourteen (14) permanent mold/die casting cells shall not exceed 340 pounds per ton of flux throughput.

This will ensure that PM and PM10 emissions from the source do not exceed 100 tons per year so that the requirements of 326 IAC 2-2 (PSD) do not apply.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-1.1-11]

During the period between May 2007 and November 2007, in order to demonstrate compliance with Condition D.1.1 and D.1.3, the Permittee shall perform PM and PM-10 testing for the reverberatory melt furnace including fluxing operations utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

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

D.1.5 Record Keeping Requirements

(a) To document compliance with Condition D.1.3, the Permittee shall maintain monthly records of the metal throughput and flux usages for the one (1) reverberatory melt furnace and each of the fourteen (14) permanent mold/die casting cells.

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

D.1.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an “authorized individual” as defined by 326 IAC 2-1.1-1.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(g) One (1) Belco phosphate wash line, identified as PWL-1, constructed in 1993, equipped with four (4) natural gas-fired stage heaters, identified as Stage 1, Stage 3, Stage 4, and Stage 6 heaters, with maximum heat input capacities of 0.70, 0.40, 1.3, and 0.30 MMBtu per hour, respectively, and one (1) natural gas-fired drying oven, identified as the Drying Oven, with a maximum heat input capacity of 0.8 MMBtu per hour, processing a maximum of 1200 pistons per hour, with Stage 1 heater exhausting through stack R7#49, Stage 3 heater exhausting through stack R7#45, Stage 4 heater exhausting through stack R7#46, Stage 6 heater exhausting through stack R7#44, and the drying oven exhausting through stack R7#42;

(h) One (1) pad print skirt coat line, identified as SPC-1, constructed in 1993, utilizing a roll coating application method, coating a maximum of 900 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.5 and 0.8 MMBtu per hour, respectively, exhausting through four (4) stacks (ID Nos. R7#35, R7#34, R7#33, and R7#32);

(i) One (1) Niagara phosphate wash line, identified as PWL-2, constructed in 1999, equipped with four (4) natural gas-fired stage heaters, identified as Stage 1, Stage 2, Stage 4, and Stage 6 heaters, with maximum heat input capacities of 0.83, 0.235, 0.44, and 0.235 MMBtu per hour, respectively, and one (1) natural gas-fired drying oven, identified as the Drying Oven, with a maximum heat input capacity of 0.4 MMBtu per hour, processing a maximum of 1200 pistons per hour, with Stage 1, 2, 4, and 6 heaters exhausting through stack R7#51, and the drying oven exhausting through stack R7#50. There is an additional stack exhaust for system water vapor (ID R7#52);

(j) One (1) screen print skirt coat line, identified as SPC-2, constructed in 1999, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R7#39, R7#38, and R7#37);

(k) One (1) Niagara phosphate wash line, identified as PWL-3, constructed in 2002, equipped with one (1) natural gas-fired boiler and one (1) natural gas-fired drying oven, with maximum heat input capacities of 1.3 and 0.4 MMBtu per hour, respectively, processing a maximum of 1200 pistons per hour, with the boiler exhausting through stack R13#7, the drying oven exhausting through stack R13#9, and the wash line exhausting through stack R13#6;

(l) One (1) screen print skirt coat line, identified as SC-3, constructed in 2002, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R13#10, R13#11, and R13#12);

(m) One (1) Niagara phosphate wash line, identified as PWL-4, constructed in 2002, equipped with one (1) natural gas-fired boiler and one (1) natural gas-fired drying oven, with maximum heat input capacities of 1.3 and 0.4 MMBtu per hour, respectively, processing a maximum of 1200 pistons per hour, with the boiler exhausting through stack R13#7, the drying oven exhausting through stack R13#14, and the wash line exhausting through stack R13#13;

(n) One (1) skirt coat line, identified as SC-4, constructed in 2002, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R13#15, R13#16, and R13#17);

(o) Four (4) anodizing lines, identified as A5, A6, A7, and A8, with A5 constructed in 2002, and A6, A7, and A8, constructed in 2004, each using a caustic soda (alkaline) wash and a sulfuric/oxalic acid solution, each exhausting through one (1) stack (ID Nos. R13#5, R13#18, R13#19, and R13#20). Line A5 processes a maximum of 480 pistons per hour and Lines A6, A7, and A8 each process a maximum of 600 pistons per hour.

(p) One (1) Assembly Line 1 pin fit and piston marking operation, identified as WPS-1, constructed in 1995, consisting of the pin fit marking process and the ink jet marking process. The pin fit process utilizes an air atomization spray coating application method, with dry filters for particulate matter control, coating a maximum of 600 pistons per hour, exhausting through one (1) stack (ID No. R7#30). The ink jet process utilizes an air atomization spray coating application method, coating a maximum of 360 pistons per hour, exhausting to the general plant ventilation;

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

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from each of the four (4) anodizing lines (A5, A6, A7, and A8) and the Assembly Line 1 pin fit and piston marking operation (WPS-1) shall not exceed 0.03 grain per dry standard cubic foot of exhaust air.

D.2.2 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a) (Particulate Emission Limitations for Sources of Indirect Heating) the particulate matter emissions from each of the 1.3 MMBtu per hour heat input boilers for the phosphate wash lines shall not exceed 0.6 pounds per MMBtu heat input.

Compliance Determination Requirements

There are no applicable compliance determination requirements.

Compliance Monitoring Requirements

There are no applicable compliance monitoring requirements.

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

There are no applicable record keeping or reporting requirements.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(q) Two (2) 30 gallon parts washers with lids for skirt coat equipment clean-up, identified as PW1 and PW2, constructed in 1994, with a combined VOC solvent throughput rate of 240 gallons per year, and two (2) 30 gallon maintenance parts washers with lids, identified as PW3 and PW4, constructed in 1996, with a mineral spirit cleaning agent throughput rate of 180 gallons per year and an alkaline cleaning agent throughput rate of 180 gallons per year. The one (1) parts washer for the skirt coat equipment clean-up, PW1, has a remote solvent reservoir and the other three (3) parts washers do not have a remote solvent reservoir;

(r) One (1) Tin plate line, identified as TP-1, constructed in 1989, processing pistons at a maximum rate of 1300 pounds per hour, using a sodium stannate solution bath, exhausting through one (1) stack (ID No. TPS-1) and equipped with one (1) natural gas-fired hot water heater, identified as WBH-1, with a maximum heat input capacity of 0.225 MMBtu per hour, exhausting through one (1) stack (ID No. TPS-2);

(s) One (1) assembly line, identified as Assembly Line 2, constructed in 1999, consisting of conveyor, piston marking system, pin and ring groove oiling system, ring installers, wrist pin inserter, quality control/inspection equipment (ring, pin and visual) and tray loader robot, processing a maximum of 750 pistons per hour, exhausting to the general plant ventilation;

(t) One (1) assembly line, identified as Assembly Line 3, constructed in 2001, consisting of ring expanders, inspection areas, wrist pin installation, piston data marker, pin lube, and two (2) pin marker stations, processing a maximum of 770 pistons per hour, exhausting to the general plant ventilation;

(u) One (1) assembly line, identified as Assembly Line 4, constructed in 2001, consisting of inspection areas, wrist pin installation, piston data marker, pin lube, and a pin marker, processing a maximum of 770 pistons per hour, exhausting to the general plant ventilation;

(v) One (1) assembly line, identified as Assembly Line 5, constructed in 2004, consisting of a tray conveyor, tray wrist pin loader (2 stations), marking system (not yet installed), quality control inspection station and tray label system (label laser printer), processing a maximum of 600 pistons per hour, exhausting to the general plant ventilation;

(w) One (1) assembly line, identified as Assembly Line 6, constructed in 2003, consisting of inspection areas, wrist pin installation, piston data marker, pin lube, and a pin marker, processing a maximum of 600 pistons per hour, exhausting to the general plant ventilation;

(x) Two (2) natural gas-fired sanitary water heaters, identified as WH1 and WH2, both constructed in 1993, each with a maximum heat input capacity of 0.199 MMBtu per hour;

(y) Two (2) natural gas-fired makeup air units, identified as 87-MAU and 87-MAU2, constructed in 1987, with 87-MAU having a maximum heat input capacity of 0.6 MMBtu per hour and 87-MAU2 having a maximum heat input capacity of 3.17 MMBtu per hour;

(z) Four (4) natural gas-fired building heaters, identified as 87-RTU1a through 87-RTU4a, constructed in 1987, with 87-RTU1a having a maximum heat input capacity of 0.235 MMBtu per hour, 87-RTU2a having a maximum heat input capacity of 0.074 MMBtu per hour, 87-RTU3a having a maximum heat input capacity of 0.48 MMBtu per hour, and 87-RTU4a having a maximum heat input capacity of 0.231 MMBtu per hour;

(aa) Four (4) natural gas-fired building heaters, identified as 87-RTU1, 87-RTU3, 87-RTU4, and 87-RTU5, constructed in 1987, with 87-RTU1 having a maximum heat input capacity of 0.36 MMBtu per hour and 87-RTU3 through 87-RTU5 each having a maximum heat input capacity of 0.5 MMBtu per hour;

(bb) Five (5) natural gas-fired air handling units, identified as 94-AHU1 through 94-AHU5, constructed in 1994, each with a maximum heat input capacity of 0.777 MMBtu per hour;

(cc) One (1) natural gas-fired makeup air unit, identified as 94-MAU1, constructed in 1994, with a maximum heat input capacity of 6.5 MMBtu per hour;

(dd) Ten (10) natural gas-fired building heaters, identified as 94-UH10 through 94-UH19, constructed in 1994, each with a maximum heat input capacity of 0.1 MMBtu per hour;

(ee) Three (3) natural gas-fired building heaters, identified as 93-UH7 through 93-UH9, constructed in 1993, with 93-UH7 having a maximum heat input capacity of 0.09 MMBtu per hour and 93-UH8 and 93-UH9 each having a maximum heat input capacity of 0.13 MMBtu per hour;

(ff) Eight (8) natural gas-fired building heaters, identified as 00-RTU1 through 00-RTU8, constructed in 2000, with 00-RTU1 through 00-RTU4 each having a maximum heat input capacity of 0.636 MMBtu per hour, 00-RTU5 and 00-RTU6 each having a maximum heat input capacity of 0.328 MMBtu per hour, and 00-RTU7 and 00-RTU8 each having a maximum heat input capacity of 0.2 MMBtu per hour,

(gg) One (1) natural gas-fired building heater, identified as 00-MAU2, constructed in 2000, with a maximum heat input capacity of 4.95 MMBtu per hour;

(hh) One (1) natural gas-fired emergency generator, identified as GEN1, constructed in 2005, with a maximum heat input capacity of 0.4029 MMBtu per hour;

(ii) One (1) polycarbonate bead blasting unit, identified as Blast 1, to be installed in 2006, processing pistons at a maximum rate of 26.4 pounds per hour, with particulate emissions controlled by a HEPA filtration system, exhausting to the general plant ventilation.

