Mr. Ron Gigliotti
Aero Metals, Inc.
402 Darlington Street
LaPorte, IN Zip 46350

Re: SMF 091-10163
Second Significant Modification to
FESOP 091-5507-00074

Dear Mr. Gigliotti:

Aero Metals, Inc. was issued a permit on April 7, 1997 for an investment casting foundry. A letter requesting changes to this permit was received on September 18, 1998 and October 22, 1998. Pursuant to the provisions of 326 IAC 2-8-11, a significant modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the following:

1. The facilities designated as EU-12 through EU-17, EU-19, EU-20-24 and EU-27 have been removed from Condition A.2(d), and have been re-evaluated as insignificant activities and are now located under Condition A.3(r);

2. The addition of three (3) new cyclones to an existing dust collector designated as D-3 which exhausts to a stack designated as S/V 48;

3. The addition of eight (8) new silica sand rainfall units listed under Section D.9;

4. The establishment of specific PM_{10} limits for the following facilities:
   (a) six (6) electric induction melting furnaces (Section D.1);
   (b) eight (8) wax burn-out stations (Section D.2);
   (c) ten (10) silica sand rainfall units (Sections D.7 and D.9);
   (d) three (3) fluidized sand beds (Section 7); and
   (e) one (1) sand mix tank (Section7);

5. Revised testing requirements for all facility sections (Sections 1 -9);

6. The addition of the following new insignificant activities:
   (a) use of TCE for the existing injection molders;
   (b) one (1) wax reclaimer unit with cyclone;
   (c) exhaust fans for existing melt pot area;
   (d) two (2) EDM mill machines;
   (e) one (1) solvent wash tank;
   (f) six (6) natural gas-fired wax burner stations'

(g) one (1) natural gas-fired air make-up unit;
(h) six (6) natural gas-fired infrared heaters;
(i) four (4) electric de-humidifiers; and
(j) one (1) six-inch degater;

7. The addition of a compliance monitoring requirement which requires all control devices to operate at all times when the controlled facilities are in operation. This new requirement is placed in Sections D.1, D.2, D.5, D.6, D.7, D.8 and D.9; and

8. The addition of one (1) two-station key grinder listed under Section D.5.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Nysa L. James, of my staff, at the above address; or by phone at 317-233-6875 or 1-800-451-6027 (ext 3-6875).

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
NLJ
cc: File - LaPorte County
U.S. EPA, Region V
LaPorte County Health Department
NWRO
Air Compliance Section Inspector - Rick Reynolds
Compliance Data Section - Jerri Curless
Administrative and Development - Janet Mobley
Technical Support and Modeling - Nancy Landau

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR MANAGEMENT and Enhanced New Source Review (ENSR)

Aero Metals, Inc.
402 Darlington Street
LaPorte , Indiana 46350

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR Part 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F091-5507-00074	
Original issued by Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: April 7, 1997

First Significant Permit Modification: SMF091-8786	Pages Affected: 4-6, 34-26, 28-40 and page 40 deleted
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: August 27, 1998

Second Significant Permit Modification: SMF091-10163	Pages Affected: 4-6a, 17, 24-28, 29a-30, 32-41, 41a, and 41b
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A SOURCE SUMMARY

A.1 General Information

The Permittee owns and operates an investment casting foundry.

Responsible Official:	Ron Gigliotti
Source Address:	402 Darlington Street, LaPorte, Indiana, 46350
Mailing Address:	402 Darlington Street, LaPorte, Indiana, 46350
SIC Code:	3324
County Location:	LaPorte
County Status:	Partial nonattainment for primary SO_2, attainment for all remaining criteria pollutants
Source Status:	Synthetic Minor Source, FESOP Program

A.2 Emission Units and Pollution Control Summary

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

(a) six (6) electric induction melting furnaces with total rating physically constrained to 4,380 pounds metal per hour:

(1) two (2) electric induction melting furnaces individually rated at 730 pounds metal per hour and identified as EU7 and EU8, and two (2) electric induction melting furnaces individually rated at 1,460 pounds metal per hour and identified as EU9 and EU10, all controlled for particulate matter by one (1) cyclone, exhausting at one (1) stack identified as S/V7; and

(2) two (2) electric induction melting furnaces individually rated at 1,460 pounds metal per hour and identified as EU58 and EU59, with particulate matter controlled by one (1) cyclone, exhausting at one (1) stack identified as S/V21;

(b) eight (8) natural gas fired wax burn-out ovens each rated at 0.55 million (MM) British thermal units (Btu) per hour and identified as EU2, EU3, EU4, EU5, EU60, EU61, EU84, and EU85 each exhausting through individual stacks respectively identified as S/V2, S/V3, S/V4, S/V5, S/V22, S/V23, S/V46, and S/V47;

(c) one (1) sodium hydroxide solution (caustic) metal parts cleaning unit rated at 1,263 pounds steel castings per hour and identified as EU1, with a wet scrubber for caustic fume control identified as AERO-421, exhausting at one (1) stack identified as S/V1;

(d) One (1) two-station key grinder, designated as EU-091, controlled by an internal micro air collection system, identified as D-2, and exhausts to one (1) stack designated as S/V 10;

(e) one (1) 2-inch degater identified as EU28, one (1) degater machine identified as EU29, one (1) 2-head degater identified as EU30, and one (1) 4-inch degater machine identified as EU31, all controlled for particulate matter by an internal Micro air collection system, identified as D-2, exhausting at one (1) stack identified as S/V10;

(f) three (3) shot blasters identified as EU32, EU34 and EU41, four (4) friction saws identified as EU33, EU35, EU36 and EU37, and three (3) ceramic mold knock out machines identified as EU38, EU39, and EU40, all controlled for particulate matter by one (1) dust collector and three (3) cyclones identified as D-3, exhausting at one (1) stack identified as S/V48;

(g) four (4) sandblasters identified as EU42 through EU44 and EU117, and one (1) 2-head degater, identified as EU46, all controlled for particulate matter by one (1) dust collector and three (3) cyclones identified as D-3, exhausting at one (1) stack identified as S/V48;

(h) Two (2) silica sand rain fall units identified as EU49 and EU50, where EU49 is controlled by one (1) cartridge type dust collector identified as SV/16 and EU50 is controlled by one (1) cartridge type dust collector identified as SV**/**15.

(i) Two (2) fluidized sand beds identified as EU-53 and EU-54, one (1) mix tank identified as EU-52, controlled by one (1) cartridge type dust collector identified as SV/17 and one (1) fluidized sand bed identified as EU-51 controlled by one (1) cartridge type dust collector identified as SV/16;

(j) one (1) OKK CNC milling machine identified as EU56, controlled for particulate matter by one (1) baghouse, exhausting at one (1) stack identified as S/V-049;

(k) Two (2) silica sand rainfall units, designated as EU-106 and EU-110, controlled by one (1) cartridge type dust collector designated as S/V15;

(l) Three (3) silica sand rainfall units, designated as EU-107, EU-111 and EU-112, controlled by one (1) cartridge type dust collector designated as S/V16; and

(m) Three (3) silica sand rainfall units, designated as EU-108, EU-113 and EU-114, controlled by one (1) cartridge type dust collector designated as S/V17.

A.3 Insignificant Activities

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

(a) natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour. This includes one (1) unit rated at 0.58 MMBtu per hour, one (1) unit rated at 0.1 MMBtu per hour, one (1) unit rated at 0.08 MMBtu per hour, one (1) unit rated at 0.05 MMBtu per hour, three (3) units each rated at 0.125 MMBtu per hour, seven (7) radiant tube heater units rated at 0.08 MMBtu per hour for small units and 0.09 MMBtu per hour for larger units, eleven (11) radiant gas space heaters rated at 0.03 MMBtu per hour for small units and 0.09 MMBtu per hour for larger units, and one (1) boiler system rated at 2.68 MMBtu per hour;

(b) the following VOC and HAP storage containers: vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(c) machining where an aqueous cutting coolant continuously floods the machining interface;

(d) degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6;

(e) the following equipment related to manufacturing activities not resulting in the emission of hazardous air pollutants: brazing equipment, cutting torches, soldering equipment, and welding equipment;

(f) any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs;

(g) replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(h) paved and unpaved roads and parking lots with public access;

(i) nineteen (19) miscellaneous belt sanders, grinders, saws, and degaters with particulate matter emissions below 5 pounds per hour. This includes Burr King belt sander (Aero-0703), Roboform EDM (Aero-0700), SBL EDM (Aero-0701), grinder (Aero-0702), Blador grinder (Aero-0273), band saw (Aero-0250), Cincinnati grinder (Aero-0445), Burr King belt sander (Aero-0463), 9-inch degater (Aero-0422), 9-inch degater (Aero-0422B), 8-inch degater (Aero-0423), Burr King belt sander (Aero-0539), six station degater (Aero-0424), automatic degater (Aero-0444), 6-inch belt sander (Aero-0704), Delta band saw (Aero-0372), and three Burr King belt sanders (Aero-0449, Aero-0376, and Aero-0516);

(j) one (1) solvent based wax pattern cleaning operation utilizing Nalco Wax Cleaner or equivalent;

(k) twelve (12) work benches using trichloroethylene for wax repair;

(l) twelve (12) heat torches to melt wax;

(m) eight (8) 48-inch ceiling fans;

(n) one (1) 12-inch gas food grill vent;

(o) eighteen (18) non-particulate matter emitting injection molders using trichloroethylene at a total maximum usage rate of 0.071 gallons per hour;

(p) one (1) steam autoclave wax melter designated as EU-109 and exhausts to a stack designated as S/V 66;

(q) One (1) wax reclaimer unit, designated as EU-099 and EU-100, with a cyclone designated as S/V 55 utilized for separation and circulation of the wax;

(r) five (5) surface grinders identified as EU-12 through EU-16, nine (9) milling machines identified as EU-17 through EU-25, and two (2) Bridgeport CNC milling machines identified as EU-26 and EU-27, all controlled for particulate matter by a Torit collection system except for EU-18, EU-25 and EU-26, identified as D-1, exhausting at one (1) stack identified as S/V 9;

(s) exhaust fans for the melt pot area designated as S/V 50 through S/V 54;

(t) Two (2) EDM mill machines, designated as EU-96 and EU-115, with an oil usage rate of 0.051 gallons per hour each and controlled by one (1) vapor cannister collector designated as S/V 54;

(u) One (1) solvent wash tank, designated as EU-098, with a maximum solvent usage rate of 0.005 gallons per hour and controlled by one (1) vapor cannister collector designated as S/V 54;

(v) Six (6) natural gas-fired burner stations, with a maximum heat input capacity of 0.25 mmBtu/hr each and exhausts to a stack designated as S/V 8;

(w) One (1) natural gas-fired air make-up unit, designated as AM-661, with a maximum heat input capacity of 0.486 mmBtu/hr and exhausts to the atmosphere;

(x) Six (6) natural gas-fired infrared heaters, with a maximum heat input capacity of 0.09 mmBtu/hr each and exhausts to stacks designated as S/V 060 through S/V 065;

(y) Four (4) electric de-humidifiers; and

(z) One (1) six-station degater, designated as AM-737 and exhausts to the atmosphere.

