



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: February 14, 2013

RE: Fox Group dba Bruce Fox, Inc.

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

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

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

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

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

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

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

Enclosures
FN-REGIS.dot 1/2/08



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REGISTRATION OFFICE OF AIR QUALITY

**Fox Group dba Bruce Fox, Inc.
1909 McDonald Lane
New Albany, IN 47150**

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 043-32500-00035	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 14, 2013

SECTION A

SOURCE SUMMARY

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

A.1 General Information

The Registrant owns and operates a stationary plaque and trophy manufacturing plant.

Source Address:	1909 McDonald Lane, New Albany, Indiana 47150
General Source Phone Number:	(812) 945-3511
SIC Code:	3499 (Fabricated Metal Products, Not Elsewhere Classified)
County Location:	Floyd County
Source Location Status:	Nonattainment for PM 2.5 standard Attainment for all other criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) One (1) paint booth, identified as Paint Booth #1 (EU-01), for the spray application of paints, enamels, and clear coats, installed in the late 1960's, with a maximum capacity of 12.5 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-17;
- (b) One (1) paint booth, identified as Paint Booth #2 (EU-02), for the spray application of paints, enamels, and clear coats, installed in the late 1960's, with a maximum capacity of 6.25 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-18;
- (c) One (1) paint booth, identified as Paint Booth #3 (EU-03), for the spray application of paints, enamels, and clear coats, installed in the late 1960's, with a maximum capacity of 12.5 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-19;
- (d) One (1) paint booth, identified as Paint Booth #4 (EU-04), for the spray application of paints, enamels, and clear coats, installed in the 1970's, with a maximum capacity of 1.9 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-02;
- (e) One (1) paint booth, identified as Paint Booth #5 (EU-05), for the spray application of paints, enamels, and clear coats, installed in the 1970's, with a maximum capacity of 12.5 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-01;
- (f) One (1) paint booth, identified as Paint Booth #6 (EU-06), for the spray application of paints, enamels, and clear coats, installed in the mid-1980's, with a maximum capacity of 25 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-09;
- (g) One (1) paint booth, identified as Paint Booth #7 (EU-07), for the spray application of silver reducer & sensitizer in preparation for electroforming, installed in the 1970's, with a

maximum capacity of 3.1 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting indoors;

Note: The seven (7) paint booths (EU-01, EU-02, EU-03, EU-04, EU-05, EU-06, and EU-07) are considered separate facilities because they coat different products and do not operate in a sequence.

- (h) One (1) brass electroplating bath, identified as Brass #1 (EU-08), with a total volume of 185 gallons and a maximum capacity of 5.63 square feet of plating surface area, using a current density of 10 amperes per square feet, and exhausting indoors;
- (i) One (1) brass electroplating bath, identified as Brass #2 (EU-09), with a total volume of 185 gallons and a maximum capacity of 5.63 square feet of plating surface area, using a current density of 10 amperes per square feet, and exhausting indoors;
- (j) One (1) copper electroplating bath, identified as Bright Acid Copper (EU-10), with a total volume of 92 gallons and a maximum capacity of 5.00 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (k) One (1) copper electroplating bath, identified as Copper Strike (EU-11), with a total volume of 156 gallons and a maximum capacity of 5.00 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (l) One (1) nickel electroplating bath, identified as Nickel (EU-12), with a total volume of 185 gallons and a maximum capacity of 4.17 square feet of plating surface area, using a current density of 40 amperes per square feet, and exhausting indoors;

Under 40 CFR 63, Subpart WWWW, this unit is considered an affected facility.

- (m) One (1) gold electroplating bath, identified as BF Gold (EU-13), with a total volume of 68 gallons and a maximum capacity of 2.67 square feet of plating surface area, using a current density of 5 amperes per square feet, and exhausting indoors;
- (n) One (1) silver electroplating bath, identified as Silver (EU-14), with a total volume of 85 gallons and a maximum capacity of 4.50 square feet of plating surface area, using a current density of 5 amperes per square feet, and exhausting indoors;
- (o) One (1) zinc electroplating bath, identified as Viro Black (EU-15), with a total volume of 48 gallons and a maximum capacity of 2.08 square feet of plating surface area, using a current density of 10 amperes per square feet, and exhausting indoors;
- (p) One (1) zinc electroless plating bath, identified as Zincate (EU-16), with a total volume of 100 gallons and a maximum capacity of 2.43 square feet of plating surface area, and exhausting indoors;
- (q) One (1) copper electroplating bath, identified as Copper Cyanide (EU-17), with a total volume of 160 gallons and a maximum capacity of 5.63 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (r) One (1) copper electroforming bath, identified as Bright Acid Copper (EU-18), with a total volume of 250 gallons and a maximum capacity of 29.17 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (s) One (1) copper electroforming bath, identified as Regular Acid Copper (EU-19), with a total volume of 480 gallons and a maximum capacity of 8.67 square feet of plating

surface area, using a current density of 12 amperes per square feet, and exhausting indoors;