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

Emission Limitations and Standards

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38OC) (one hundred degrees Fahrenheit (100OF));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38OC) (one hundred degrees Fahrenheit (100OF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38OC) (one hundred degrees Fahrenheit (100OF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9OC) (one hundred twenty degrees Fahrenheit (120OF)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.3.3 Particulate [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. Therefore, particulate emissions from the polycarbonate bead blasting unit, identified as Blast 1, which has a maximum process weight rate of 26.4 pounds per hour, shall not exceed 0.551 pounds per hour.

Compliance Determination Requirements

D.3.4 Particulate Control

In order to comply with condition D.3.3, the HEPA filtration system for particulate control shall be in operation and control emissions from the polycarbonate bead blasting unit, identified as Blast 1, at all times that the polycarbonate bead blasting unit, identified as Blast 1, is in operation.

Compliance Monitoring Requirements

There are no applicable compliance monitoring requirements.

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

There are no applicable record keeping or reporting requirements.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Quarterly Report

Company Name: Federal Mogul Corporation
Location: 3605 West Cleveland Road, South Bend, Indiana 46628
Permit No.: MSOP 141-13714-00065
Source: Reverberatory Melt Furnace (RF1)
Pollutant: PM and PM10
Limit: The input of all solid flux to the reverberatory melt furnace shall not exceed 46,720 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Solid Flux Usage This Month (tons)	Solid Flux Usage Previous 11 Months (tons)	12 Month Total Solid Flux Usage (tons)
Month 1			
Month 2			
Month 3			

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Quarterly Report

Company Name: Federal Mogul Corporation
Location: 3605 West Cleveland Road, South Bend, Indiana 46628
Permit No.: MSOP 141-13714-00065
Source: Reverberatory Melt Furnace (RF1)
Pollutant: PM and PM10
Limit: The input of metal to the reverberatory melt furnace shall not exceed 24,528 tons per 12 consecutive month period, with compliance determined at the end of each month.

Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Throughput This Month (tons)	Metal Throughput Previous 11 Months (tons)	12 Month Total Metal Throughput (tons)
Month 1			
Month 2			
Month 3			

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Quarterly Report

Company Name: Federal Mogul Corporation
Location: 3605 West Cleveland Road, South Bend, Indiana 46628
Permit No.: MSOP 141-13714-00065
Source: fourteen (14) permanent mold/die casting cells
Pollutant: PM and PM10
Limit: The input of solid flux to the fourteen (14) permanent mold/die casting cells shall not exceed 102,930 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Solid Flux Usage This Month (tons)	Solid Flux Usage Previous 11 Months (tons)	12 Month Total Solid Flux Usage (tons)
Month 1			
Month 2			
Month 3			

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section

Quarterly Report

Company Name: Federal Mogul Corporation
Location: 3605 West Cleveland Road, South Bend, Indiana 46628
Permit No.: MSOP 141-13714-00065
Source: fourteen (14) permanent mold/die casting cells
Pollutant: PM and PM10
Limit: The input of metal to the fourteen (14) permanent mold/die casting cells shall not exceed 30,287 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Throughput This Month (tons)	Metal Throughput Previous 11 Months (tons)	12 Month Total Metal Throughput (tons)
Month 1			
Month 2			
Month 3			

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

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

Company Name:	**Federal Mogul Corporation**
Address:	**3605 West Cleveland Road**
City:	**South Bend, Indiana 46628**
Phone #:	**(574) 272-5900**
MSOP #:	**141-13714-00065**

I hereby certify that Federal Mogul Corporation is
☐ still in operation.
☐ no longer in operation.

I hereby certify that Federal Mogul Corporation is
☐ in compliance with the requirements of MSOP 141-13714-00065.
☐ not in compliance with the requirements of MSOP 141-13714-00065.

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 - 317 233-5967

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

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

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMI 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: _____/_____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ 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:

_____
_____

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a
Minor Source Operating Permit

Source Name:	Federal Mogul Corporation
Source Location:	3605 West Cleveland Road, South Bend, Indiana 46628
County:	St. Joseph
Operation Permit No.:	141-13714-00065
SIC Code:	3592
Permit Reviewer:	Trish Earls/EVP

On April 4, 2006, the Office of Air Quality (OAQ) had a notice published in the South Bend Tribune, South Bend, Indiana, stating that Federal Mogul Corporation had applied for a Minor Source Operating Permit (MSOP) to operate a secondary aluminum foundry manufacturing automotive pistons. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On May 3, 2006, Federal Mogul Corporation submitted comments on the proposed permit. The summary of the comments and corresponding responses is as follows (additions in bold, deletions in ~~strikeout~~):

Comment #1

Page 4 of 33, Section A.1, General Source Phone: The new area code for the South Bend area is now: 574.

Response #1

Section A.1 is revised as follows:

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 secondary aluminum foundry operation manufacturing automotive pistons.

Authorized Individual:	Plant Manager
Source Address:	3605 West Cleveland Road, South Bend, Indiana 46628
Mailing Address:	3605 West Cleveland Road, South Bend, Indiana 46628
General Source Phone:	~~(219)~~ **(574)** 272-5900
SIC Code:	3592
County Location:	St. Joseph
Source Location Status:	Basic Nonattainment area for the 8-hour ozone standard Attainment area for all other criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

Comment #2

Page 4 of 33, Section A.2: item (a), the reverb melt furnace has 3 burners with a combined capacity of 6.0 million Btu per hour (or 2.0 MMBtu per hour each).

Response #2

Item (a) of section A.2 is revised as shown below. This description has also been revised in section D.1 in the same manner.

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

(a) One (1) reverberatory melt furnace, identified as RF1, constructed in 1994, and modified in 2002, with a maximum metal throughput rate of 5,600 pounds per hour, a maximum ladle dross and bath dross flux usage rate of 120 pounds per day and a maximum maintenance wall flux usage rate of 8.0 pounds per day, equipped with ~~one (1)~~ **three (3)** natural gas-fired burner**s, each** with a maximum heat input capacity of ~~6.0~~ **2.0** million British thermal units (MMBtu) per hour, exhausting through one (1) stack (ID No. R9#2);

Comment #3

Page 5 and 6 of 33, Section A.2: items (i), (m) and (k), the correct spelling for the phosphate lines should be: Niagara.

Response #3

Items (i), (k), and (m) under section A.2 of the MSOP are revised as shown below. These descriptions have also been revised in section D.2 in the same manner.

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

***

(i) One (1) Niag**a**ra phosphate wash line, identified as PWL-2, constructed in 1999, equipped with four (4) natural gas-fired stage heaters, identified as Stage 1, Stage 2, Stage 4, and Stage 6 heaters, with maximum heat input capacities of 0.83, 0.235, 0.44, and 0.235 MMBtu per hour, respectively, and one (1) natural gas-fired drying oven, identified as the Drying Oven, with a maximum heat input capacity of 0.4 MMBtu per hour, processing a maximum of 1200 pistons per hour, with Stage 1, 2, 4, and 6 heaters exhausting through stack R7#51, and the drying oven exhausting through stack R7#50. There is an additional stack exhaust for system water vapor (ID R7#52);

(j) One (1) screen print skirt coat line, identified as SPC-2, constructed in 1999, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R7#39, R7#38, and R7#37);

(k) One (1) Niag**a**ra phosphate wash line, identified as PWL-3, constructed in 2002, equipped with one (1) natural gas-fired boiler and one (1) natural gas-fired drying oven, with maximum heat input capacities of 1.3 and 0.4 MMBtu per hour, respectively, processing a maximum of 1200 pistons per hour, with the boiler exhausting through stack R13#7, the drying oven exhausting through stack R13#9, and the wash line exhausting through stack R13#6;

(l) One (1) screen print skirt coat line, identified as SC-3, constructed in 2002, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R13#10, R13#11, and R13#12);

(m) One (1) Niag**a**ra phosphate wash line, identified as PWL-4, constructed in 2002, equipped with one (1) natural gas-fired boiler and one (1) natural gas-fired drying oven, with maximum heat input capacities of 1.3 and 0.4 MMBtu per hour, respectively, processing a maximum of 1200 pistons per hour, with the boiler exhausting through stack R13#7, the drying oven exhausting through stack R13#14, and the wash line exhausting through stack R13#13;

Comment #4

Page 6 of 33, Section A.2 (p): please include the process description of Assembly 1 along with the WPS-1 identification.

Response #4

Item (p) under Section A.2 is revised as shown below. This description has also been revised in section D.2 in the same manner. Also, condition D.2.1 has been revised to reflect the revised identification of the piston marking operation.

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

***

(p) One (1) **Assembly Line 1 pin fit and** piston marking operation, identified as WPS-1, constructed in 1995, consisting of the pin fit **marking** process and the ink jet **marking** process. The pin fit process utilizes an air atomization spray coating application method, with dry filters for particulate matter control, coating a maximum of 600 pistons per hour, exhausting through one (1) stack (ID No. R7#30). The ink jet process utilizes an air atomization spray coating application method, coating a maximum of 360 pistons per hour, exhausting to the general plant ventilation;

D.2.1 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from each of the four (4) anodizing lines (A5, A6, A7, and A8) and the **Assembly Line 1 pin fit and** piston marking operation (WPS-1) shall not exceed 0.03 grain per dry standard cubic foot of exhaust air.

Comment #5

FMSB's Assembly 2 operation: (same as item u) but with a 750 piston per hour process rate, is not included in the listing of processes for the facility. This process was installed in the year 1999. Also, revise Assembly Line 5 to more accurately describe the operation. The descriptions should read as follows:

Assembly 2, consisting of conveyor, piston marking system, pin and ring groove oiling system, ring installers, wrist pin inserter, quality control/inspection equipment (ring, pin and visual) and tray loader robot.

Assembly 5, consisting of tray conveyor, tray wrist pin loader (2 stations), marking system (not yet installed), quality control inspection station and tray label system (label laser printer).