A.4 FESOP Applicability [326 IAC 2-8-2]
This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a Federally Enforceable State Operating Permit (FESOP).

B.23 Inspection and Entry [326 IAC 2-8-5(a)(2)]
Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

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

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements. [326 IAC 2-8-5(a)(4)].

B.25 Annual Fee Payment [326 IAC 2-8-4(6)][326 IAC 2-8-16]

(a) The Permittee shall pay annual fees to IDEM, OAM, consistent with the fee schedule established in 326 IAC 2-8-16.

(b) Failure to pay may result in administrative enforcement action, revocation of this permit, referral to the Office of Attorney General for collection, or other appropriate measures.

(c) The Permittee shall pay the annual fee within thirty (30) calendar days of receipt of a billing by IDEM, OAM or in a time period that is consistent with the payment schedule issued by IDEM, OAM.

(d) If the Permittee does not receive a bill from IDEM, OAM, thirty (30) calendar days before due date, the Permittee shall call the following telephone numbers: 1-800-451-6027 or 317-233-0179 (ask for OAM, Data Support Section), to determine the appropriate permit fee. The applicable fee is due April 1 of each year.

B.26 Enhanced New Source Review [326 IAC 2]

The requirements of the construction permit rules in 326 IAC 2 are satisfied by this permit for any previously unpermitted facilities and such facilities to be constructed within eighteen (18) months after the date of issuance of this permit, as listed in Sections A.2 and A.3.

SECTION D.1 FACILITY OPERATION CONDITIONS

six (6) electric induction melting furnaces with total rating physically constrained to 4,380 pounds metal per hour:

(1) two (2) electric induction melting furnaces individually rated at 730 pounds metal per hour and identified as EU7 and EU8, and two (2) electric induction melting furnaces individually rated at 1,460 pounds metal per hour and identified as EU9 and EU10, all controlled for particulate matter by one (1) cyclone, exhausting at one (1) stack identified as S/V7; and

(2) two (2) electric induction melting furnaces individually rated at 1,460 pounds metal per hour and identified as EU58 and EU59, with particulate matter controlled by one (1) cyclone, exhausting at one (1) stack identified as S/V21.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Matter

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions, from the facilities described above, shall not exceed the following:

(a) 2.08 pounds per hour with a maximum process weight rate of 730 pounds per hour; and

(b) 3.32 pounds per hour with a maximum process weight rate of 1,460 pounds per hour.

D.1.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, the allowable PM_{10} emission rate from the six (6) electric induction melting furnaces shall not exceed the following:

(a) 1.74 pounds per hour each for the furnaces with a process weight rate of 1,460 pounds per hour; and

(b) 0.58 pounds per hour each for the furnaces with a process weight rate of 730 pounds per hour.

This limit shall satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.3 Beryllium

That pursuant to 40 CFR 61, Subpart C (National Emission Standard for Beryllium), beryllium emissions to the atmosphere from the facilities described above, shall not exceed 10 grams of beryllium over a 24 hour period.

Testing Requirements [326 IAC 2-8-4(3)]

D.1.4 Particulate Matter

Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of the electric induction melting furnaces (stacks designated as S/7 and S/V 21) utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.1.5 Beryllium

During the period 48 to 54 months after issuance of this permit, the Permittee shall perform beryllium testing on any of furnaces EU7-EU10 at the cyclone exhaust stack (S/V7) utilizing methods per 40 CFR Part 61 Appendix B, Method 104. Method 103 of Appendix B to this part is approved by the Administrator as an alternative method. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

The Permittee is not required to perform beryllium testing on furnaces EU58 and EU59. The use of any metals containing beryllium by the furnaces designated as EU58 and EU59, must be approved by the Office of Air Management (OAM) before such change may occur.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.1.6 Daily Visible Emission Notations

Daily visible emission notations of the cyclone stacks' exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

D.1.6a Particulate Matter (PM)

The cyclones for PM and PM_{10} control shall be in operation at all times when the six (6) electric induction melting furnaces are in operation.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.7 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.

D.1.8 Preventive Inspections

The following inspections shall be performed when the induction melting furnaces are operating in accordance with the Preventive Maintenance Plan prepared pursuant to Condition B.13:

Items/Conditions to be inspected:

(a) Integrity of the unit and duct work
(b) Duct work interior (free flow)
(c) Fan and motor operation

Inspections of unit and related items shall be performed monthly.

D.1.9 Operational Parameters

The Permittee shall maintain daily records at the stationary source of the following values:

(a) Visible emission observations;
(b) Checklist with dates and initials for each preventive action performed; and
(c) Records of corrective actions.

D.1.10 Reporting

Any deviations shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted, to the addresses listed in Section C - General Reporting Requirements, in accordance with Condition B.12.

SECTION D.2 FACILITY OPERATION CONDITIONS

eight (8) natural gas fired wax burn-out ovens each rated at 0.55 million (MM) Btu per hour and identified as EU2, EU3, EU4, EU5, EU60, EU61, EU84 and EU85, each exhausting through individual stacks respectively identified as S/V2, S/V3, S/V4, S/V5, S/V22, S/V23, S/V46 and S/V47.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate Matter

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facilities described above shall not exceed 1.05 pounds per hour each. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

D.2.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, the allowable PM_{10} emission rate from the eight (8) wax burn-out stations shall not exceed 1.05 pounds per hour each. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.2.3 Natural Gas Fuel

The eight (8) burn out ovens, rated at 0.55 million Btu per hour each, shall use only natural gas fuel.

Compliance Determination Requirements

D.2.3a Testing Requirements

Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of the wax burn-out stations (stacks S/V 2-5, S/V 22-23 and S/V 46-47) utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.2.4 Daily Visible Emission Notations

Daily visible emission notations of the burn out oven stacks' exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.5 Operational Parameters
The Permittee shall maintain daily records at the stationary source of the following values:

(a) Visible emission observations;
(b) Checklist with dates and initials for each preventive action performed; and
(c) Records of corrective actions.

D.2.6 Reporting
Any deviations shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted, to the addresses listed in Section C - General Reporting Requirements, in accordance with Condition B.12.

SECTION D.3 FACILITY OPERATION CONDITIONS

one (1) sodium hydroxide solution (caustic) metal parts cleaning unit rated at 1263 pounds steel castings per hour and identified as EU1, with a wet scrubber for caustic fume control identified as AERO-421, exhausting at one (1) stack identified as S/V1.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate Matter
Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facility described above, shall not exceed 0.30 pounds per hour. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

D.3.2 Particulate Matter 10 Microns (PM-10)
Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the caustic parts cleaning unit shall not exceed 0.30 pounds per hour, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

Testing Requirements [326 IAC 2-8-4(3)]

D.3.3 Particulate Matter
The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Condition D.3.1 and D.3.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.3.4 Pressure and Liquid Flow Rate Readings
The Permittee shall take pressure readings and scrubbing liquid flow rate readings from the wet scrubber controlling the facility, at least once a day when the facility is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the wet scrubber shall be maintained within the range of 0.2 and 1.0 inches of water, and the scrubbing liquid flow rate shall be maintained within the range of 1.5 and 2.0 gallons of sodium hydroxide per minute or a range and flow rate established during the latest stack test.

The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading or flow rate is outside of the above mentioned range for any one reading.

The instruments used for determining the pressure and liquid flow rate shall comply with condition C.10 - Pressure Gauge and Wet Scrubber Liquid Flow Rate Meter Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

SECTION D.4 FACILITY OPERATION CONDITIONS

One (1) two-station key grinder, designated as EU-091, controlled by an internal micro air collection system, identified as D-2, and exhausts to one (1) stack designated as S/V 10.

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

General Construction Conditions

D.4a This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.4b Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

First Time Operation Permit

D.4c This document shall also become the first-time operation permit for the facilities under this section of this permit, pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in this section of this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this permit.

Operation Conditions

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.4.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, the two-station key grinder shall not exceed 0.551 pounds per hour, based on a maximum process weight of less than 100 pounds per hour.

D.4.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the two-station key grinder shall not exceed 0.045 pounds per hour, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

Compliance Determination Requirements

D.4.2a Testing Requirements

Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of stack S/V 10 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.4.3 Visible Emissions Notations

Daily visible emission notations of the internal micro air collection system stack exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

D.4.4 Particulate Matter (PM)

The internal micro air collection system for PM and PM_{10} control shall be in operation at all times when the two-station key grinder is in operation.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.4.5 Preventive Maintenance [326 IAC 2-8-4(9)]
A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.

SECTION D.5 FACILITY OPERATION CONDITIONS

one (1) 2-inch degater identified as EU28, one (1) degater machine identified as EU29, one (1) 2-head degater identified as EU30, and one (1) 4-inch degater machine identified as EU31, all controlled for particulate matter by an internal Micro air collection system, identified as D-2, exhausting at one (1) stack identified as S/V10.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.5.1 Particulate Matter
Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facilities described above, shall not exceed 0.117 pounds per hour each. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

D.5.2 Particulate Matter 10 Microns (PM-10)
Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the above listed facilities shall not exceed 0.007 pounds per hour each, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

Compliance Determination Requirements

D.5.2a Testing Requirements
Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of stack S/V 10 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.5.3 Pressure Readings
The Permittee shall take readings of the total static pressure drop across the baghouse at least once a day when the facility is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 0.5 and 8.5 inches of water. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range.

The instruments used for determining the pressure and liquid flow rate shall comply with condition C.10 - Pressure Gauge and Wet Scrubber Liquid Flow Rate Meter Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.5.4 Broken Bag or Failure Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the units have been replaced.

(b) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

D.5.4a Particulate Matter (PM)

The internal micro air collection system for PM and PM_{10} control shall be in operation at all times when EU-28, EU-29, EU-30 and EU-31 are in operation.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.5.5 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.

D.5.6 Preventive Inspections

The following inspections shall be performed when the foundry process operations are operating in accordance with the Preventive Maintenance Plan prepared pursuant to Condition B.13:

Items/Conditions to be inspected:

(a) Integrity of the unit and duct work

(b) Duct work interior (free flow)

(c) Fan and motor operation

An inspection shall be performed each month of the internal Micro air collection system controlling the one (1) 2-inch degater, one (1) degater machine, one (1) 2-head degater and one (1) 4-inch degater machine when venting to the atmosphere. Inspections are optional when venting indoors.