- (t) One (1) copper electroforming bath, identified as Regular Acid Copper (EU-20), with a total volume of 400 gallons and a maximum capacity of 25.28 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (u) One (1) acid dip bath with a total volume of 66 gallons for cleaning electroplated units;
- (v) One (1) alkaline dip bath with a total volume of 56 gallons for cleaning electroplated units;
- (w) One (1) copper/brass oxidizing dip bath with a total volume of 50 gallons for finishing electroplated units;
- (x) One (1) silver oxidizing dip bath with a total volume of 40 gallons for finishing electroplated units;
- (y) Three (3) natural gas-fired manual pot furnaces, identified as Spin Casting (EU-21), each with maximum heat input rating of 0.01 million Btu per hour, one (1) furnace with a maximum capacity of 150 pounds of lead alloy per hour and two (2) furnaces each with a maximum capacity of 100 pounds of pewter per hour, and exhausting to S-03;
- (z) One (1) natural gas-fired crucible furnace, identified as Speed Casting (EU-22), with a maximum heat input rating of 0.325 million Btu per hour and a maximum capacity of 20 pounds of aluminum or bronze per hour, and exhausting to S-04;
- (aa) One (1) natural gas-fired open hearth furnace, identified as Kiln Casting (EU-23), with a maximum heat input rating of 0.24 million Btu per hour and a maximum capacity of 1 pound of wax per hour, and exhausting to S-05;
- (bb) Two (2) hand-operated abrasive blasting units for blasting cast metal pieces, one (1) unit using steel shot and one (1) backup unit using aluminum oxide as abrasive media, each with one (1) nozzle at a maximum media throughput of 13 pounds of media per hour, each with a maximum product throughput of 0.6 pounds of cast metal per hour, and exhausting indoors;
- (cc) One (1) two-part etching bath, identified as EU-24, with a maximum capacity of 6.25 trophy and plaque units per hour, with one (1) 90 gallon tank of acid etcher and one (1) 40 gal tank of alkaline stripper, and exhausting to S-11;
- (dd) One (1) Timesaver sander, for sanding polyurethane foam on electroformed pieces, with a maximum throughput of 4.29 pieces per hour, using a cyclone for particulate control, and exhausting indoors;
- (ee) One (1) CNC mill for piecework milling of aluminum parts, using a dedicated vacuum for particulate control, and exhausting indoors;
- (ff) One (1) silver emulsion typesetting operation with a maximum throughput of 3.33 linear feet of film per hour and a usage rate of 0.014 gallons each of developer and fixer per linear feet of film, and using either photographic film development, installed in late 1990, or an inkjet printer, installed in 2012;
- (gg) Two (2) hand-operated abrasive etching units using aluminum oxide as abrasive media, each with one (1) nozzle at a maximum media throughput of 0.02 pounds of aluminum

oxide per hour, each with a maximum product throughput of 3.24 pounds of etched glass per hour, and exhausting indoors;

- (hh) One (1) Instapak foam system for packing delicate trophies and plaques for shipping.
- (ii) Three (3) space heaters, identified as H001, H002, and H003, each with a maximum heat input rating of 0.08 million Btu per hour;
- (jj) Two (2) space heaters, identified as H004 and H005, each with a maximum heat input rating of 0.30 million Btu per hour;
- (kk) One (1) space heater, identified as H006, with a maximum heat input rating of 0.13 million Btu per hour;
- (ll) One (1) makeup air heater, identified as H007, with a maximum heat input rating of 3.85 million Btu per hour;
- (mm) One (1) space heater, identified as H008, with a maximum heat input rating of 0.09 million Btu per hour;
- (nn) One (1) space heater, identified as H009, with a maximum heat input rating of 0.10 million Btu per hour; and
- (oo) Paved roads and parking lots with public access.