Response #5

Since Assembly Line 2 includes a piston marking operation as in Assembly Lines 3 and 4, VOC emission calculations from the piston marking operation have been included in the emission calculations. Since particulate emissions from Assembly Line 2 are negligible, the requirements of 326 IAC 6-3-2 were not included in the permit for Assembly Line 2 because potential emissions are less than 0.551 pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), this operation is exempt from 326 IAC 6-3. The description for Assembly Line 2 has been added to Section A.2 and the description for Assembly Line 5 has been revised in Section A.2 as follows:

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

***

(s) One (1) assembly line, identified as Assembly Line 2, constructed in 1999, consisting of conveyor, piston marking system, pin and ring groove oiling system, ring installers, wrist pin inserter, quality control/inspection equipment (ring, pin and visual) and tray loader robot, processing a maximum of 750 pistons per hour, exhausting to the general plant ventilation;

~~(u)~~**(v)** One (1) assembly line, identified as Assembly Line 5, constructed in 2004, consisting of ~~wrist pin installation~~ **a tray conveyor, tray wrist pin loader (2 stations), marking system (not yet installed), quality control inspection station and tray label system (label laser printer)**, processing a maximum of 600 pistons per hour, exhausting to the general plant ventilation;

Items (s) through (ii) of section A.2 have been re-lettered accordingly. These descriptions have also been included in the Facility Description box for section D.3.

Comment #6

Page 7 of 33, Section A.2, (r): please remove the “piston prep solution” notation. This reference was for a formerly utilized alkaline material that is no longer used at FMSB.

Response #6

Item (r) of section A.2 is revised as follows:

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

***

(r) One (1) Tin plate line, identified as TP-1, constructed in 1989, processing pistons at a maximum rate of 1300 pounds per hour, using ~~an alkaline piston prep solution bath and~~ **a** sodium stannate solution bath, exhausting through one (1) stack (ID No. TPS-1) and equipped with one (1) natural gas-fired hot water heater, identified as WBH-1, with a maximum heat input capacity of 0.225 MMBtu per hour, exhausting through one (1) stack (ID No. TPS-2);

This description has also been revised in section D.3 in the same manner.

Comment #7

Page 7 of 33, Section A.2, (w): one (1) 0.199 water heater for sanitary use; please be advised that FMSB does have two (2) 0.199 water heaters for employee sanitary use.

Response #7

Item (w), now item (x), of section A.2 is revised as shown below. This description has also been revised in section D.3 in the same manner. Also, the emission calculations in Appendix A to the Technical Support Document have been revised to include the additional water heater.

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

***

~~(w)~~**(x)** ~~One (1)~~ **Two (2)** natural gas-fired sanitary water heater**s**, identified as WH1 **and WH2**, **both** constructed in 1993, **each** with a maximum heat input capacity of 0.199 MMBtu per hour;

Comment #8

Technical Support Document, Page 8 of 16, Potential to Emit of the Source Before Controls, second table for Hazardous Air Pollutants (HAPS) and related Appendices (1 and 9 of 11): Please remove Copper from the list of HAP compounds.

Response #8

Since copper is not a listed HAP under section 112 of the Clean Air Act, it should not be included in the source's potential to emit of HAPs.

The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. Therefore, the Potential to Emit of the Source Before Controls section of the TSD is revised as documented in this addendum to the TSD as follows:

Potential to Emit of the Source Before Controls

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

Pollutant	Potential to Emit (tons/yr)
PM	52.5
PM-10	56.2
SO_2	3.9
VOC	13.0
CO	24.2
NO_x	29.4

HAPs	Potential to Emit (tons/yr)
HCl	Less than 10
Hexane	Less than 10
Glycol Ethers	Less than 10

HAPs	Potential to Emit (tons/yr)
Ethylene Glycol	Less than 10
MEK	Less than 10
Methanol	Less than 10
Nickel	Less than 10
Manganese	Less than 10
Lead	Less than 10
Chromium	Less than 10
~~Copper~~	~~Less than 10~~
Total	Less than 25

Additionally, the emission calculation spreadsheets in Appendix A of the TSD are revised so that copper is not included with HAP emissions.

Comment #9

Page 14 of 16, 326 IAC (Miscellaneous Metal Coating), second entry; please remove the "solvent" notation. The Tin Plate process utilizes inorganic compounds but no solvents (organic or inorganic) are utilized at this process.

Response #9

As stated above, the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. Therefore, the discussion of the applicability of 326 IAC 8-2-9 under the State Rule Applicability – Individual Facilities section of the TSD is revised as documented in this addendum to the TSD as follows:

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

The four (4) skirt coating lines, identified as SPC-1, SPC-2, SC3, and SC4 and the **Assembly Line 1 pin fit and** piston marking operation identified as WPS-1, are not subject to the requirements of this rule because they were each constructed after 1990 and have actual and potential VOC emissions of less than 15 pounds per day. Therefore, they do not meet the applicability criteria pursuant to 326 IAC 8-2-1.

The tin plate line, identified as TP-1, uses **only** inorganic ~~solvents~~ **compounds** and is not subject to this rule because there are no VOC emissions from the tin plating process.

Upon further review IDEM, OAQ has made the following changes to the MSOP (additions in bold, deletions in ~~strikeout~~):

1. Condition B.1, Permit No Defense, has been removed. A decision has been made to move the statements of this condition to the cover page.

~~B.1 Permit No Defense [IC 13]~~

~~This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.~~

The following paragraph has been added to the cover page of the permit as follows:

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.

2. Condition B.6, now re-numbered B.5, Annual Notification was revised to reflect the requirements of 326 IAC 2-6.1-5(a)(5).

B.~~6~~**5** 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) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.~~

~~(c)~~ **(b)** The annual notice shall ~~cover the time period from January 1 to December 31 of the previous year, and shall~~ be submitted in the format attached no later than March 1 of each year to:

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

~~(d)~~ **(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.

3. Upon further review, IDEM has decided to remove (d) concerning nonroad engines from B.8 Permit Revision. 40 CFR 89, Appendix A specifically indicates that states are not precluded from regulating the use and operation of nonroad engines, such as regulations on hours of usage, daily mass emission limits, or sulfur limits on fuel; nor are permits regulating such operations precluded, once the engine is no longer new.

B.~~8~~**7** Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) Permit revisions are governed by the requirements of 326 IAC 2-6.1-6.

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

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

Any such application shall be certified by an “authorized individual” as defined by 326 IAC 2-1.1-1.

(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)]

~~(d) No permit amendment or modification is required for the addition, operation or removal of a non-road engine, as defined in 40 CFR 89.2.~~

4. Condition B.10, now re-numbered B.9, has been revised as follows:

B.~~10~~**9** Transfer of Ownership or Operation**al Control** [326 IAC 2-6.1-6~~(d)(3)~~]

~~Pursuant to [326 IAC 2-6.1-6(d)(3)]:~~

~~(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch within thirty (30) days of the change.~~

~~(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).~~

~~(c) IDEM, OAQ, shall issue a revised permit.~~

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

(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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

(c) The Permittee may implement 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)]

5. The following conditions have been added to section B as follows:

B.12 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.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to 141-13714-00065 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.

6. Condition C.5 has been revised to remove the language regarding testing on new units since there are no new emission units being added:

C.5 Performance Testing [326 IAC 3-6]

(a) ~~Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval.~~ All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14 days) prior to the actual date. **The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).**

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ ~~(and local agency)~~ not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, ~~(and local agency),~~ 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.

7. The signature box on the front page of the MSOP has been updated to reflect the name of the new Permits Branch Chief who will be signing the final permit.

Operation Permit No.: MSOP 141-13714-00065	
Issued by: ~~Paul Dubenetzky, Assistant Commissioner~~ **Nisha Sizemore, Chief** **Permits Branch** Office of Air Quality	Issuance Date: Expiration Date:

8. All changes to the emission calculations mentioned above have been incorporated into the emission calculations included as Appendix A of this addendum to the TSD (11 pages).

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name:	**Federal Mogul Corporation**
Source Location:	**3605 West Cleveland Road, South Bend, IN 46628**
County:	**St. Joseph**
SIC Code:	**3592**
Operation Permit No.:	**141-13714-00065**
Permit Reviewer:	**Trish Earls/EVP**

The Office of Air Quality (OAQ) has reviewed an application from Federal Mogul Corporation relating to the operation of a secondary aluminum foundry operation manufacturing automotive pistons.

Permitted Emission Units and Pollution Control Equipment

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

(a) One (1) reverberatory melt furnace, identified as RF1, constructed in 1994, and modified in 2002, with a maximum metal throughput rate of 5,600 pounds per hour, a maximum ladle dross and bath dross flux usage rate of 120 pounds per day and a maximum maintenance wall flux usage rate of 8.0 pounds per day, equipped with one (1) natural gas-fired burner with a maximum heat input capacity of 6.0 million British thermal units (MMBtu) per hour, exhausting through one (1) stack (ID No. R9#2);

(b) Fourteen (14) permanent mold/die casting cells, identified as CC1 through CC14, with CC1 through CC3 constructed in 1987, CC4 and CC5 constructed in 1988, CC6 and CC7 constructed in 1989, CC8 through CC13 constructed in 1994, and CC14 constructed in 2001, with CC1 through CC8 each equipped with three (3) electric resistance furnaces and two (2) natural gas-fired mold heaters each with a maximum heat input capacity of 0.394 MMBtu per hour (DT1 through DT16), CC9 through CC13 each equipped with two (2) electric resistance furnaces and two (2) natural gas-fired mold heaters each with a maximum heat input capacity of 0.394 MMBtu per hour (DT17 through DT26), and CC14 equipped with four (4) electric resistance furnaces and two (2) natural gas-fired mold heaters each with a maximum heat input capacity of 0.394 MMBtu per hour (DT27 and DT28), all exhausting through seven (7) area roof vents (ID Nos. R4#2, R4#3, R4#4, R4#6, R4#9, R8#2, and R8#3). CC1 through CC8 and CC10 through CC13 can also melt aluminum at a maximum combined throughput rate of 5,186.16 pounds per hour, and CC9 and CC14 can also melt aluminum at a maximum combined throughput rate of 1,728.72 pounds per hour. All casting cells combined have a maximum flux usage rate of 282 pounds per day.