In the event that control device failure has been observed, the affected control device will be shut down immediately until the failed units have been repaired or replaced.

D.5.7 Operational Parameters

To document compliance with Condition D.5.3, the Permittee shall maintain the following:

(a) Documentation of all response steps implemented, per event.

(b) Operation and preventive maintenance logs shall be maintained.

(c) Quality Assurance/Quality Control (QA/QC) procedures.

(d) Operator standard operating procedures (SOP).

(e) Manufacturer's specifications or its equivalent.

(f) Equipment "troubleshooting" contingency plan.

(g) Documentation of the dates vents are redirected.

D.5.8 Reporting

Any deviations shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted, to the addresses listed in Section C - General Reporting Requirements, in accordance with Condition B.12.

SECTION D.6 FACILITY OPERATION CONDITIONS

three (3) shot blasters identified as EU32, EU34 and EU41, four (4) friction saws identified as EU33, EU35, EU36 and EU37, and three (3) ceramic mold knock out machines identified as EU38, EU39, and EU40, all controlled for particulate matter by one (1) dust collector and three (3) cyclones identified as D-3, exhausting at one (1) stack identified as S/V48.

four (4) sandblasters identified as EU42 through EU44 and EU117, and one (1) 2-head degater, identified as EU46, all controlled for particulate matter by one (1) dust collector and three (3) cyclones identified as D-3, exhausting at one (1) stack identified as S/V48.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.6.1 Particulate Matter

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facilities described above, shall not exceed 0.272 pounds per hour each. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

D.6.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the above listed facilities shall not exceed 0.015 pounds per hour each, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

Compliance Determination Requirements

D.6.2a Testing Requirements

Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of stack S/V 48 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.6.3 Pressure Readings

The Permittee shall take readings of the total static pressure drop across the baghouse at least once a day when the facility is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 0.05 and 10.0 inches of water. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range.

The instruments used for determining the pressure and liquid flow rate shall comply with condition C.10 - Pressure Gauge and Wet Scrubber Liquid Flow Rate Meter Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.6.4 Visible Emissions Notations

Daily visible emission notations of the one (1) dust collector and three (3) cyclones stack exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

D.6.4a Particulate Matter (PM)

The dust collector and cyclones for PM and PM_{10} control shall be in operation at all times when the three (3) shot blasters, four (4) friction saws, three (3) ceramic mold knock out machines, four (4) sandblasters and one (1) 2-head degater are in operation.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.6.5 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.

D.6.6 Preventive Inspections

The following inspections shall be performed when the foundry process operations are operating in accordance with the Preventive Maintenance Plan prepared pursuant to Condition B.13:

Items/Conditions to be inspected:

(a) Integrity of the unit and duct work
(b) Duct work interior (free flow)
(c) Fan and motor operation

An inspection shall be performed each month of the one (1) dust collector and three (3) cyclones controlling the three (3) shot blasters and three (3) ceramic mold knock out machines when venting to the atmosphere. Inspections are optional when venting indoors.

In the event that control device failure has been observed, the affected control device will be shut down immediately until the failed units have been repaired or replaced.

D.6.7 Operational Parameters

To document compliance with Condition D.6.3, the Permittee shall maintain the following:

(a) Documentation of all response steps implemented, per event.

(b) Operation and preventive maintenance logs shall be maintained.

(c) Quality Assurance/Quality Control (QA/QC) procedures.

(d) Operator standard operating procedures (SOP).

(e) Manufacturer's specifications or its equivalent.
(f) Equipment "troubleshooting" contingency plan.

(g) Documentation of the dates vents are redirected.

D.6.8 Reporting
Any deviations shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted, to the addresses listed in Section C - General Reporting Requirements, in accordance with Condition B.12.

SECTION D.7 FACILITY OPERATION CONDITIONS

(1)	Two (2) silica sand rain fall units identified as EU49 and EU50, where EU49 is controlled by one (1) cartridge type dust collector identified as SV/16 and EU50 is controlled by one (1) cartridge type dust collector identified as SV/15.
(2)	Two (2) fluidized sand beds identified as EU-53 and EU-54, one (1) mix tank identified as EU-52, controlled by one (1) cartridge type dust collector identified as SV/17 and one (1) fluidized sand bed identified as EU-51 controlled by one (1) cartridge type dust collector identified as SV/16;

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.7.1 Particulate Matter
Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facilities described above, shall not exceed 0.195 pounds per hour. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

D.7.2 Particulate Matter 10 Microns (PM-10)

(a) Pursuant to 326 IAC 2-8-4, the allowable PM_{10} emission rate from the two (2) silica sand rainfall units shall not exceed 0.20 pounds per hour each . Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

(b) Pursuant to 326 IAC 2-8-4, the allowable PM_{10} emission rate from the three (3) fluidized sand beds shall not exceed 0.20 pounds per hour each . Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

(c) Pursuant to 326 IAC 2-8-4, the allowable PM_{10} emission rate from the one (1) sand mix tank shall not exceed 0.20 pounds per hour. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

Compliance Determination Requirements

D.7.2a Testing Requirements
Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of the Particulate Matter (PM) control devices (MC3000-1, MC3000-2 and MC3000-3) utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.7.3a Particulate Matter (PM)

The dust collectors for PM and PM_{10} control shall be in operation at all times when the two (2) silica sand rainfall units, three (3) fluidized sand beds and one (1) sand mix tank are in operation.

D.7.3 Visible Emissions Notations

Daily visible emission notations of the dust collectors stack exhausts, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.7.4 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.

D.7.5 Preventive Inspections

The following inspections shall be performed when the silica sand rainfall units are operating in accordance with the Preventive Maintenance Plan prepared pursuant to Condition B.13:

Items/Conditions to be inspected:

(a) Integrity of the unit and duct work
(b) Duct work interior (free flow)
(c) Fan and motor operation

Inspections of unit and related items shall be performed monthly.

D.7.6 Operational Parameters

To document compliance with Condition D.7.3, the Permittee shall maintain the following:

(a) Documentation of all response steps implemented, per event.

(b) Operation and preventive maintenance logs shall be maintained.

(c) Quality Assurance/Quality Control (QA/QC) procedures.

(d) Operator standard operating procedures (SOP).

(e) Manufacturer's specifications or its equivalent.

(f) Equipment "troubleshooting" contingency plan.

(g) Documentation of the dates vents are redirected.

D.7.7 Reporting

Any deviations shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted, to the addresses listed in Section C - General Reporting Requirements, in accordance with Condition B.12.

SECTION D.8 FACILITY OPERATION CONDITIONS

one (1) OKK CNC milling machine identified as EU56, controlled for particulate matter by one (1) baghouse, exhausting at one (1) stack identified as S/V-049.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.8.1 Particulate Matter

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facility described above, shall not exceed 0.0083 pounds per hour. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

D.8.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the CNC milling machine shall not exceed 0.009 pounds per hour, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

Compliance Determination Requirements

D.8.2a Testing Requirements

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Condition D.8.1 and D.8.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.8.3 Visible Emissions Notations

Daily visible emission notations of the baghouse stack exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

D.8.4 Broken Bag or Failure Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the units have been replaced.

(b) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

D.8.4a Particulate Matter (PM)

The baghouse for PM and PM_{10} control shall be in operation at all times when the CNC milling machine is in operation.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.8.5 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.

D.8.6 Preventive Inspections

The following inspections shall be performed when the OKK CNC milling machine is operating in accordance with the Preventive Maintenance Plan prepared pursuant to Condition B.13:

Items/Conditions to be inspected:

(a) Integrity of the unit and duct work
(b) Duct work interior (free flow)
(c) Fan and motor operation

Inspections of unit and related items shall be performed monthly.

D.8.7 Operational Parameters

To document compliance with Condition D.8.3, the Permittee shall maintain the following:

(a) Documentation of all response steps implemented, per event.

(b) Operation and preventive maintenance logs shall be maintained.

(c) Quality Assurance/Quality Control (QA/QC) procedures.

(d) Operator standard operating procedures (SOP).

(e) Manufacturer's specifications or its equivalent.

(f) Equipment "troubleshooting" contingency plan.

(g) Documentation of the dates vents are redirected.

D.8.8 Reporting

Any deviations shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted, to the addresses listed in Section C - General Reporting Requirements, in accordance with Condition B.12.

SECTION D.9 FACILITY CONDITIONS

Two (2) silica sand rainfall units, designated as EU-106 and EU-110, controlled by one (1) cartridge type dust collector designated as S/V15; Three (3) silica sand rainfall units, designated as EU-107, EU-111 and EU-112, controlled by one (1) cartridge type dust collector designated as S/V16; and Three (3) silica sand rainfall units, designated as EU-108, EU-113 and EU-114, controlled by one (1) cartridge type dust collector designated as S/V17.

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

General Construction Conditions

D.9.1 This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.9.2 Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

First Time Operation Permit

D.9.3 This document shall also become the first-time operation permit for the facilities under this section of this permit, pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in this section of this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this permit.

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Operation Conditions

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.9.4 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, the silica sand rainfall units shall not exceed 0.551 pounds per hour each, based on a maximum process weight of 0.02 tons per hour.

D.9.5 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, the allowable PM_{10} emission rate from the eight (8) silica sand rainfall units shall not exceed 0.551 pounds per hour each . Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.9.6 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.

Compliance Determination Requirements

D.9.7 Testing Requirements

Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of the Particulate Matter (PM) control devices (S/V 15-17) utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.9.8 Particulate Matter (PM)

The dust collectors for PM and PM_{10} control shall be in operation at all times when the two (2) silica sand rainfall units, three (3) fluidized sand beds and one (1) sand mix tank are in operation.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.9.9 Visible Emissions Notations

(a) Daily visible emission notations of the silica sand rainfall units' stacks exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.9.10 Dust Collector Inspections

An inspection shall be performed each calendar quarter of the dust collectors. Defective cartridges and collectors shall be replaced. A record shall be kept of the results of the inspection ad the number of dust collectors and cartridges replaced.

D.9.11 Failure Detection

In the event that a dust collector's failure has been observed:

(i) The affected compartments will be shut down immediately until the failed units have been replaced.

(ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.9.12 Record Keeping Requirements

(a) To document compliance with Condition D.9.9, the Permittee shall maintain records of daily visible emission notations of the rainfall units at the point of exhaust.

(b) To document compliance with Condition D.9.10 and 9.11, the Permittee shall maintain records of the results of the inspections, parts replaced and corrective actions taken if necessary.