(c) Eight (8) natural gas-fired heat treat ovens, identified as HT1, HT2, HT3, HT5, HT6, HT7, HT8, and HT9, with HT1 through HT3 and HT5 through HT7 constructed in 1994, and HT8 and HT9 constructed in 2001, with HT1 through HT3 and HT5 through HT7 each having a maximum heat input capacity of 0.75 MMBtu per hour and HT8 and HT9 each having a maximum heat input capacity of 0.80 MMBtu per hour, each exhausting through one (1) stack (ID Nos. R3#33, R7#11, R7#10, R7#8, R7#9, R7#7, R7#53, and R3#34, respectively);

(d) One (1) rapid prototype operation, identified as RPT, for research and development, consisting of one (1) electric resistance furnace with a maximum metal throughput of 54 pounds per day, and one (1) prototype shell/core machine (PT) with a maximum resin coated sand usage rate of 500 pounds per year, equipped with one (1) natural gas-fired heater with a maximum heat input capacity of 0.06 MMBtu per hour, exhausting through one (1) duct exhaust wall fan (ID No. RPTW-1);

(e) Two (2) die prep tables, identified as DP1 and DP2, constructed in 1987, each equipped with one (1) natural gas-fired heater each with a maximum heat input capacity of 0.40 MMBtu per hour, exhausting through one (1) wall fan (ID No. DPW-1);

(f) Ten (10) machine lines, identified as MCL-1 through MCL-10, with MCL-1 and MCL-2 constructed in 1987, MCL-3 constructed in 1989, MCL-4 constructed in 1990, MCL-5 and MCL-6 constructed in 1995, MCL-7 constructed in 1994, MCL-8 and MCL-9 constructed in 2001, and MCL-10 constructed in 2004, with MCL-1 through MCL-9 having a maximum aged piston throughput rate of 533.3 pounds per hour, and MCL-10 having a maximum aged piston throughput rate of 450 pounds per hour, all using a water based coolant during machining, all exhausting through general plant ventilation;

(g) One (1) Belco phosphate wash line, identified as PWL-1, constructed in 1993, equipped with four (4) natural gas-fired stage heaters, identified as Stage 1, Stage 3, Stage 4, and Stage 6 heaters, with maximum heat input capacities of 0.70, 0.40, 1.3, and 0.30 MMBtu per hour, respectively, and one (1) natural gas-fired drying oven, identified as the Drying Oven, with a maximum heat input capacity of 0.8 MMBtu per hour, processing a maximum of 1200 pistons per hour, with Stage 1 heater exhausting through stack R7#49, Stage 3 heater exhausting through stack R7#45, Stage 4 heater exhausting through stack R7#46, Stage 6 heater exhausting through stack R7#44, and the drying oven exhausting through stack R7#42;

(h) One (1) pad print skirt coat line, identified as SPC-1, constructed in 1993, utilizing a roll coating application method, coating a maximum of 900 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.5 and 0.8 MMBtu per hour, respectively, exhausting through four (4) stacks (ID Nos. R7#35, R7#34, R7#33, and R7#32);

(i) One (1) Niagra phosphate wash line, identified as PWL-2, constructed in 1999, equipped with four (4) natural gas-fired stage heaters, identified as Stage 1, Stage 2, Stage 4, and Stage 6 heaters, with maximum heat input capacities of 0.83, 0.235, 0.44, and 0.235 MMBtu per hour, respectively, and one (1) natural gas-fired drying oven, identified as the Drying Oven, with a maximum heat input capacity of 0.4 MMBtu per hour, processing a maximum of 1200 pistons per hour, with Stage 1, 2, 4, and 6 heaters exhausting through stack R7#51, and the drying oven exhausting through stack R7#50. There is an additional stack exhaust for system water vapor (ID R7#52);

(j) One (1) screen print skirt coat line, identified as SPC-2, constructed in 1999, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R7#39, R7#38, and R7#37);

(k) One (1) Niagra phosphate wash line, identified as PWL-3, constructed in 2002, equipped with one (1) natural gas-fired boiler and one (1) natural gas-fired drying oven, with maximum heat input capacities of 1.3 and 0.4 MMBtu per hour, respectively, processing a maximum of 1200 pistons per hour, with the boiler exhausting through stack R13#7, the drying oven exhausting through stack R13#9, and the wash line exhausting through stack R13#6;

(l) One (1) screen print skirt coat line, identified as SC-3, constructed in 2002, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R13#10, R13#11, and R13#12);

(m) One (1) Niagra phosphate wash line, identified as PWL-4, constructed in 2002, equipped with one (1) natural gas-fired boiler and one (1) natural gas-fired drying oven, with maximum heat input capacities of 1.3 and 0.4 MMBtu per hour, respectively, processing a maximum of 1200 pistons per hour, with the boiler exhausting through stack R13#7, the drying oven exhausting through stack R13#14, and the wash line exhausting through stack R13#13;

(n) One (1) skirt coat line, identified as SC-4, constructed in 2002, utilizing a flow coating application method, coating a maximum of 1200 pistons per hour, equipped with one (1) natural gas-fired preheat oven and one (1) natural gas-fired cure oven, with maximum heat input capacities of 0.4 and 0.8 MMBtu per hour, respectively, exhausting through three (3) stacks (ID Nos. R13#15, R13#16, and R13#17);

(o) Four (4) anodizing lines, identified as A5, A6, A7, and A8, with A5 constructed in 2002, and A6, A7, and A8, constructed in 2004, each using a caustic soda (alkaline) wash and a sulfuric/oxalic acid solution, each exhausting through one (1) stack (ID Nos. R13#5, R13#18, R13#19, and R13#20). Line A5 processes a maximum of 480 pistons per hour and Lines A6, A7, and A8 each process a maximum of 600 pistons per hour.

(p) One (1) piston marking operation, identified as WPS-1, constructed in 1995, consisting of the pin fit process and the ink jet process. The pin fit process utilizes an air atomization spray coating application method, with dry filters for particulate matter control, coating a maximum of 600 pistons per hour, exhausting through one (1) stack (ID No. R7#30). The ink jet process utilizes an air atomization spray coating application method, coating a maximum of 360 pistons per hour, exhausting to the general plant ventilation;

(q) Two (2) 30 gallon parts washers with lids for skirt coat equipment clean-up, identified as PW1 and PW2, constructed in 1994, with a combined VOC solvent throughput rate of 240 gallons per year, and two (2) 30 gallon maintenance parts washers with lids, identified as PW3 and PW4, constructed in 1996, with a mineral spirit cleaning agent throughput rate of 180 gallons per year and an alkaline cleaning agent throughput rate of 180 gallons per year. The one (1) parts washer for the skirt coat equipment clean-up, PW1, has a remote solvent reservoir and the other three (3) parts washers do not have a remote solvent reservoir;

(r) One (1) Tin plate line, identified as TP-1, constructed in 1989, processing pistons at a maximum rate of 1300 pounds per hour, using an alkaline piston prep solution bath and sodium stannate solution bath, exhausting through one (1) stack (ID No. TPS-1) and equipped with one (1) natural gas-fired hot water heater, identified as WBH-1, with a maximum heat input capacity of 0.225 MMBtu per hour, exhausting through one (1) stack (ID No. TPS-2);

(s) One (1) assembly line, identified as Assembly Line 3, constructed in 2001, consisting of ring expanders, inspection areas, wrist pin installation, piston data marker, pin lube, and two (2) pin marker stations, processing a maximum of 770 pistons per hour, exhausting to the general plant ventilation;

(t) One (1) assembly line, identified as Assembly Line 4, constructed in 2001, consisting of inspection areas, wrist pin installation, piston data marker, pin lube, and a pin marker, processing a maximum of 770 pistons per hour, exhausting to the general plant ventilation;

(u) One (1) assembly line, identified as Assembly Line 5, constructed in 2004, consisting of wrist pin installation, processing a maximum of 600 pistons per hour, exhausting to the general plant ventilation;

(v) One (1) assembly line, identified as Assembly Line 6, constructed in 2003, consisting of inspection areas, wrist pin installation, piston data marker, pin lube, and a pin marker, processing a maximum of 600 pistons per hour, exhausting to the general plant ventilation;

(w) One (1) natural gas-fired sanitary water heater, identified as WH1, constructed in 1993, with a maximum heat input capacity of 0.199 MMBtu per hour;

(x) Two (2) natural gas-fired makeup air units, identified as 87-MAU and 87-MAU2, constructed in 1987, with 87-MAU having a maximum heat input capacity of 0.6 MMBtu per hour and 87-MAU2 having a maximum heat input capacity of 3.17 MMBtu per hour;

(y) Four (4) natural gas-fired building heaters, identified as 87-RTU1a through 87-RTU4a, constructed in 1987, with 87-RTU1a having a maximum heat input capacity of 0.235 MMBtu per hour, 87-RTU2a having a maximum heat input capacity of 0.074 MMBtu per hour, 87-RTU3a having a maximum heat input capacity of 0.48 MMBtu per hour, and 87-RTU4a having a maximum heat input capacity of 0.231 MMBtu per hour;

(z) Four (4) natural gas-fired building heaters, identified as 87-RTU1, 87-RTU3, 87-RTU4, and 87-RTU5, constructed in 1987, with 87-RTU1 having a maximum heat input capacity of 0.36 MMBtu per hour and 87-RTU3 through 87-RTU5 each having a maximum heat input capacity of 0.5 MMBtu per hour;

(aa) Five (5) natural gas-fired air handling units, identified as 94-AHU1 through 94-AHU5, constructed in 1994, each with a maximum heat input capacity of 0.777 MMBtu per hour;

(bb) One (1) natural gas-fired makeup air unit, identified as 94-MAU1, constructed in 1994, with a maximum heat input capacity of 6.5 MMBtu per hour;

(cc) Ten (10) natural gas-fired building heaters, identified as 94-UH10 through 94-UH19, constructed in 1994, each with a maximum heat input capacity of 0.1 MMBtu per hour;

(dd) Three (3) natural gas-fired building heaters, identified as 93-UH7 through 93-UH9, constructed in 1993, with 93-UH7 having a maximum heat input capacity of 0.09 MMBtu per hour and 93-UH8 and 93-UH9 each having a maximum heat input capacity of 0.13 MMBtu per hour;

(ee) Eight (8) natural gas-fired building heaters, identified as 00-RTU1 through 00-RTU8, constructed in 2000, with 00-RTU1 through 00-RTU4 each having a maximum heat input capacity of 0.636 MMBtu per hour, 00-RTU5 and 00-RTU6 each having a maximum heat input capacity of 0.328 MMBtu per hour, and 00-RTU7 and 00-RTU8 each having a maximum heat input capacity of 0.2 MMBtu per hour,

(ff) One (1) natural gas-fired building heater, identified as 00-MAU2, constructed in 2000, with a maximum heat input capacity of 4.95 MMBtu per hour;

(gg) One (1) natural gas-fired emergency generator, identified as GEN1, constructed in 2005, with a maximum heat input capacity of 0.4029 MMBtu per hour;

(hh) One (1) polycarbonate bead blasting unit, identified as Blast 1, to be installed in 2006, processing pistons at a maximum rate of 26.4 pounds per hour, with particulate emissions controlled by a HEPA filtration system, exhausting to the general plant ventilation.

Note that potential emissions from this new unit are at exempt levels pursuant to 326 IAC 2-1.1-3; therefore, it is included with the permitted emission units. See Appendix A, page 10 of 11 for detailed calculations.

(ii) The following storage tanks:

(1) One (1) virgin coolant make-up tank, with a maximum storage capacity of 3500 gallons, constructed in 2002;
(2) One (1) dirty process water tank, with a maximum storage capacity of 6400 gallons;
(3) One (1) recovered coolant tank, with a maximum storage capacity of 1000 gallons;
(4) Four (4) oil tanks, each with a maximum storage capacity of 500 gallons;
(5) One (1) equalization tank, T1, with a maximum storage capacity of 9,297 gallons;
(6) One (1) spent acid tank, T2, with a maximum storage capacity of 6,470 gallons;
(7) One (1) bulk sodium hydroxide tank, T6, with a maximum storage capacity of 6,470 gallons;
(8) One (1) spent alkaline tank, T3, with a maximum storage capacity of 6,464 gallons;
(9) One (1) spare conical bottom tank, T4, with a maximum storage capacity of 1,183 gallons;
(10) One (1) wastewater treatment filter effluent transfer tank, T5, with a maximum storage capacity of 175 gallons;
(11) Four (4) reagent tanks, each with a maximum storage capacity of 500 gallons;
(12) Two (2) pH adjust tanks, N1 and N2, each with a maximum storage capacity of 2,094 gallons;
(13) One (1) polymer add tank, F1, with a maximum storage capacity of 454 gallons;
(14) One (1) sludge thickener tank with a maximum storage capacity of 5,911 gallons; and
(15) One (1) final pH adjust tank, N3, with a maximum storage capacity of 1,885 gallons.

Unpermitted Emission Units and Pollution Control Equipment

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

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Exemption No. 141-3215-00065, issued on November 5, 1993;

(b) Registration No. 141-3209-00065 issued on July 5, 1994; and

(c) Registration No. 141-3775-00065 issued on July 8, 1994.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{o}F)
R3#33	HT1	28.0	0.67	440	500
R3#34	HT9	28.0	0.5	330	495
R4#2	Casting cells	35.5	4.0	2500	83
R4#3	Casting cells	33.9	3.5	1860	83
R4#4	Casting cells	33.9	3.5	1860	83
R4#6	Casting cells	35.5	4.0	2500	86
R4#9	Casting cells	35.5	4.0	2500	86
R7#7	HT7	28.0	0.67	325	500
R7#8	HT5	28.0	0.67	325	500
R7#9	HT6	28.0	0.67	325	500
R7#10	HT3	28.0	0.67	440	500
R7#11	HT2	28.0	0.67	440	500
R7#30	Piston marking WPS-1	28.0	1.5	650	ambient
R7#32	SPC-1	34.0	1.5	1000	200
R7#33	SPC-1	34.0	0.5	315	500
R7#34	SPC-1	34.0	0.5	210	500
R7#35	SPC-1	34.0	1.5	1000	80
R7#37	SPC-2	34.0	1.5	5000	ambient
R7#38	SPC-2	34.0	1.0	1600	500
R7#39	SPC-2	34.0	0.67	800	500
R7#50	Drying oven for PWL-2	29.0	0.83	1350	296
R7#51	Stage 1, 2, 4, and 6 heaters for PWL-2	29.0	0.67	4800	114
R7#52	PWL-2 system water vapor exhaust	29.0	1.5	3200	93
R7#53	HT8	28.0	0.5	330	495
R8#2	Casting cells	36.4	4.3	2500	75
R8#3	Casting cells	36.4	4.3	2500	75
R9#2	RF1	Not known	Not known	23,783	383
R13#5	Anodizing Line A5	27.0	0.5	1.0	75
R13#6	PWL-3 Wash Line	27.0	2.0	3000	100
R13#7	Phosphate wash lines (PWL-3 and 4) boilers	27.0	0.5	200	225
R13#9	PWL-3 Dryer	27.0	0.75	500	200
R13#10	SC3 Preheat	27.0	1.0	500	225

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{o}F)
R13#11	SC3 Curing oven	27.0	1.0	1000	400
R13#12	SC3 Skirt Coat	27.0	1.5	3000	100
R13#13	PWL-4 Wash Line	27.0	0.75	3000	100
R13#14	PWL-4 Dryer	27.0	1.0	500	200
R13#15	SC4 Preheat	27.0	1.0	500	225
R13#16	SC4 Curing oven	27.0	1.0	1000	400
R13#17	SC4 Skirt Coat	27.0	1.5	3000	100
R13#18	Anodizing Line A6	27.5	0.5	80	82
R13#19	Anodizing Line A7	27.5	0.5	80	80
R13#20	Anodizing Line A8	27.5	0.5	80	80
R13#7	PWL-3 and PWL-4 Boilers	27.0	0.5	200	225
RPTW-1	Prototype Operation RPT	12.0	Wall fan	5000	90
DPW-1	Die Prep DP1	20.0	Wall fan	2600	180
TPS-2	Tin Plate Water Heater WBH-1	27.0	0.5	400	110

Recommendation

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

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

An application for the purposes of this review was received on December 28, 2000, with additional information received on March 19, 2001, November 14, 2001, February 4, 2002, November 11, 2002, October 1, 2004, June 9, 2005, January 11, 2006 and February 8, 2006.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 11)

Potential to Emit of the Source Before Controls

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

Pollutant	Potential to Emit (tons/yr)
PM	52.5
PM-10	56.2
SO_2	3.9
VOC	13.0
CO	24.2
NO_x	29.4

HAPs	Potential to Emit (tons/yr)
HCl	Less than 10
Hexane	Less than 10
Glycol Ethers	Less than 10
Ethylene Glycol	Less than 10
MEK	Less than 10
Methanol	Less than 10
Nickel	Less than 10
Manganese	Less than 10
Lead	Less than 10
Chromium	Less than 10
Copper	Less than 10
Total	Less than 25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants are less than 100 tons per year and the potential to emit of PM-10 and NOx are greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. An MSOP will be issued.

(b) Fugitive Emissions
Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM2.5	Attainment
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Basic Nonattainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) St. Joseph County has been classified as unclassifiable or attainment for PM2.5. 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 surrogate for PM2.5 emissions. See the State Rule Applicability for the source section.

(c) St. Joseph County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

(d) Fugitive Emissions
Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2 or 2-3, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	Less than 100
PM-10	Less than 100
SO_2	Less than 100
VOC	Less than 100
CO	Less than 100
NO_x	Less than 100
Single HAP	Less than 10
Combination HAPs	Less than 25

(a) This existing source is **not** a major stationary source because even though it is one of the 28 listed source categories, it does not emit 100 tons per year or greater of any regulated pollutants.

(b) This existing source is **not** a major stationary source because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater.

(c) These emissions were based on previous approvals issued to the source.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)
This existing source, including the emissions from this permit 141-13714-00065, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

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

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit for this source.

(b) The requirements of the New Source Performance Standard (NSPS), 326 IAC 12, (40 CFR 60.191, Subpart S (Primary Aluminum Reduction) are not included in the permit because the source does not perform primary aluminum reduction as defined in 40 CFR 60.191.

(c) The requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb) are not included in the permit for the storage tanks, all constructed after July 23, 1984, because each of the storage tanks at this source have maximum storage capacities of less than 75 cubic meters.

(d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit for this source.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production, 40 CFR 63.1500 through 63.1519, Subpart RRR, are not included in the permit because this source is not a secondary aluminum production facility as defined in 40 CFR 63.1503. Pursuant to 40 CFR 63.1503, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. This source only melts clean charge, customer returns, or internal scrap and does not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns, therefore, it is not a secondary aluminum production facility as defined in the rule.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20, (40 CFR 63.460 through 63.468, Subpart T) are not included in the permit for the parts washers because these units do not use a halogenated HAP cleaning solvent.

State Rule Applicability – Entire Source

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

This secondary aluminum production source, which is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, is not subject to the requirements of 326 IAC 2-2 (PSD). The potential to emit of all pollutants are less than 100 tons per year, therefore, this source is not a major PSD source. Although the potential to emit of all pollutants are less than 100 tons per year at maximum metal throughputs and flux usage rates, these maximum usage rates will be included as limits in the permit to ensure that PM and PM10 emissions from the source do not exceed 100 tons per year as follows:

(a) The input of all solid flux to the reverberatory melt furnace shall not exceed 46,720 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The input of metal to the reverberatory melt furnace shall not exceed 24,528 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) The input of solid flux to the fourteen (14) permanent mold/die casting cells shall not exceed 102,930 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) The input of metal to the fourteen (14) permanent mold/die casting cells shall not exceed 30,287 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(e) Emissions of PM from the reverberatory melt furnace shall not exceed 0.912 pound per ton of metal and flux throughput.

(f) Emissions of PM10 from the reverberatory melt furnace shall not exceed 0.9856 pound per ton of metal and flux throughput.

(g) Emissions of PM from metal melting in the fourteen (14) permanent mold/die casting cells shall not exceed 1.9 pounds per ton of metal throughput.

(h) Emissions of PM10 from metal melting in the fourteen (14) permanent mold/die casting cells shall not exceed 1.7 pounds per ton of metal throughput.

(i) Emissions of PM from fluxing in the fourteen (14) permanent mold/die casting cells shall not exceed 180 pounds per ton of flux throughput.

(j) Emissions of PM10 from fluxing in the fourteen (14) permanent mold/die casting cells shall not exceed 340 pounds per ton of flux throughput.

326 IAC 2-3 (Emission Offset)

St. Joseph County has been designated as nonattainment for the 8-hour ozone standard. However, since the potential to emit of VOC and NOx are each less than 100 tons per year, this source is a minor source under Emission Offset and is not subject to the requirements of this rule.