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

D.9.13 Reporting Requirements

Any deviations shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted, to the addresses listed in Section C - General Reporting Requirements, in accordance with Condition B.12.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document for Second Significant Permit Modification of the Federally Enforceable State Operating Permit (FESOP) and Enhanced New Source Review (ENSR)

Source Background and Description

Source Name:	Aero Metals, Inc.	
Source Location:	402 Darlington Street, Laporte, Indiana 46350	
County:	LaPorte	
Permit No.:	F091-5507-00074	Issued: April 7, 1997
Revision No.	SMF-091-10163	
SIC Code:	3324	
Permit Reviewer:	Nysa L. James	

History

On April 7, 1997, Aero Metals, Inc. was issued a Federally Enforceable State Operating Permit (FESOP) F-091-5507-00074. On August 27, 1998, the First Significant Modification, SMF-091-8786. On September 18, 1998, Aero Metals, Inc. filed a construction permit application and on October 22, 1998, filed an amendment requesting certain changes to the FESOP permit. The following changes were agreed to as the Second Significant Modification to this source.

Changes Proposed

The Office of Air Management (OAM) has reviewed an application from Aero Metals, Inc. relating to the requested revisions of their FESOP and is proposing the following changes:

1. Condition A.2, Emission Units and Pollution Control Summary, is amended to the following (changes are bolded and crossed out for emphasis):

A.2 Emission Units and Pollution Control Summary
The stationary source consists of the following emission units and pollution control devices:

(a) six (6) electric induction melting furnaces with total rating physically constrained to 4,380 pounds metal per hour:

(1) two (2) electric induction melting furnaces individually rated at 730 pounds metal per hour and identified as EU7 and EU8, and two (2) electric induction melting furnaces individually rated at 1,460 pounds metal per hour and identified as EU9 and EU10, all controlled for particulate matter by one (1) cyclone, exhausting at one (1) stack identified as S/V7; and

(2) two (2) electric induction melting furnaces individually rated at 1,460 pounds metal per hour and identified as EU58 and EU59, with particulate matter controlled by one (1) cyclone, exhausting at one (1) stack identified as S/V21;

(b) eight (8) natural gas fired wax burn-out ovens each rated at 0.55 million (MM) British thermal units (Btu) per hour and identified as EU2, EU3, EU4, EU5, EU60, EU61, EU84, and EU85 each exhausting through individual stacks respectively identified as S/V2, S/V3, S/V4, S/V5, S/V22, S/V23, S/V46, and S/V47;

(c) one (1) sodium hydroxide solution (caustic) metal parts cleaning unit rated at 1,263 pounds steel castings per hour and identified as EU1, with a wet scrubber for caustic fume control identified as AERO-421, exhausting at one (1) stack identified as S/V1;

(d) ~~five (5) surface grinders identified as EU12 through EU16, nine (9) milling machines identified as EU17 through EU25, and two (2) Bridgeport CNC milling machines identified as EU26 and EU27, all controlled for particulate matter by a Torit collection system, identified as D-1, exhausting at one (1) stack identified as S/V9;~~ **One (1) two-station key grinder, designated as EU-091, controlled by an internal micro air collection system, identified as D-2, and exhausts to one (1) stack designated as S/V 10;**

(e) one (1) 2-inch degater identified as EU28, one (1) degater machine identified as EU29, one (1) 2-head degater identified as EU30, and one (1) 4-inch degater machine identified as EU31, all controlled for particulate matter by an internal Micro air collection system, identified as D-2, exhausting at one (1) stack identified as S/V10;

(f) three (3) shot blasters identified as EU32, EU34 and EU41, four (4) friction saws identified as EU33, EU35, EU36 and EU37, and three (3) ceramic mold knock out machines identified as EU38, EU39, and EU40, all controlled for particulate matter by one (1) dust collector **and three (3) cyclones** identified as D-3, exhausting at one (1) stack identified as S/V48;

(g) four (4) sandblasters identified as EU42 through EU45, and one (1) 2-head degater, identified as EU46, all controlled for particulate matter by one (1) dust collector **and three (3) cyclones** identified as D-3, exhausting at one (1) stack identified as S/V48;

(h) two (2) silica sand rain fall units identified as EU49 and EU50, each controlled for particulate matter by one (1) cartridge type dust collector identified as MC3000-1, exhausting at two (2) stacks identified as S/V15 and S/V16;

(i) three (3) fluidized sand beds identified as EU51, EU53, and EU54, and one (1) sand mix tank identified as EU52, with EU51 controlled for particulate matter by one (1) cartridge type dust collector identified as MC3000-2, exhausting through one (1) stack identified as S/V16, and EU52, EU53, and EU54 controlled for particulate matter by one (1) cartridge type dust collector identified as MC3000-3, exhausting through one (1) stack identified as S/V17; ~~and~~

(j) one (1) OKK CNC milling machine identified as EU56, controlled for particulate matter by one (1) baghouse, exhausting at one (1) stack identified as S/V-049**;**

(k) Two (2) silica sand rainfall units, designated as EU-106 and EU-110, controlled by one (1) cartridge type dust collector designated as MC3000-1 and exhausts to two (2) stacks designated as S/V15 and S/V16;

(l) Three (3) silica sand rainfall units, designated as EU-107, EU-111 and EU-112, controlled by one (1) cartridge type dust collector designated as MC3000-2 and exhausts to one (1) stack designated as S/V16; and

(m) Three (3) silica sand rainfall units, designated as EU-108, EU-113 and EU-114, controlled by one (1) cartridge type dust collector designated as MC3000-3 and exhausts to one (1) stack designated as S/V17.

2. Condition A.3, Insignificant Activities, is amended to the following (changes are bolded and crossed out for emphasis):

A.3 Insignificant Activities
This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour. This includes one (1) unit rated at 0.58 MMBtu per hour, one (1) unit rated at 0.1 MMBtu per hour, one (1) unit rated at 0.08 MMBtu per hour, one (1) unit rated at 0.05 MMBtu per hour, three (3) units each rated at 0.125 MMBtu per hour, seven (7) radiant tube heater units rated at 0.08 MMBtu per hour for small units and 0.09 MMBtu per hour for larger units, eleven (11) radiant gas space heaters rated at 0.03 MMBtu per hour for small units and 0.09 MMBtu per hour for larger units, and one (1) boiler system rated at 2.68 MMBtu per hour;

(b) the following VOC and HAP storage containers: vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(c) machining where an aqueous cutting coolant continuously floods the machining interface;

(d) degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6;

(e) the following equipment related to manufacturing activities not resulting in the emission of hazardous air pollutants: brazing equipment, cutting torches, soldering equipment, and welding equipment;

(f) any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs;

(g) replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(h) paved and unpaved roads and parking lots with public access;

(i) nineteen (19) miscellaneous belt sanders, grinders, saws, and degaters with particulate matter emissions below 5 pounds per hour. This includes Burr King belt sander (Aero-0703), Roboform EDM (Aero-0700), SBL EDM (Aero-0701), grinder (Aero-0702), Blador grinder (Aero-0273), band saw (Aero-0250), Cincinnati grinder (Aero-0445), Burr King belt sander (Aero-0463), 9-inch degater (Aero-0422), 9-inch degater (Aero-0422B), 8-inch degater (Aero-0423), Burr King belt sander (Aero-0539), six station degater (Aero-0424), automatic degater (Aero-0444), 6-inch belt sander (Aero-0704), Delta band saw (Aero-0372), and three Burr King belt sanders (Aero-0449, Aero-0376, and Aero-0516);

(j) one (1) solvent based wax pattern cleaning operation utilizing Nalco Wax Cleaner or equivalent;

(k) twelve (12) work benches using trichloroethylene for wax repair;

(l) twelve (12) heat torches to melt wax;

(m) eight (8) 48-inch ceiling fans;

(n) one (1) 12-inch gas food grill vent;

(o) eighteen (18) ~~non-volatiles/~~non-particulate matter emitting injection molders **using trichloroethylene at a total maximum usage rate of 0.071 gallons per hour**; ~~and~~

(p) one (1) steam autoclave wax melter **designated as EU-100 and exhausts to a stack designated as S/V 66;**

(q) One (1) wax reclaimer unit, designated as EU-099, with a cyclone designated as S/V 55 utilized for separation and circulation of the wax;

(r) five (5) surface grinders identified as EU-12 through EU-16, nine (9) milling machines identified as EU-17 through EU-25, and two (2) Bridgeport CNC milling machines identified as EU-26 and EU-27, all controlled for particulate matter by a Torit collection system except for EU-18, EU-25 and EU-26, identified as D-1, exhausting at one (1) stack identified as S/V 9;

(s) exhaust fans for the melt pot area designated as S/V 50 through S/V 55;

(t) Two (2) EDM mill machines, designated as EU-96 and EU-115, with an oil usage rate of 0.051 gallons per hour each and controlled by one (1) vapor cannister collector designated as S/V 54;

(u) One (1) solvent wash tank, designated as EU-098, with a maximum solvent usage rate of 0.005 gallons per hour and controlled by one (1) vapor cannister collector designated as S/V 54;

(v) Six (6) natural gas-fired burner stations, with a maximum heat input capacity of 0.25 mmBtu/hr each and exhausts to a stack designated as S/V 8;

(w) One (1) natural gas-fired air make-up unit, designated as AM-661, with a maximum heat input capacity of 0.486 mmBtu/hr and exhausts to the atmosphere;

(x) Six (6) natural gas-fired infrared heaters, with a maximum heat input capacity of 0.09 mmBtu/hr each and exhausts to stacks designated as S/V 060 through S/V 065;

(y) Four (4) electric de-humidifiers; and

(z) One (1) six-station degater, designated as AM-767 and exhausts to the atmosphere.

3. Condition B.26, Enhanced New Source Review, is added to page 17 of 44 and is the following (changes are bolded and crossed out for emphasis):

B.26 Enhanced New Source Review [326 IAC 2]

The requirements of the construction permit rules in 326 IAC 2 are satisfied by this permit for any previously un-permitted facilities and such facilities to be constructed within eighteen (18) months after the date of issuance of this permit, as listed in Sections A.2 and A.3.