326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake or Porter counties, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1-2 (Opacity Limitations)

Pursuant to 326 IAC 5-1-1, because this source is located in St. Joseph County in the area north of Kern Road and east of Pine Road, it is subject to 326 IAC 5-1-2(2). Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

326 IAC 6-4 (Fugitive Dust Emissions)

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

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

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any new process or production unit, which in and of itself emits or has the potential to emit (PTE) 10 tons per year of any HAP or 25 tons per year of any combination of HAPs, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT). Each of the facilities at this source that have been constructed and/or permitted after July 27, 1997, have potential HAP emissions of less than 10 tons per year of any single HAP and less than 25 tons per year of any combination of HAPs, therefore, the requirements of 326 IAC 2-4.1-1 do not apply.

State Rule Applicability – Individual Facilities

326 IAC 6.5-1-2 (Particulate Emission Limitations)

Pursuant to 326 IAC 6.5-1-1, this source is subject to the limitations in section 2 of this rule because it is located in St. Joseph county and actual particulate matter emissions are greater than 10 tons per year and it is not a specifically listed source in the rule.

Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from facilities not limited by subsections (b), (c), (d), (e), (f), or (g) of 326 IAC 6.5-1-2 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf). Therefore, particulate matter emissions from each facility emitting particulate matter shall not exceed 0.03 gr/dscf. This includes the reverberatory melt furnace, identified as RF1, the fourteen (14) permanent mold/die casting cells, identified as CC1 through CC14, each of the heat treat ovens (HT1 through HT3 and HT5 through HT9), the rapid prototype operation (RPT), the four (4) anodizing lines, identified as A5, A6, A7, and A8, and the piston marking operation, identified as WPS-1.

The two (2) natural gas-fired boilers for the phosphate wash lines identified as PWL-3 and PWL-4, the one (1) natural gas-fired hot water heater, identified as WBH-1, and the two (2) natural gas-fired process water heaters, identified as WH1 and WH2, do not meet the definition of a fuel combustion steam generator as defined in 326 IAC 6.5-1-1.5 since they are only used to heat water for their associated processes and are not used to produce steam. Therefore, they are not subject to the particulate matter emission limitation in 326 IAC 6.5-1-2(b).

The polycarbonate bead blasting unit, identified as Blast 1, is not subject to this rule because this operation exhausts to the general plant ventilation and is not enclosed or vented through a stack, therefore, it would not be practical to measure emissions from this operation.

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

The two (2) natural gas-fired boilers for the phosphate wash lines identified as PWL-3 and PWL-4, which were constructed after September 21, 1983, are subject to 326 IAC 6-2-4. Pursuant to this rule, particulate emissions from indirect heating facilities constructed after September 21, 1983, shall be limited by the following equation:

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

Where: Pt = pounds of particulate matter emitted per million Btu heat input
Q = Total source maximum operating capacity rating in million Btu per hour heat input.

For the two (2) boilers for the phosphate wash lines, constructed in 2002, Pt is calculated as 0.85 pound particulate matter per million Btu heat input where Q is equal to 2.6 MMBtu per hour.

However, pursuant to 326 IAC 6-2-4(a), for Q less than 10 MMBtu per hour, Pt shall not exceed 0.6 pound particulate matter per million Btu heat input. Therefore, particulate matter emissions from each of the boilers for the phosphate wash lines shall not exceed 0.6 pound per million Btu heat input.

Based on the emission calculations on page 2 of 11 of Appendix A, potential particulate matter emissions from each of these facilities is less than the allowable emissions and these units are in compliance with this rule.

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

(a) The reverberatory melt furnace, identified as RF1, the fourteen (14) die casting cells, identified as CC1 through CC14, each of the heat treat ovens (HT1 through HT3 and HT5 through HT9), the rapid prototype operation (RPT), the four (4) anodizing lines, identified as A5, A6, A7, and A8, and the piston marking operation, identified as WPS-1 are not subject to the requirements of 326 IAC 6-3-2. This rule does not apply if the limitation established in the rule is less stringent than applicable limitations in 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), 326 IAC 6.5-1, 326 IAC 11, 326 IAC 12, or 326 IAC 20. Since each of these units is subject to the more stringent particulate matter emission limitation pursuant to 326 IAC 6.5-1-2, they are not subject to this rule.

(b) Pursuant to 326 IAC 6-3-1(b)(6) and (7), the skirt coat lines, identified as SPC-1, SPC-2, SC3, and SC4, are not subject to 326 IAC 6-3-2 because these operations use a flow coating or roll coating application method.

(c) The four (4) phosphate wash lines are not subject to 326 IAC 6-3-2 because they do not meet the definition of a surface coating operation as defined in 326 IAC 6-3-1.5. The purpose of the wash lines is to wash the pistons before they are coated in the skirt coat lines.

(d) The tin plate line, identified as TP-1, uses a dip coating method to apply the piston prep and sodium stannate solutions, therefore, pursuant to 326 IAC 6-3-1(b)(5), it is not subject to 326 IAC 6-3-2.

(e) The requirements of 326 IAC 6-3-2 were not included in the permit for the ten (10) machine lines which are wet machining operations. Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with potential emissions less than 0.551 pound per hour are exempt from 326 IAC 6-3. Since these are wet machining operations where an aqueous coolant continuously floods the machining interface, there are no particulate emissions from this operation.

(f) The requirements of 326 IAC 6-3-2 were not included in the permit for the four (4) assembly lines (Assembly Lines 3, 4, 5 and 6), because potential emissions are less than 0.551 pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), these operations are exempt from 326 IAC 6-3.

(g) 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. Therefore, particulate emissions from the polycarbonate bead blasting unit, identified as Blast 1, which has a maximum process weight rate of 26.4 pounds per hour, shall not exceed 0.551 pounds per hour. The HEPA filtration system for particulate control shall be in operation at all times the polycarbonate bead blasting unit, identified as Blast 1, is in operation in order to comply with this limit.

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

This rule applies to new facilities which have potential emissions of 25 tons or more per year of VOC that were constructed after January 1, 1980. None of the facilities at this source have potential VOC emissions of 25 tons per year or greater. Therefore, they are not subject to this rule.

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

The four (4) skirt coating lines, identified as SPC-1, SPC-2, SC3, and SC4 and the piston marking operation identified as WPS-1, are not subject to the requirements of this rule because they were each constructed after 1990 and have actual and potential VOC emissions of less than 15 pounds per day. Therefore, they do not meet the applicability criteria pursuant to 326 IAC 8-2-1.

The tin plate line, identified as TP-1, uses inorganic solvents and is not subject to this rule because there are no VOC emissions from the tin plating process.

326 IAC 8-3-2 (Cold Cleaner Operations)

The four (4) parts washers, identified as PW1 through PW4, are subject to this rule since they are cold cleaning operations which were constructed after January 1, 1980. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The one (1) parts washer, PW1, which is a cold cleaning operation which has a remote solvent reservoir, is not subject to this rule because this rule only applies to cold cleaner degreasers without a remote solvent reservoir.

The other three (3) parts washers, PW2 through PW4 are subject to this rule because they are cold cleaner degreasers without a remote solvent reservoir.

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38OC) (one hundred degrees Fahrenheit (100OF));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38OC) (one hundred degrees Fahrenheit (100OF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38OC) (one hundred degrees Fahrenheit (100OF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9OC) (one hundred twenty degrees Fahrenheit (120OF)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Testing Requirements

On May 29, 2002, a stack test was performed on the reverberatory melt furnace for PM and PM10 emissions to determine emission factors for PM and PM10. The emission factors obtained from the test run performed during fluxing in the furnace, which represent the worst case scenario for the operation of the reverberatory furnace, were used to calculate potential PM and PM10 emissions from both melting and fluxing combined. Repeat stack testing on this unit will be required during the period between May 2007 and November 2007.

On April 6th and 7th, 2005, PM, PM10, Hydrochloric acid (HCl), Hydrofluoric acid (HF), Fluorine (F), and Chlorine (Cl_2) stack testing was performed on one (1) representative casting cell of the fourteen (14) casting cells during fluxing using two types of fluxes to determine emission factors for each pollutant from fluxing. The emission factors obtained for the flux that will now be used in both the melt furnace and the casting cells were as follows:

PM = 0.09 pound PM per pound of flux used or 180 lb PM/ton flux used
PM10 = 0.17 pound PM-10 per pound of flux used or 340 lb PM10/ton flux used
HCl = 0.0039 pound HCl per pound of flux used
Cl_2 = not detected

The SF270FM flux does not contain fluoride therefore; there are no Fluorine or Hydrofluoric acid emissions.

Stack testing is not required for any other emission units at this source because they do not meet the criteria to require stack testing.

Conclusion

The operation of this secondary aluminum foundry operation manufacturing automotive pistons shall be subject to the conditions of the Minor Source Operating Permit 141-13714-00065.

Appendix A: Emission Calculations

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit: **141-13714**
Plt ID: **141-00065**
Reviewer: Trish Earls/EVP

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity						
Pollutant	Natural Gas Combustion*	Foundry Operations	Anodizing Line**	Surface Coating	Parts Washers	Abrasive Blasting	**TOTAL**
PM	0.55	44.81	2.51	0.01	0.00	4.67	52.55
PM10	2.19	46.81	2.51	0.01	0.00	4.67	56.19
SO2	0.18	0.55	3.15	0.00	0.00	0.00	3.87
NOx	29.24	0.27	0.00	0.00	0.00	0.00	29.51
VOC	1.58	6.34	0.00	3.65	1.61	0.00	13.18
CO	24.24	0.00	0.00	0.00	0.00	0.00	24.24
total HAPs	0.54	0.87	0.00	0.53	0.00	0.00	1.94
worst case single HAP	(Hexane) 0.52	(HF) 0.37	0.00	(Glycol Ethers) 0.20	0.00	0.00	(Hexane) 0.52

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

* Natural Gas Combustion emissions include emissions from new emergency generator.

**Note: PM and PM10 emissions represent emissions of sulfuric acid mist. Emissions are based on a stack test performed in 1994 on a similar facility in Wisconsin.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity						
Pollutant	Natural Gas Combustion	Foundry Operations	Anodizing Line*	Surface Coating	Parts Washers	Abrasive Blasting	**TOTAL**
PM	0.55	44.81	2.51	0.01	0.00	4.7E-04	47.88
PM10	2.19	46.81	2.51	0.01	0.00	4.7E-04	51.52
SO2	0.18	0.55	3.15	0.00	0.00	0.00	3.87
NOx	29.24	0.27	0.00	0.00	0.00	0.00	29.51
VOC	1.58	6.34	0.00	3.65	1.61	0.00	13.18
CO	24.24	0.00	0.00	0.00	0.00	0.00	24.24
total HAPs	0.54	0.87	0.00	0.53	0.00	0.00	1.94
worst case single HAP	(Hexane) 0.52	(HF) 0.37	0.00	(Glycol Ethers) 0.20	0.00	0.00	(Hexane) 0.52

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

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

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit: **141-13714**
Plt ID: **141-00065**
Reviewer: Trish Earls/EVP

Unit I.D.	Heat Input Capacity per unit MMBtu/hr	Potential Throughput MMCF/yr
RMF	6.000	52.560
PT	0.060	0.526
WBH1	0.225	1.971
WH1 & WH2	0.398	3.486
HT1 - HT3, HT5 - HT9	6.100	53.436
DT1 - DT28	11.032	96.640
DP1 & DP2	0.800	7.008
PWL1 Wash Line & Drying oven	3.500	30.660
SPC1 Preheat & Cure oven	1.300	11.388
PWL2 Wash Line & Drying oven	2.140	18.746
SPC2 Preheat & Cure oven	1.200	10.512
PWL3 Wash Line, Boiler & Oven	1.700	14.892
SC3 Preheat & Cure oven	1.200	10.512
PWL4 Wash Line, Boiler & Oven	1.700	14.892
SC4 Preheat & Cure oven	1.200	10.512
94-AHU1 - 94-AHU5	3.885	34.033
94-UH10 - 94-UH19	1.000	8.760
94-MAU1	6.500	56.940
93-UH7 - 93-UH9	0.350	3.066
00-RTU1 - 00-RTU8	3.600	31.536
00-MAU2	4.950	43.362
87-MAU	0.600	5.256
87-MAU2	3.170	27.769
87-RTU1a - 87-RTU4a	1.020	8.935
87-RTU1, 87-RTU3, 87-RTU4, 87-RTU5	1.860	16.294
Total	**65.490**	**573.692**

	Pollutant					
	PM*	PM10*	SO2	NOx**	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.55	2.18	0.17	28.68	1.58	24.10

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

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

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

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit: **141-13714**
Plt ID: **141-00065**
Reviewer: Trish Earls/EVP

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	6.024E-04	3.442E-04	2.151E-02	5.163E-01	9.753E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.434E-04	3.155E-04	4.016E-04	1.090E-04	6.024E-04	**0.54**

Methodology is the same as page 2.

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

Appendix A: Secondary Metal Production
Aluminum

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit No.: **141-13714**
Plt ID: **141-00065**
Reviewer: Trish Earls/EVP

SCC# 3-04-001-03
Smelting Furnace/Reverberatory (Reverberatory Furnace)

TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR
Aluminum + Flux	Maximum:	5605	2000	2.8025

	PM ** lbs/ton Produced	PM10 ** lbs/ton Produced	SOx lbs/ton Produced	NOx lbs/ton Produced	VOC * lbs/ton Produced	CO lbs/tons Produced
	0.912	0.9856	--	--	0.2	--
Potential Emissions lbs/hr	2.56	2.76	--	--	0.6	--
Potential Emissions lbs/day	61.34	66.29	--	--	13.5	--
Potential Emissions tons/year	11.19	12.10	--	--	2.5	--

SCC# 3-04-001-02
Smelting Furnace/crucible (Casting Cells and Rapid Prototype Operation)

TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR
Aluminum	Maximum:	6917.13	2000	3.458565

	PM * lbs/ton Produced	PM10 * lbs/ton Produced	SOx lbs/ton Produced	NOx lbs/ton Produced	VOC * lbs/ton Produced	CO lbs/tons Produced
	1.9	1.7	--	--	--	--
Potential Emissions lbs/hr	6.57	5.88	--	--	--	--
Potential Emissions lbs/day	157.71	141.11	--	--	--	--
Potential Emissions tons/year	28.78	25.75	--	--	--	--

* Note: Emission factor is from FIRE version 6.24.

**Note: PM and PM-10 emission factors for reverberatory furnace are based on approved stack test results from a stack test performed May 29, 2002 on this furnace. Emissions include emissions from melting and fluxing at a maximum flux usage rate of 5 pounds per hour during the test. HAP emissions from melting and fluxing are calculated on page 8 of Appendix A.

PM-10 includes filterable and condensible particulate matter.

Appendix A: Secondary Metal Production
Aluminum

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit No.: **141-13714**
Plt ID: **141-00065**
Reviewer: Trish Earls/EVP

SCC# 3-04-001-14
Pouring/Casting

TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR
Aluminum	Maximum:	12517.13	2000	6.258565

	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx * lbs/ton metal charged	NOx * lbs/ton metal charged	VOC * lbs/ton metal charged	CO lbs/tons metal charged
	--	--	0.02	0.01	0.14	--
Potential Emissions lbs/hr	--	--	0.13	0.06	0.88	--
Potential Emissions lbs/day	--	--	3.00	1.50	21.03	--
Potential Emissions tons/year	--	--	0.55	0.27	3.84	--

SCC# 3-04-001-04
Flux Usage in Casting Cells

TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR
SF270FM flux	Maximum:	11.75	2000	0.005875

	PM** lbs/ton flux used	PM10** lbs/ton flux used	SOx lbs/ton chlorine used	NOx lbs/ton chlorine used	VOC lbs/ton chlorine used	CO lbs/ton chlorine used
	180	340	--	--	--	--
Potential Emissions lbs/hr	1.06	2.00	--	--	--	--
Potential Emissions lbs/day	25.38	47.94	--	--	--	--
Potential Emissions tons/year	4.63	8.75	--	--	--	--

* Note: Emission factor is from FIRE version 6.24

** Note: PM and PM10 emission factors are from stack test performed on casting cells on April 6-7, 2005.
PM-10 includes filterable and condensible particulate matter.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations and Parts Washers

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit No.: **141-13714**
Plt ID: **141-00065**
Reviewer: Trish Earls/EVP

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Screen Print - Skirt Coating																
E788-G75	11.15	18.51%	0.0%	18.5%	0.0%	81.49%	0.00006	1200	2.06	2.06	0.15	3.57	0.65	0.00	2.53	100%
E724-G75	11.15	24.09%	0.0%	24.1%	0.0%	75.91%	0.00005	1200	2.69	2.69	0.16	3.87	0.71	0.00	3.54	100%
Pad Print - Skirt Coating																
E786-G75	11.04	35.12%	0.0%	35.1%	0.0%	51.09%	0.00003	900	3.88	3.88	0.10	2.51	0.46	0.00	7.59	100%
SC3 - Skirt Coating																
E788-G75	11.15	18.51%	0.0%	18.5%	0.0%	81.49%	0.00004	1320	2.06	2.06	0.11	2.75	0.50	0.00	2.53	100%
E724-G75	11.15	24.09%	0.0%	24.1%	0.0%	75.91%	0.00004	1320	2.69	2.69	0.15	3.57	0.65	0.00	3.54	100%
SC4 - Skirt Coating																
E788-G75	11.15	18.51%	0.0%	18.5%	0.0%	81.49%	0.00004	1320	2.06	2.06	0.11	2.75	0.50	0.00	2.53	100%
E724-G75	11.15	24.09%	0.0%	24.1%	0.0%	75.91%	0.00004	1320	2.69	2.69	0.15	3.57	0.65	0.00	3.54	100%
Ink Jet																
167900	7.43	75.00%	0.0%	75.0%	0.0%	25.00%	9.0E-07	360	5.57	5.57	0.00	0.04	0.01	0.00	22.28	10%
Pin Fit																
1000-I	7.09	88.81%	0.0%	88.8%	0.0%	11.19%	5.0E-06	600	6.30	6.30	0.02	0.45	0.08	0.01	56.31	10%
Phosphating Wash Lines																
Ridolene 200	10.01	0.00%	0.0%	0.0%	0.0%	100.00%	4.2E-04	1200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Alodine 300	10.43	0.00%	0.0%	0.0%	0.0%	100.00%	2.9E-04	1200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Parcolene 99x	8.54	0.10%	0.0%	0.1%	0.0%	6.60%	2.5E-05	1200	0.01	0.01	2.56E-04	6.15E-03	1.12E-03	0.00	0.13	100%
SC3 & SC4 Wash Lines																
Ridolene 200	10.01	0.00%	0.0%	0.0%	0.0%	100.00%	5.0E-04	1200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Alodine 300	10.43	0.00%	0.0%	0.0%	0.0%	100.00%	3.2E-04	1200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
Parcolene 99x	8.54	0.10%	0.0%	0.1%	0.0%	6.60%	2.7E-05	1200	0.01	0.01	2.77E-04	6.64E-03	1.21E-03	0.00	0.13	100%
Assembly Line 2																
Marking Fluid 1000-I	7.09	88.81%	0.0%	88.8%	0.0%	11.19%	2.6E-06	750	6.30	6.30	0.01	0.29	0.05	0.00	56.31	100%
Jet Ink Fluid 167900 Q	7.43	75.00%	0.0%	75.0%	0.0%	25.00%	5.6E-06	750	5.57	5.57	0.02	0.56	0.10	0.00	22.28	100%
Assembly Lines 3 and 4																
Marking Fluid 1000-I	7.09	88.81%	0.0%	88.8%	0.0%	11.19%	2.6E-06	770	6.30	6.30	0.01	0.30	0.05	0.00	56.31	100%
Jet Ink Fluid 167900 Q	7.43	75.00%	0.0%	75.0%	0.0%	25.00%	5.6E-06	770	5.57	5.57	0.02	0.58	0.11	0.00	22.28	100%
Assembly Line 6																
Marking Fluid 1000-I	7.09	88.81%	0.0%	88.8%	0.0%	11.19%	2.6E-06	600	6.30	6.30	0.01	0.23	0.04	0.00	56.31	100%
Jet Ink Fluid 167900 Q	7.43	75.00%	0.0%	75.0%	0.0%	25.00%	5.6E-06	600	5.57	5.57	0.02	0.45	0.08	0.00	22.28	100%
PW1 - PW4																
S-2254 solvent blend	8.34	100.00%	0.0%	100.0%	0.0%	0.00%	2.7E-02	gal/hr	8.34	8.34	0.23	5.48	1.00	0.00	N/A	100%
Safety-Kleen solvent	6.80	100.00%	0.0%	100.0%	0.0%	0.00%	2.1E-02	gal/hr	6.80	6.80	0.14	3.35	0.61	0.00	N/A	100%
State Potential Emissions			**Add worst case coating to all solvents**								**1.20**	**28.85**	**5.26**	**0.01**		