4. Condition D.1.1, Particulate Matter, is amended to the following (changes are bolded and crossed out for emphasis):

D.1.1 Particulate Matter

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facilities described above, shall not exceed **the following:**

(a) 2.08 pounds per hour with a maximum process weight rate of 730 pounds per hour; and

(b) ~~6.93~~ **3.32 pounds per hour with a maximum process weight rate of 1,460 pounds per hour.**

Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

5. Condition D.1.2, Particulate Matter 10 Microns (PM-10), is amended to the following (changes are bolded and crossed out for emphasis):

D.1.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, ~~particulate matter 10 microns emissions from the source, which includes facilities described herein at D.1 through D.8 shall not exceed 22.0 pounds per hour, including both filterable and condensible fractions~~ **the allowable PM_{10} emission rate from the six (6) electric induction melting furnaces shall be the following:**

(a) shall not exceed 1.74 pounds per hour each for the furnaces with a process weight rate of 1,460 pounds per hour; and

(b) shall not exceed 0.58 pounds per hour each for the furnaces with a process weight rate of 730 pounds per hour.

~~t~~**This** limit ~~will~~ **shall** satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

6. The testing requirements for the furnaces are amended to the following (changes are bolded and crossed out for emphasis):

D.1.4 Particulate Matter

~~During the period 48 to 54 months after issuance of this permit, the Permittee shall perform PM and PM-10 testing on any of furnaces EU7-EU10 at the cyclone exhaust stack (S/V7) or from any of furnaces EU58-EU59 at the cyclone exhaust stack (S/V21) utilizing methods per 40 CFR Part 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10.~~ **Within 60 days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of the electric induction furnaces electric induction melting furnaces (stacks designated as S/7 and S/V 21) utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

7. A compliance monitoring condition shall be added on page 25 of 44 to ensure compliance with Condition D.1.1 and D.1.2. Condition D.1.6a, Particulate Matter, is added as the following (changes are bolded and crossed out for emphasis):

D.1.6a Particulate Matter (PM)

The cyclones for PM and PM_{10} control shall be in operation at all times when the six (6) electric induction melting furnaces are in operation.

8. Condition D.2.1, Particulate Matter, is amended to the following (changes are bolded and crossed out for emphasis):

D.2.1 Particulate Matter

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facilities described above, shall not exceed ~~8.40~~ **1.05** pounds per hour **each**. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

9. Condition D.2.2, Particulate Matter 10 Microns (PM-10), is amended to the following (changes are bolded and crossed out for emphasis):

D.2.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, ~~particulate matter 10 microns emissions from the source, which includes facilities described herein at D.1 through D.8 shall not exceed 22.0 pounds per hour, including both filterable and condensible fractions~~ **the allowable PM_{10} emission rate from the eight (8) wax burn-out stations shall not exceed 1.05 pounds per hour each .** Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

10. Condition D.2.3a, Testing Requirements, is added on page 26 of 44 to ensure compliance with 326 IAC 2-8-4 and is the following (changes are bolded and crossed out for emphasis):

D.2.3a Testing Requirements

Within 60 days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of the wax burn-out stations (stacks S/V 2-5, S/V 22-23 and S/V 46-47) utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

11. Condition D.3.2, Particulate Matter 10 Microns (PM-10), is amended to the following (changes are bolded and crossed out for emphasis):

D.3.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the ~~source, which includes facilities described herein at D.1 through D.8~~ **caustic parts cleaning unit** shall not exceed ~~22.0~~ **0.30** pounds per hour, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

12. Condition D.3.3, Testing Requirement for Particulate Matter, is amended to the following (changes are bolded and crossed out for emphasis):

D.3.3 Particulate Matter

~~During the period 48 to 54 months after issuance of this Federally Enforceable State Operating Permit, the Permittee shall perform PM and PM-10 testing utilizing methods per 40 CFR Part 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.~~ **The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Condition D.3.1 and D.3.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.**

13. Section D.4, Facility Description, is amended to the following (changes are bolded and crossed out for emphasis):

~~five (5) surface grinders identified as EU12 through EU16, nine (9) milling machines identified as EU17 through EU25, and two (2) Bridgeport CNC milling machines identified as EU26 and EU27, all controlled for particulate matter by a Torit collection system, identified as D-1, exhausting at one (1) stack identified as S/V9.~~ **One (1) two-station key grinder, designated as EU-091, controlled by an internal micro air collection system, identified as D-2, and exhausts to one (1) stack designated as S/V 10.**

14. Since the facility now listed under Section D.4 is new construction, the following construction conditions are added on page 30 of 44 (changes are bolded and crossed out for emphasis):

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

General Construction Conditions

D.4a This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.4b Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

First Time Operation Permit

D.4c This document shall also become the first-time operation permit for the facilities under this section of this permit, pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in this section of this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this permit.

Operation Conditions

15. Condition D.4.1, Particulate Matter emission limitations, is amended to the following (changes are bolded and crossed out for emphasis):

D.4.1 ~~Particulate Matter~~
~~Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facility described above, shall not exceed 0.02 pounds per hour. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.~~
Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]
Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, the two-station key grinder shall not exceed 0.551 pounds per hour, based on a maximum process weight of less than 100 pounds per hour.

16. Condition D.4.2, Particulate Matter 10 Microns (PM-10), is amended to the following (changes are bolded and crossed out for emphasis):

D.4.2 Particulate Matter 10 Microns (PM-10)
Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the ~~source, which includes facilities described herein at D.1 through D.8~~ **two-station key grinder** shall not exceed ~~22.0~~ **0.045** pounds per hour, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

17. Condition D.4.2a, Testing Requirements, is amended to the following (changes are bolded and crossed out for emphasis):

D.4.2a Testing Requirements

~~Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the new Particulate Matter (PM) control devices (D-1, D-2, and D-3), the Permittee shall perform PM and PM-10 testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.~~ **The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Condition D.4.1and D.4.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.**

18. Condition D.4.3, Visible Emissions Notations, is amended to the following (changes are bolded and crossed out for emphasis):

D.4.3 Visible Emissions Notations

Daily visible emission notations of the ~~Torit~~ **internal micro air** collection system stack exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

19. A compliance monitoring condition is added on page 30 of 44 to ensure compliance with Condition D.4.1. Condition D.4.4, Particulate Matter, is added as the following (changes are bolded and crossed out for emphasis):

D.4.4 Particulate Matter (PM)

The internal micro air collection system for PM and PM_{10} control shall be in operation at all times when the two-station key grinder is in operation.

20. Condition D.5.1, Particulate Matter, is amended to the following (changes are bolded and crossed out for emphasis):

D.5.1 Particulate Matter

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facilit~~y~~**ies** described above, shall not exceed ~~0.47~~ **0.117** pounds per hour **each**. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

21. Condition D.5.2, Particulate Matter 10 Microns (PM-10), is amended to the following (changes are bolded and crossed out for emphasis):

D.5.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the ~~source, which includes facilities described herein at D.1 through D.8~~ **above listed facilities** shall not exceed ~~22.0~~ **0.007** pounds per hour **each**, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

22. Condition D.5.2a, Testing Requirements, is amended to the following (changes are bolded and crossed out for emphasis):

D.5.2a Testing Requirements

~~Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the new Particulate Matter (PM) control devices (D-1, D-2, and D-3), the Permittee shall perform PM and PM-10 testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.~~ **The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Condition D.5.1 and D.5.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.**

23. A compliance monitoring condition shall be added on page 33 of 44 to ensure compliance with Condition D.5.1. Condition D.5.4a, Particulate Matter, is added as the following (changes are bolded and crossed out for emphasis):

D.5.4a Particulate Matter (PM)

The internal micro air collection system for PM and PM_{10} control shall be in operation at all times when EU-28, EU-29, EU-30 and EU-31 are in operation.

24. The facility description section for D.6 is amended to the following (changes are bolded and crossed out for emphasis):

three (3) shot blasters identified as EU32, EU34 and EU41, four (4) friction saws identified as EU33, EU35, EU36 and EU37, and three (3) ceramic mold knock out machines identified as EU38, EU39, and EU40, all controlled for particulate matter by one (1) dust collector **and three (3) cyclones** identified as D-3, exhausting at one (1) stack identified as S/V48.

four (4) sandblasters identified as EU42 through EU45, and one (1) 2-head degater, identified as EU46, all controlled for particulate matter by one (1) dust collector **and three (3) cyclones** identified as D-3, exhausting at one (1) stack identified as S/V48.

25. Condition D.6.1, Particulate Matter, is amended to the following (changes are bolded and crossed out for emphasis):

D.6.1 Particulate Matter

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facilit~~y~~**ies** described above, shall not exceed ~~4.09~~ **0.272** pounds per hour **each**. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

26. Condition D.6.2, Particulate Matter 10 Microns (PM-10), is amended to the following (changes are bolded and crossed out for emphasis):

D.6.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the ~~source, which includes facilities described herein at D.1 through D.8~~ **above listed facilities** shall not exceed ~~22.0~~ **0.003** pounds per hour **each**, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

27. Condition D.6.2a, Testing Requirements, is amended to the following (changes are bolded and crossed out for emphasis):

D.6.2a Testing Requirements

~~Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the new Particulate Matter (PM) control devices (D-1, D-2, and D-3), the Permittee shall perform PM and PM-10 testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.~~ **The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Condition D.6.1 and D.6.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.**

28. Condition D.6.4, Visible Emissions Notations, is amended to the following (changes are bolded and crossed out for emphasis):

D.6.4 Visible Emissions Notations

Daily visible emission notations of the one (1) dust collector **and three (3) cyclones** stack exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

29. A compliance monitoring condition shall be added on page 35 of 44 to ensure compliance with Condition D.6.1. Condition D.6.4a, Particulate Matter, is added as the following (changes are bolded and crossed out for emphasis):

D.6.4a Particulate Matter (PM)

The dust collector and cyclones for PM and PM_{10} control shall be in operation at all times when the three (3) shot blasters, four (4) friction saws, three (3) ceramic mold knock out machines, four (4) sandblasters and one (1) 2-head degater are in operation.

30. Condition D.6.6, Preventive Inspections, is amended to the following (changes are bolded and crossed out for emphasis):

D.6.6 Preventive Inspections

The following inspections shall be performed when the foundry process operations are operating in accordance with the Preventive Maintenance Plan prepared pursuant to Condition B.13:

Items/Conditions to be inspected:
(a) Integrity of the unit and duct work
(b) Duct work interior (free flow)
(c) Fan and motor operation

An inspection shall be performed each month of the one (1) dust collector **and three (3) cyclones** controlling the three (3) shot blasters and three (3) ceramic mold knock out machines when venting to the atmosphere. Inspections are optional when venting indoors.

In the event that control device failure has been observed, the affected control device will be shut down immediately until the failed units have been repaired or replaced.

31. Condition D.7.1, Particulate Matter, is amended to the following (changes are bolded and crossed out for emphasis):

D.7.1 Particulate Matter
Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Process Operations), the particulate matter emissions from the facilities described above, shall not exceed ~~1.17~~ **0.195** pounds per hour. Satisfaction of this limit will ensure compliance with the limit for PM-10 pursuant to 326 IAC 2-8-4.

32. Condition D.7.2, Particulate Matter 10 Microns (PM-10), is amended to the following (changes are bolded and crossed out for emphasis):

D.7.2 Particulate Matter 10 Microns (PM-10)

(a) Pursuant to 326 IAC 2-8-4, ~~particulate matter 10 microns emissions from the source, which includes facilities described herein at D.1 through D.8 shall not exceed 22.0 pounds per hour, including both filterable and condensible fractions~~ **the allowable PM_{10} emission rate from the two (2) silica sand rainfall units shall not exceed 0.20 pounds per hour each .** Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

(b) Pursuant to 326 IAC 2-8-4, the allowable PM_{10} emission rate from the three (3) fluidized sand beds shall not exceed 0.20 pounds per hour each . Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

(c) Pursuant to 326 IAC 2-8-4, the allowable PM_{10} emission rate from the one (1) sand mix tank shall not exceed 0.20 pounds per hour. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

33. Since the facilities listed in section D.7 are considered significant emission points, the facilities shall require performance testing. The following is added to page 37 of 44 (changes are bolded and crossed out for emphasis):

Compliance Determination Requirements

D.7.2a Testing Requirements

Within 60 days after the issuance of the second significant permit, the Permittee shall perform PM and PM-10 testing of the silica sand rainfall units, fluidized sand beds and sand mix tank utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

34. A compliance monitoring condition shall be added on page 37 of 44 to ensure compliance with Condition D.7.1 and D.7.2. Condition D.7.3a, Particulate Matter, is added as the following (changes are bolded and crossed out for emphasis):

D.7.3a Particulate Matter (PM)

The dust collectors for PM and PM_{10} control shall be in operation at all times when the two (2) silica sand rainfall units, three (3) fluidized sand beds and one (1) sand mix tank are in operation.

35. Condition D.8.2, Particulate Matter 10 Microns (PM-10), is amended to the following (changes are bolded and crossed out for emphasis):

D.8.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the ~~source, which includes facilities described herein at D.1 through D.8~~ **CNC milling machine** shall not exceed ~~22.0~~ **0.009** pounds per hour, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

36. Condition D.8.2a, Testing Requirements, is amended to the following (changes are bolded and crossed out for emphasis):

D.8.2a Testing Requirements

~~Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the new Particulate Matter (PM) control devices (S/V-049), the Permittee shall perform PM and PM-10 testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.~~ **The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Condition D.8.1 and D.8.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.**

37. A compliance monitoring condition shall be added on page 40 of 44 to ensure compliance with Condition D.8.1. Condition D.8.4a, Particulate Matter, is added as the following (changes are bolded and crossed out for emphasis):

D.8.4a Particulate Matter (PM)

The baghouse for PM and PM_{10} control shall be in operation at all times when the CNC milling machine is in operation.

38. Section D.9 is added on pages 41-, for the eight (8) new silica sand rainfall units. The conditions are as follows (changes are bolded and crossed out for emphasis):

SECTION D.9 FACILITY CONDITIONS

Two (2) silica sand rainfall units, designated as EU-106 and EU-110, controlled by one (1) cartridge type dust collector designated as MC3000-1 and exhausts to two (2) stacks designated as S/V15 and S/V16;
Three (3) silica sand rainfall units, designated as EU-107, EU-111 and EU-112, controlled by one (1) cartridge type dust collector designated as MC3000-2 and exhausts to one (1) stack designated as S/V16; and
Three (3) silica sand rainfall units, designated as EU-108, EU-113 and EU-114, controlled by one (1) cartridge type dust collector designated as MC3000-3 and exhausts to one (1) stack designated as S/V17.

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

Construction Conditions [326 IAC 2-1-3.2]

General Construction Conditions

D.9.1 This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.9.2 Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

First Time Operation Permit

D.9.3 This document shall also become the first-time operation permit for the facilities under this section of this permit, pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to:

Indiana Department of Environmental Management
Permit Administration & Development Section, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

verifying that the facilities were constructed as proposed in the application. The facilities covered in this section of this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this permit.

Operation Conditions

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.9.4 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, the silica sand rainfall units shall not exceed 0.551 pounds per hour each, based on a maximum process weight of 0.02 tons per hour.

D.9.5 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, the allowable PM_{10} emission rate from the eight (8) silica sand rainfall units shall not exceed 0.551 pounds per hour each . Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.9.6 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.

Compliance Determination Requirements

D.9.7 Testing Requirements

Within 60 days after the issuance of the second significant permit, the Permittee shall perform PM and PM-10 testing of the silica sand rainfall units, fluidized sand beds and sand mix tank utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.9.8 Particulate Matter (PM)

The dust collectors for PM and PM_{10} control shall be in operation at all times when the two (2) silica sand rainfall units, three (3) fluidized sand beds and one (1) sand mix tank are in operation.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.9.9 Visible Emissions Notations

(a) Daily visible emission notations of the silica sand rainfall units' stacks exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.9.10 Dust Collector Inspections

An inspection shall be performed each calendar quarter of the dust collectors. Defective cartridges and collectors shall be replaced. A record shall be kept of the results of the inspection ad the number of dust collectors and cartridges replaced.

D.9.11 Failure Detection

In the event that a dust collector's failure has been observed:

(i) The affected compartments will be shut down immediately until the failed units have been replaced.

(ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.9.12 Record Keeping Requirements

(a) To document compliance with Condition D.9.9, the Permittee shall maintain records of daily visible emission notations of the rainfall units at the point of exhaust.

(b) To document compliance with Condition D.9.10 and 9.11, the Permittee shall maintain records of the results of the inspections, parts replaced and corrective actions taken if necessary.

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

D.9.13 Reporting Requirements

Any deviations shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted, to the addresses listed in Section C - General Reporting Requirements, in accordance with Condition B.12.

Enforcement Issue

None

Recommendation

The staff recommends to the Commissioner that the modification be approved.

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

Emissions Calculations (New Equipment)

(1) PM/PM_{10} Potential Emissions from the eight rainfall units = 0.15 ton/yr / (1-.999) = 150 ton/yr each unit; Therefore total emissions is equal to 1200 ton/yr;

(2) PM/PM_{10} Potential Emissions from the Two-station key grinder = 0.05 ton/yr / (1-.999) = 50 ton/yr;

(3) PM/PM_{10} Potential Emissions from the 6-inch degater machine = 0.2 ton/yr;

(4) VOC Potential Emissions from solvent wash tank = 0.0502 gal/hr * 7.0 lb/gal * 100% VOC = 0.35 lb/hr; 0.35 lb/hr * 8760 hr/yr * ton/2000lb = 1.53 ton/yr;

(5) VOC Potential Emissions from TCE at mold injection stations = 0.007 gal/hr * 12.178 lb/gal * 100% VOC = 0.085lb/hr; 0.085 lb/hr * 8760 hr/yr * ton/2000lb = 0.37 ton/yr

(6) There are insignificant emissions from the four (4) electric de-humidifiers, exhaust fans, and two(2) EDM mill machines, wax reclaimer unit; and

(7) See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations of the combustion units (three pages).

Total Potential and Allowable Emissions (New Equipment)

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	5.06	1250.3
Particulate Matter (PM10)	5.06	1250.3
Sulfur Dioxide (SO_2)	--	--
Volatile Organic Compounds (VOC)	–	1.9
Carbon Monoxide (CO)	--	0.1
Nitrogen Oxides (NO_x)	–	1.1
Single Hazardous Air Pollutant (HAP)	--	--
Combination of HAPs	–	–

(a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3.

(1) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, the silica sand rainfall units shall not exceed 0.551 pounds per hour each, based on a maximum process weight of 0.02 tons per hour; and

(2) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

Therefore, the two-station key grinder shall not exceed 0.551 pounds per hour, based on a maximum process weight of 0.01 tons per hour.

Limited PTE

The table below summarizes the total potential to emit of the significant emission units.

	Limited PTE (tons/yr)						
Process/Facility	PM	PM-10	SO2	VOC	CO	NOx	HAPs
Induction Melting Furnaces (EU7-10 and EU58-59)	30.48	30.48	0.00	0.00	0.00	0.00	0.48
Wax Burn-out stations (EU2-5, EU60-61 and EU84-85)	36.79	36.79	0.00	0.1	0.4	1.9	0.00
Caustic Parts Cleaning (EU1)	1.31	1.31	0.00	0.00	0.00	0.00	0.00
Two-station key grinder (EU091)	2.41	0.2	0.00	0.00	0.00	0.00	0.00
Silica Sand Rainfall units (EU49-50)	1.75	1.75	0.00	0.00	0.00	0.00	0.00
Silica Sand Rainfall units (EU106-108 and EU110-114)	19.31	19.31	0.00	0.00	0.00	0.00	0.00
Fluidized Sand Beds (EU51 and EU53-54)	2.62	2.62	0.00	0.00	0.00	0.00	0.00
Sand Mix Tank (EU52)	0.88	0.88	0.00	0.00	0.00	0.00	0.00
CNC Milling Machine (EU56)	0.04	0.04	0.00	0.00	0.00	0.00	0.00
Three (3) shot blasters (EU32, EU34 and EU41), four (4) friction saws (EU33 and EU35-37) and three (3) ceramic mold knock-out machines (EU38-40)	8.96	0.175	0.00	0.00	0.00	0.00	0.00
One (1) 2-inch degater (EU28), one (1) degater machine (EU29), one (1) 2-head degater (EU30) and One (1) 4-inch degater (EU31)	2.06	0.13	0.00	0.00	0.00	0.00	0.00
four (4) sandblasters (EU42-45) and one (1) two-head degater (EU46)	8.96	0.04	0.00	0.00	0.00	0.00	0.00
Insignificant Activities	5.0	5.0	0.00	1.9	1.63	4.92	0.00
Total Emissions	120.57	98.5	0.02	16.13	1.63	6.82	0.48

Federal Rule Applicability

There are no changes in Federal rule applicability from the original FESOP.

State Rule Applicability (New Equipment)

There are no changes in State rule applicability from the FESOP for the existing equipment.

326 IAC 5-1-2 (Opacity Limitations):

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the opacity shall meet the following:

(a) Opacity shall not exceed an average of 40% any one (1) six (6) minute averaging period.

(b) Opacity shall not exceed 60% for more than a cumulative total of 15 minutes (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 6-hour period.

326 IAC 6-3 (Process Operations):

Pursuant to 326 IAC 6-3 (Process Operations), the following applies:

(a) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, the silica sand rainfall units shall not exceed 0.551 pounds per hour each, based on a maximum process weight of 0.02 tons per hour; and

(b) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour. Therefore, the two-station key grinder shall not exceed 0.551 pounds per hour, based on a maximum process weight of 0.01 tons per hour.