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
HAPs
From Surface Coating Operations

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit No.: **141-13714**
Plt ID: **141-00065**
Reviewer: Trish Earls/EVP

Material	Density (Lb/Gal)	Weight % Glycol Ether	Weight % Ethylene Glycol	Weight % MEK	Weight % Methanol	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Glycol Ether Emissions tons per year	Ethylene Glycol Emissions tons per year	MEK Emissions tons per year	Methanol Emissions tons per year
Screen Print - Skirt Coating											
E788-G75	11.15	0.00%	0.0%	0.0%	0.00%	0.00006	1200	0.00	0.00	0.00	0.00
E724-G75	11.15	0.00%	0.0%	0.0%	0.00%	0.00005	1200	0.00	0.00	0.00	0.00
Pad Print - Skirt Coating											
E786-G75	11.04	0.00%	0.0%	0.0%	0.00%	0.00003	900	0.00	0.00	0.00	0.00
SC3 - Skirt Coating											
E788-G75	11.15	0.00%	0.0%	0.0%	0.00%	0.00004	1320	0.00	0.00	0.00	0.00
E724-G75	11.15	0.00%	0.0%	0.0%	0.00%	0.00004	1320	0.00	0.00	0.00	0.00
SC4 - Skirt Coating											
E788-G75	11.15	0.00%	0.0%	0.0%	0.00%	0.00004	1320	0.00	0.00	0.00	0.00
E724-G75	11.15	0.00%	0.0%	0.0%	0.00%	0.00004	1320	0.00	0.00	0.00	0.00
Piston Coating											
E785-G75	11.15	10.00%	0.0%	0.0%	0.00%	0.00005	800	0.20	0.00	0.00	0.00
Ink Jet											
167900	7.43	0.00%	3.0%	35.0%	45.00%	9.0E-07	360	0.00	0.00	0.00	0.00
Pin Fit											
1000-I	7.09	0.00%	0.0%	0.0%	0.00%	5.0E-06	600	0.00	0.00	0.00	0.00
Phosphating Wash Lines											
Ridolene 200	10.01	0.00%	0.00%	0.00%	0.00%	4.2E-04	1200	0.00	0.00	0.00	0.00
Alodine 300	10.43	0.00%	0.00%	0.00%	0.00%	2.9E-04	1200	0.00	0.00	0.00	0.00
Parcolene 99x	8.54	0.00%	0.00%	0.00%	0.00%	2.5E-05	1200	0.00	0.00	0.00	0.00
SC3 & SC4 Wash Lines											
Ridolene 200	10.01	0.00%	0.00%	0.00%	0.00%	5.0E-04	1200	0.00	0.00	0.00	0.00
Alodine 300	10.43	0.00%	0.00%	0.00%	0.00%	3.2E-04	1200	0.00	0.00	0.00	0.00
Parcolene 99x	8.54	0.00%	0.00%	0.00%	0.00%	2.7E-05	1200	0.00	0.00	0.00	0.00
Assembly Line 2											
Marking Fluid 1000-I	7.09	0.00%	0.0%	0.0%	0.00%	2.6E-06	750	0.00	0.00	0.00	0.00
Jet Ink Fluid 167900 Q	7.43	0.00%	3.0%	35.0%	45.00%	5.6E-06	750	0.00	0.00	0.05	0.06
Assembly Lines 3 and 4											
Marking Fluid 1000-I	7.09	0.00%	0.0%	0.0%	0.00%	2.6E-06	770	0.00	0.00	0.00	0.00
Jet Ink Fluid 167900 Q	7.43	0.00%	3.0%	35.0%	45.00%	5.6E-06	770	0.00	0.00	0.05	0.06
Assembly Line 6											
Marking Fluid 1000-I	7.09	0.00%	0.0%	0.0%	0.00%	2.6E-06	600	0.00	0.00	0.00	0.00
Jet Ink Fluid 167900 Q	7.43	0.00%	3.0%	35.0%	45.00%	5.6E-06	600	0.00	0.00	0.04	0.05
State Potential Emissions			**Add worst case coating to all solvents**					**0.20**	**0.01**	**0.14**	**0.18**

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emission Calculations
HAP Emissions

Company Name: Federal Mogul Corporation
Address City IN Zip: 3605 West Cleveland Road, South Bend, IN 46628
Minor Source Operating Permit: 141-13714
Plt ID: 141-00065
Reviewer: Trish Earls/EVP

Emission Unit	Flux Usage (lbs/day)	Pollutant	EF (lb/lb org flux)	Emissions before Controls (tons/yr)	Emissions after Controls (tons/yr)	Control Device	Control Efficiency (%)
Fluxing Operation with SF270FM flux (includes furnace and casting cells)	402	PM	see page 5 of App. A			none	
		PM10	see page 5 of App. A			none	
		HCl	0.0039	0.29	0.29	none	
		HF	0	0.00	0.00	none	
Maintenance Fluxing with Pyroflux FC-212-CC (in melt furnace only)	8	PM	see page 5 of App. A			none	
		PM10	see page 5 of App. A			none	
		HCl	0.02	0.03	0.03	none	
		HF	0.25	0.37	0.37	none	
		Total HAPs		**0.68**	**0.68**		

Note: Emission factors for SF270FM flux are based on a stack test conducted on the casting cells during fluxing on April 6-7, 2005. The SF270FM flux does not contain fluoride, therefore, there are no HF emissions.
Note: Emission factors for Pyroflux FC-212-CC flux are based on a worst case assumption that all chlorine in the flux is emitted as HCl and that all flourine in the flux is emitted as HF. This flux contains a maximum of 2% by weight of chloride compounds and 25% by weight of fluoride compounds.

Appendix A: Emission Calculations
HAP Emissions

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit: **141-13714**
Plt ID: **141-00065**
Reviewer: **Trish Earls/EVP**

SCC# 3-04-001-03
Smelting Furnace/Reverberatory (Reverberatory Furnace)

TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR	
Aluminum	Maximum:	5600	2000	2.8	
	Nickel lbs/ton Produced	**Manganese lbs/ton Produced**	**Lead lbs/ton Produced**	**Chromium lbs/ton Produced**	**Copper* lbs/ton Produced**
	0.004	0.001	0.001	0.001	0.001
Potential Emissions lbs/hr	0.01	0.00	0.00	0.00	0.00
Potential Emissions lbs/day	0.25	0.09	0.04	0.05	0.04
Potential Emissions tons/year	0.05	0.02	0.01	0.01	0.01

SCC# 3-04-001-03
Smelting Furnace/Reverberatory (Casting Cells)

TYPE OF MATERIAL		Throughput LBS/HR	1 TON/2000 lbs	TON/HR	
Aluminum	Maximum:	6914.88	2000	3.45744	
	Nickel lbs/ton Produced	**Manganese lbs/ton Produced**	**Lead lbs/ton Produced**	**Chromium lbs/ton Produced**	**Copper* lbs/ton Produced**
	0.004	0.001	0.001	0.001	0.001
Potential Emissions lbs/hr	0.01	0.01	0.00	0.00	0.00
Potential Emissions lbs/day	0.34	0.12	0.06	0.07	0.06
Potential Emissions tons/year	0.06	0.02	0.01	0.01	0.01

Note: HAP emission factors for reverberatory furnace are based on approved stack test results from a stack test performed May 29, 2002 on this furnace. The PM-10 emission factors obtained from those tests were multiplied by the various metal contents of the aluminum alloy as listed on the MSDS sheet to obtain each metal HAP emission factor.
* Copper is not a listed HAP under Section 112 of the Clean Air Act and is only counted towards PM and PM10 emissions.

Appendix A: Emission Calculations
Abrasive Blasting

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit: **141-13714**
Plt ID: **141-00065**
Reviewer: Trish Earls/EVP

Table 1 - Emission Factors for Abrasives

	Emission Factor	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Calculations

Flow Rate (FR) (lb/hr) = **599.760** per nozzle
Maximum Hours of Blasting per year* = **778.67** hours/year per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) =	0.010
FR = Flow Rate (lb/hr) =	599.760
w = fraction of time of wet blasting =	0 %
N = number of nozzles =	2

Uncontrolled Emissions =	**6.00 lb/hr**	per nozzle
	2.34 ton/yr	per nozzle based on maximum hours of blasting
	4.67 ton/yr	total for both nozzles
Control Efficiency: 99.99%	**Controlled Emissions =** **6.0E-04 lb/hr**	per nozzle
	2.3E-04 ton/yr	per nozzle based on maximum hours of blasting
	4.7E-04 ton/yr	total for both nozzles

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs
Flow Rate (FR) (lb/hr) obtained from manufacturer.
E = EF x FR x (1-w/200) x N
w should be entered in as a whole number (if w is 50%, enter 50)
* The maximum hours of blasting time per year was based on a design cycle time to process each piston of 90 seconds. Based on the unit's design, blasting can occur a maximum of 16 seconds per cycle. Therefore, the maximum hours of blasting time per year is calculated as follows:

8760 hrs/yr x 3600 sec./hr = 31536000 seconds/yr

31536000 seconds/yr / 90 sec./cycle = 350400 cycles/yr

350400 cycles/yr x 8 sec./cycle blasting per nozzle 2803200 sec./yr blasting per nozzle

2803200 sec./yr blasting per nozzle 3600 sec./hr = 778.67 hours/yr blasting per nozzle

Appendix A: Emission Calculations
Internal Combustion Engines - Natural Gas-Fired Emergency Generator

Company Name: **Federal Mogul Corporation**
Address City IN Zip: **3605 West Cleveland Road, South Bend, IN 46628**
Minor Source Operating Permit: **141-13714**
Plt ID: **141-00065**
Reviewer: Trish Earls/EVP

Heat Input Capacity
MM Btu/hr

0.4

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.0019	0.0066	0.0034	0.3200	0.0021	0.0820
Potential Emission in tons/yr	3.4E-03	1.2E-02	6.0E-03	0.56	3.7E-03	0.14

Methodology

Emission Factors are from AP 42 Table 3.1-1 and Table 3.1-2a.
Heat input capacity (MMBtu/hr) = Max. fuel consumption (395 cf/hr) x (1020 Btu/cf) x (1E-06 MMBtu/Btu)
Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)
*The PM emission factor is filterable PM. The PM10 emission factor is filterable and condensable PM10 combined.