(c) The dust collectors for particulate matter control shall be in operation at all times when the eight (8) silica sand rainfall units are in operation.

(d) The internal micro air collection system for particulate matter control shall be in operation at all times when the two-station key grinder is in operation.

(e) Daily visible emission notations of the silica sand rainfall units' stacks exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(f) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(i) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(j) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(k) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Compliance Monitoring (New Equipment - silica sand rainfall units and two-station key grinder)

1. The dust collectors for particulate matter control shall be in operation at all times when the eight (8) silica sand rainfall units are in operation.

2. The internal micro air collection system for particulate matter control shall be in operation at all times when the two-station key grinder is in operation.

3. Daily visible emission notations of the silica sand rainfall units' stacks exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
   (a) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

   (b) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

   (c) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

   (d) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

4. An inspection shall be performed each calendar quarter of the dust collectors (MC3000-1, MC3000-2 and MC3000-3). Defective cartridges and collectors shall be replaced. A record shall be kept of the results of the inspection ad the number of dust collectors and cartridges replaced.

5. In the event that a dust collector's (MC3000-1, MC3000-2 and MC3000-3) failure has been observed:

   (i) The affected compartments will be shut down immediately until the failed units have been replaced.
   (ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

   These monitoring conditions are necessary because the control devices for the sand rainfall units and grinder must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

Air Toxic Emissions

There are no changes in the air toxic emissions due to this modification.

Conclusion

The modifications of this source will be subject to the conditions of the attached proposed **FESOP Second Significant Modification-091-10163-00074.**

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for the Second Significant Permit Modification of the Federally Enforceable State Operating Permit (FESOP) and Enhanced New Source Review (ENSR)

Source Name:	Aero Metals, Inc.
Source Location:	402 Darlington Street, LaPorte, Indiana 46350
County:	LaPorte
Construction Permit No.:	SMF-091-10163-00074
SIC Code:	3324
Permit Reviewer:	Nysa L. James

On January 30, 1999, the Office of Air Management (OAM) had a notice published in the LaPorte Herald, LaPorte, Indiana, stating that Aero Metals, Inc. had applied for a second significant permit modification to the source's existing investment foundry with control. The notice also stated that OAM proposed to issue a permit for this modification 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 March 4, 1999, Aero Metals, Inc. submitted comments on the proposed permit modification. The summary of the comments and corresponding responses is as follows (changes are bolded and crossed out for emphasis):

Comment 1: The four sandblasters identified in A.2(g), should be EU-42 though EU-44 and EU-117. EU-45 has recently been replaced by EU-117 because it has a cyclone to collect particulate matter before it goes to the SV-48 collector system. Since this will reduce the overall stack emissions, we seek testing of SV-48 to ascertain what particulate emissions are coming out of the stack.

Response 1: The sandblaster designated as EU117 is considered to be new equipment the potential emissions from this new equipment are 1.25 tons per year (based on initial FESOP emission calculations from previously permitted sandblasters. However, the limited PTE decreases due to the removal of unit EU-44 and the addition of the cyclone. Conditions A.2(g), Emission Units and Pollution Control Summary located on page 5 of 44, and Condition D.6, Facility Description located on page 34 of 44, are amended to the following (changes are bolded and crossed out for emphasis):

four (4) sandblasters identified as EU42 through EU~~45~~**44 and EU117**, and one (1) 2-head degater, identified as EU46, all controlled for particulate matter by one (1) dust collector and three (3) cyclones identified as D-3, exhausting at one (1) stack identified as S/V48;

The stack testing requirement for these units, Condition D.6.2a located on page 34 of 44, is amended to the following (changes are bolded and crossed out for emphasis):

D.6.2a Testing Requirements

~~The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Condition D.6.1 and D.6.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.~~

Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of stack S/V 48 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Comment 2: A.2(i) should be changed to read "Two (2) fluidized sand beds identified as EU-53 and EU-54, one (1) mix tank EU-52, all controlled by one (1) cartridge type dust collector identified as SV-17 and one (1) fluidized sand bed identified as EU-51 controlled by one (1) cartridge type dust collector identified as SV-16".

Response 2: For descriptive purposes only, Condition A.2(i), Emission Units and Pollution Control Summary located on page 5 of 44, and Condition D.7(2), Facility Description located on page 37 of 44, are amended to the following (changes are bolded and crossed out for emphasis):

~~three (3) fluidized sand beds identified as EU51, EU53, and EU54, and one (1) sand mix tank identified as EU52, with EU51 controlled for particulate matter by one (1) cartridge type dust collector identified as MC3000-2, exhausting through one (1) stack identified as S/V16, and EU52, EU53, and EU54 controlled for particulate matter by one (1) cartridge type dust collector identified as MC3000-3, exhausting through one (1) stack identified as S/V17;~~

Two (2) fluidized sand beds identified as EU-53 and EU-54, one (1) mix tank identified as EU-52, controlled by one (1) cartridge type dust collector identified as SV-17 and one (1) fluidized sand bed identified as EU-51 controlled by one (1) cartridge type dust collector identified as SV-16;

This change is descriptive only and does change emissions or applicable rules of the units described above.

Comment 3: The one (1) OKK CNC milling machine identified as EU-56 and it's filter cartridge collector (SV-049) are an insignificant source of emissions and should be put into the insignificant activities description. As illustration of the insignificance from this unit we conducted an eight (8) week test for all particulate matter emissions being generated by EU-56. A summary of the units emissions (as noted we also tested SV-09 from the units described in A.3(r)) are attached on the page labeled TABLE 1.

Response 3: For OAM to accept stack tested values, the source needs to conduct a stack test based on the appropriate method approved by OAM and have a representative from OAM - Compliance Data Section at the stack testing location to observe and verify the method conducted.

The Compliance Data Section shall then review the stack testing information and make a determination as to whether OAM shall accept the stack testing information. Based on the initial FESOP emission calculations, this facility has a potential to emit of 31.01 tons per year and the limited potential to emit, based on after control, is 0.03 tons per year. The potential to emit is above the insignificant threshold based on this information. If the stack testing information is accepted by OAM, then the potential uncontrolled emissions, in pounds per hour, will be calculated to verify if this facility is below the insignificant activity thresholds (as described un 326 IAC 2-1-7(21)). If the emissions are below such threshold, then the source can request a minor modification to identify the milling machine as an insignificant activity. At this time, there is no change in the status of the unit.

Comment 4: The two (2) silica sand rainfall units, designated as EU-106 and EU-110 ....exhausts to one stack designated as SV-15 only and not also SV-16.

Response 4: Condition A.2(k), Emission Units and Pollution Control Summary located on page 5 of 44, and Condition D.9, Facility Description located on page 41 of 44, are amended to the following (changes are bolded and crossed out for emphasis):

Two (2) silica sand rainfall units, designated as EU-106 and EU-110, controlled by one (1) cartridge type dust collector designated as ~~MC3000-1 and exhausts to two (2) stacks designated as~~ S/V15~~ and S/V16~~;

Comment 5: A.3(p) should read “one (1) steam.....EU-109" in lieu of EU-100.

Response 5: Condition A.3(p), Insignificant Activities located on page 6 of 44, is amended to the following (changes are bolded and crossed out for emphasis):

(p) one (1) steam autoclave wax melter designated as ~~EU-100~~ **EU-109** and exhausts to a stack designated as S/V 66;

Comment 6: A.3(q) should read “one (1) wax reclaimer unit; designated as EU-099 and EU-100.”

Response 6: Condition A.3(q), Insignificant Activities located on page 6 of 44, is amended to the following (changes are bolded and crossed out for emphasis):

(q) One (1) wax reclaimer unit, designated as EU-099 **and EU-100**, with a cyclone designated as S/V 55 utilized for separation and circulation of the wax;

Comment 7: A.3(s) should read “exhaust fans.....SV-50 through SV-54". SV-55 is a cyclone for wax circulation and separation.

Response 7: Condition A.3(s), Insignificant Activities located on page 6 of 44, is amended to the following (changes are bolded and crossed out for emphasis):

(s) exhaust fans for the melt pot area designated as S/V 50 through S/V ~~55~~ **54**;

Comment 8: A.3(z) should read AM-737 in lieu of AM-767.

Response 8: Condition A.3(z), Insignificant Activities located on page 6a of 44, is amended to the following (changes are bolded and crossed out for emphasis):

(z) One (1) six-station degater, designated as AM-7~~6~~**3**7 and exhausts to the atmosphere.

Comment 9: We are concerned about being able to schedule testing 60 days after issuance of the permit modification considering approval of the test protocol as well as scheduling a test crew in that short period of time. We request an additional 30 days upon issuance of the permit modification.

Response 9: The stack testing deadline is extended from sixty (60) days to ninety (90) days after issuance of this permit modification and no later than. Condition D.1.4, D.2.3a, D.7.2a and D.9.7, Testing Requirements, are amended to reflect the thirty (30) day extension.

Comment 10: Considering that each wax burnout oven operates the same way (each oven operates at 2000 ^{o}F and burnout time is a minimum of 1 hour to remove residual wax from the empty casting shells), testing would be very costly for all eight exhausts. We request that testing be for only one stack.

Response 10: At the time of testing, the compliance data section shall determine how many units will be stack tested. The source can discuss the number of stacks tested with the compliance data section and can work on developing a test plan as to which ovens' stacks are going to be tested.

Comment 11: We agree that the equipment list in D.3 need not be completed on this emission source and since it is indeed insignificant, it should be placed in the insignificant activities section.

Response 11: Testing was not required for the facility listed in section D.3 because the emissions from the unit are not considered a large majority of the total source's emissions. This however, does not mean that the facility is considered insignificant. The potential to emit, without the control equipment, is above the insignificant activity threshold (as defined under 326 IAC 2-7-1(21). Equipment listed in the D-sections are considered significant emission points and testing of such equipment is determined on a case by case basis.

Comment 12: Paragraph D.3.4 should be changed to reflect that the pressure drop range should be within a range of 0.2 to 1.0 inches of water instead of 2.0 to 3.0 inches of water.

Response 12: Condition D.3.4, Pressure and Liquid Flow Rate Readings located on page 28 of 44, is amended to the following (changes are bolded and crossed out for emphasis):

The Permittee shall take pressure readings and scrubbing liquid flow rate readings from the wet scrubber controlling the facility, at least once a day when the facility is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the wet scrubber shall be maintained within the range of ~~2.0~~ **0.2** and ~~3.0~~ **1.0** inches of water, and the scrubbing liquid flow rate shall be maintained within the range of 1.5 and 2.0 gallons of sodium hydroxide per minute or a range and flow rate established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading or flow rate is outside of the above mentioned range for any one reading.

Comment 13: It would be virtually impossible to test each emitting source that exhausts to SV-10 collector and equally impossible to monitor them, therefore, we request that SV-10 be tested so that we can place it into the insignificant activities section.

Response 13: Visible emissions notations should only be conducted on the one stack designated as SV-10 and monitoring of the control equipment should only be conducted on the one control device designated as D-2. The definition of insignificant is defined as the "potential uncontrolled emissions" below the specified thresholds as defined under 326 IAC 2-7-1(21). The stack testing information will yield a total controlled emission rate in pounds per hour for all facilities listed in sections D.4 and D.5. OAM will need to calculate the potential uncontrolled emission rate from this tested value. If this total uncontrolled emission rate (pounds per hour) is less than the insignificant threshold, as specified under 326 IAC 2-7-1(21), then OAM shall consider these facilities to be insignificant. If this total uncontrolled emission rate is above such threshold, then each unit will have to be tested prior to exhausting to the control device to verify which facilities are insignificant and which facilities are not insignificant.

Conditions D.4.2a and D.5.2a, Testing requirements, are amended to the following (changes are bolded and crossed out for emphasis):

~~The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM and PM_{10} limits specified in Condition D.4.1(D.5.1) and D.4.2 (D.5.2) shall be determined by a performance test conducted in accordance with Section C - Performance Testing.~~

Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of stack S/V 10 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Comment 14: There is no economically feasible way to maintain a 0.272 pounds per hour or less, emission rate for each unit mentioned above in section D.6. The minimum economically achievable rate is 0.45 pounds per hour.

Response 14: The particulate matter limit of 0.272 pounds per hour is established under 326 IAC 6-3 (Process Operations). The facilities listed in section D.6 must maintain a limit of 0.272 pounds per hour or less per unit to maintain compliance with 326 IAC 6-3. Based on the initial after control emissions calculations of the FESOP, the facilities listed in section D.6 demonstrate compliance with 326 IAC 6-3 limit of 0.272 pounds per hour per unit. The units are in compliance with this limit by the use of control devices.

Comment 15: Monitoring or testing the amount of emissions exhausting to the three (3) dust collectors (SV-15, 16 and 17) is not economically feasible. Each collector has the same efficiency in the sand room. We propose that the total sand used in the emission units daily be monitored and recorded. The testing requirements for the three (3) identical dust collectors that perform that exact same operation seem to be excessive, redundant and unnecessary. We propose that only SV-17 be tested since it has more emission units hooked up to it.

Response 15: The visible emissions notations required for each stack is an acceptable way to monitor the opacity from these units. Testing is required for all three (3) stacks, as described above, because they control different processes and OAM needs to verify compliance with the PM_{10} limits for each process established in the significant source modification.. SV-17 controls two (2) fluidized sand beds and one (1) mix tank, SV-16 controls one (1) fluidized sand bed and SV-15 controls two (2) silica sand rainfall units. Based on this information, testing shall be required for all three (3) stack to obtain emissions data from the different processes listed above.

Comment 16: Considering that the CNC milling machine actually operates like lathe and drilling processes, the emissions generated are indeed insignificant and this operation should be placed in the insignificant category as stated in A.2(j).

Response 16: Based on the potential uncontrolled emissions of this unit, this would not be considered to be an insignificant activity. As stated under Response #3, the source needs to conduct an approved stack test by the OAM - Compliance Data Section.

Comment 17: Since there is never any beryllium containing metals placed in EU58 and EU59 furnaces, why should we complete testing on the exhaust stack SV-21?

Response 17: At the time of initial review of this FESOP, the information submitted to the Office of Air Management listed that the metals used in furnaces EU58 and EU59, contained beryllium. The condition requiring testing of such units, can be stricken from the FESOP and replaced with the condition that testing will not be required as long as any metals used by furnaces Eu58 and EU59, contain no berylluim. Condition D.1.5, Beryllium located on page 24 of 44, is amended to the following (changes are bolded and crossed out for emphasis):

D.1.5 Beryllium

During the period 48 to 54 months after issuance of this permit, the Permittee shall perform beryllium testing on any of furnaces EU7-EU10 at the cyclone exhaust stack (S/V7) ~~or from any of furnaces EU58-EU59 at the cyclone exhaust stack (S/V21)~~ utilizing methods per 40 CFR Part 61 Appendix B, Method 104. Method 103 of Appendix B to this part is approved by the Administrator as an alternative method. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

The Permittee is not required to perform beryllium testing on furnaces EU58 and EU59. The use of any metals containing beryllium by the furnaces designated as EU58 and EU59, must be approved by the Office of Air Management (OAM) before such change may occur.

Upon further review, OAM has made the following changes (changes are bolded and crossed out for emphasis):

1. Condition D.6.2, Particulate Matter 10 Microns (PM-10) located on page 34 of 44, is amended to increase the PM_{10} emissions of the facilities listed in such section, and is the following (changes are bolded and crossed out for emphasis):

D.6.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the above listed facilities shall not exceed ~~0.003~~ **0.015** pounds per hour each, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

2. The Limited PTE Table, located on pages 18 and 19 of 21 of the technical support document, is amended to the following (changes are bolded and crossed out for emphasis):

Process/Facility	PM	PM-10	SO2	VOC	CO	NOx	HAPs
Induction Melting Furnaces (EU7-10 and EU58-59)	30.48	30.48	0.00	0.00	0.00	0.00	0.48
Wax Burn-out stations (EU2-5, EU60-61 and EU84-85)	36.79	36.79	0.00	0.1	0.4	1.9	0.00
Caustic Parts Cleaning (EU1)	1.31	1.31	0.00	0.00	0.00	0.00	0.00
Two-station key grinder (EU091)	2.41	0.2	0.00	0.00	0.00	0.00	0.00
Silica Sand Rainfall units (EU49-50)	1.75	1.75	0.00	0.00	0.00	0.00	0.00
Silica Sand Rainfall units (EU106-108 and EU110-114)	19.31	19.31	0.00	0.00	0.00	0.00	0.00
Fluidized Sand Beds (EU51 and EU53-54)	2.62	2.62	0.00	0.00	0.00	0.00	0.00
Sand Mix Tank (EU52)	0.88	0.88	0.00	0.00	0.00	0.00	0.00
CNC Milling Machine (EU56)	0.04	0.04	0.00	0.00	0.00	0.00	0.00
Three (3) shot blasters (EU32, EU34 and EU41), four (4) friction saws (EU33 and EU35-37) and three (3) ceramic mold knock-out machines (EU38-40)	8.96	~~0.175~~ **0.675**	0.00	0.00	0.00	0.00	0.00
One (1) 2-inch degater (EU28), one (1) degater machine (EU29), one (1) 2-head degater (EU30) and One (1) 4-inch degater (EU31)	2.06	0.13	0.00	0.00	0.00	0.00	0.00
four (4) sandblasters (EU42-45) and one (1) two-head degater (EU46)	8.96	0.04	0.00	0.00	0.00	0.00	0.00
Insignificant Activities	5.0	5.0	0.00	1.9	1.63	4.92	0.00
Total Emissions	120.57	~~98.5~~ **99.0**	0.02	16.13	1.63	6.82	0.48

3. Section D.7(1), Facility Description located on page 37 of 44, and Condition A.2(h), Emission Units and Pollution Control Summary located on page 5 of 44, are amended to be consistent with the source's requested revisions of the other facilities listed under this section. The amended description is as follows (changes are bolded and crossed out for emphasis):

Two (2) silica sand rain fall units identified as EU49 and EU50, ~~each controlled for particulate matter by one (1) cartridge type dust collector identified as MC3000-1, exhausting at two (2) stacks identified as S/V15 and S/V16; and~~ **where EU49 is controlled by one (1) cartridge type dust collector identified as SV/16 and EU50 is controlled by one (1) cartridge type dust collector identified as SV/15.**

4. Section D.9, Facility Description located on page 41 of 44, and Conditions A.2(l) and A.2(m), Emission Units and Pollution Control Summary located on page 5 of 44, are amended to be consistent with the source's requested revisions of the other facilities listed under this section. The amended description is as follows (changes are bolded and crossed out for emphasis):

Three (3) silica sand rainfall units, designated as EU-107, EU-111 and EU-112, controlled by one (1) cartridge type dust collector designated as ~~MC3000-2 and exhausts to one (1) stack designated as~~ S/V16; and

Three (3) silica sand rainfall units, designated as EU-108, EU-113 and EU-114, controlled by one (1) cartridge type dust collector designated as ~~MC3000-3 and exhausts to one (1) stack designated as~~ S/V17.

5. Condition D.9.7, testing Requirements located on page 41a of 44, is amended to be consistent with the revised descriptions of the control devices and is the following (changes are bolded and crossed out for emphasis):

D.9.7 Testing Requirements

Within ninety (90) days after the issuance of the second significant permit modification, the Permittee shall perform PM and PM-10 testing of the Particulate Matter (PM) control devices (~~MC3000-1, MC3000-2 and MC3000-3~~ **S/V 15-17**) utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other 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. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Appendix A: Emission Calculations
Natural Gas Combustion Only
MM Btu/hr 0.3 - < 10
Air Make-up unit

Company Name: **Aero Metals, Inc.**
Address City IN Zip: **Darlington, Laporte, IN. 46350**
CP: **091-10163**
Plt ID: **091-00074**
Reviewer: NLJ
Date: 11-24-1998

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.5	4.3

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	11.9	11.9	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.0	0.0	0.0	0.2	0.0	0.0

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

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

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

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

Appendix A: Emission Calculations
Natural Gas Combustion Only
MM Btu/hr 0.3 - < 10
Six (6) wax burner stations

Company Name: **Aero Metals, Inc.**
Address City IN Zip: **Darlington, Laporte, IN. 46350**
CP: **091-10163**
Plt ID: **091-00074**
Reviewer: NLJ
Date: 11-24-1998

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.5	13.1

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	11.9	11.9	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.1	0.1	0.0	0.7	0.0	0.1

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

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

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

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

Appendix A: Emission Calculations
Natural Gas Combustion Only
MM Btu/hr 0.3 - < 10
Six (6) Infrared heaters

Company Name: **Aero Metals, Inc.**
Address City IN Zip: **Darlington, Laporte, IN. 46350**
CP: **091-10163**
Plt ID: **091-00074**
Reviewer: NLJ
Date: 11-24-1998

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.5	4.7

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	11.9	11.9	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.0	0.0	0.0	0.2	0.0	0.0

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

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

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

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