SECTION B GENERAL CONDITIONS

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

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

B.2 Effective Date of Registration [IC 13-15-5-3]

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

B.3 Registration Revocation [326 IAC 2-1.1-9]

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

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to Registration No. 043-32500-00036 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

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

Indianapolis, IN 46204-2251

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

B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

B.8 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this registration, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant notifies:

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

The Registrant shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Fugitive Dust Emissions [326 IAC 6-4]

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

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

C.3 General Record Keeping Requirements [326 IAC 2-5.1-3(e)(2)]

- (a) Records of all required monitoring data, reports and support information required by this registration shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Registrant, the Registrant shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this registration, for all record keeping requirements not already legally required, the Registrant shall be allowed up to ninety (90) days from the date of registration issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.4 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-5.1-3(e)(2)] [IC 13-14-1-13]

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

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

- (b) Unless otherwise specified in this registration, any notice, report, or other submission required by this registration shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt,

is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

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

SECTION D.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (a) One (1) paint booth, identified as Paint Booth #1 (EU-01), for the spray application of paints, enamels, and clear coats, installed in the late 1960's, with a maximum capacity of 12.5 trophy and plaque units per hour, using fiberglass paint filters as control, and exhausting to stack S-17;
- (b) One (1) paint booth, identified as Paint Booth #2 (EU-02), for the spray application of paints, enamels, and clear coats, installed in the late 1960's, with a maximum capacity of 6.25 trophy and plaque units per hour, using fiberglass paint filters as control, and exhausting to stack S-18;
- (c) One (1) paint booth, identified as Paint Booth #3 (EU-03), for the spray application of paints, enamels, and clear coats, installed in the late 1960's, with a maximum capacity of 12.5 trophy and plaque units per hour, using fiberglass paint filters as control, and exhausting to stack S-19; and
- (d) One (1) paint booth, identified as Paint Booth #4 (EU-04), for the spray application of paints, enamels, and clear coats, installed in the 1970's, with a maximum capacity of 1.9 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-02;
- (e) One (1) paint booth, identified as Paint Booth #5 (EU-05), for the spray application of paints, enamels, and clear coats, installed in the 1970's, with a maximum capacity of 12.5 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-01;
- (f) One (1) paint booth, identified as Paint Booth #6 (EU-06), for the spray application of paints, enamels, and clear coats, installed in the mid-1980's, with a maximum capacity of 25 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-09;
- (g) One (1) paint booth, identified as Paint Booth #7 (EU-07), for the spray application of silver reducer & sensitizer in preparation for electroforming, installed in the 1970's, with a maximum capacity of 3.1 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting indoors;

Note: The seven (7) paint booths (EU-01, EU-02, EU-03, EU-04, EU-05, EU-06, and EU-07) are considered separate facilities because they coat different products and do not operate in a sequence.

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

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 VOC Limit [326 IAC 8-2-9]

In order to render 326 IAC 8-2-9 not applicable, the VOC input to the Paint Booths #1, #2, #5, and #6 (EU-1, EU-02, EU-05, and EU-06) shall each be limited to less than fifteen (15) pounds per day of VOC, including coatings, dilution solvents, and cleaning solvents.

Compliance with this limit renders the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) not applicable.

Compliance Determination Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.1.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC content contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.1.3 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.1, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit established in Condition D.1.1.
- (1) The VOC content of each coating material and solvent used less water.
 - (2) The amount of coating material and solvent used on a daily basis.
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
- (b) Section C - General Record Keeping Requirements of this registration contains the Registrant's obligations with regard to the records required by this condition.

D.1.4 Reporting Requirements

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

SECTION E.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (l) One (1) nickel electroplating bath, identified as Nickel (EU-12), with a total volume of 185 gallons and a maximum capacity of 4.17 square feet of plating surface area, using a current density of 40 amperes per square feet, and exhausting indoors;

Under 40 CFR 63, Subpart WWWWWW, this unit is considered an affected facility.

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

E.1.1 General Provisions Relating to NESHAP [326 IAC 20-1] [40 CFR 63, Subpart A]

- (a) Pursuant to 40 CFR 63.1, the Registrant shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1, except as otherwise specified in 40 CFR 63, Subpart WWWWWW.

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

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.1.2 National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Plating and Polishing Operations [40 CFR Part 63, Subpart WWWWWW]

The Registrant shall comply with the following provisions of 40 CFR Part 63, Subpart WWWWWW (included as Attachment A of this registration), except as otherwise specified in 40 CFR Part 63, Subpart WWWWWW:

- (a) 40 CFR 63.11504
- (b) 40 CFR 63.11505(a)(1),(b),(e)
- (c) 40 CFR 63.11506(a)
- (d) 40 CFR 63.11507(a),(g)
- (e) 40 CFR 63.11508
- (f) 40 CFR 63.11509(a),(b),(c)(1),(4),(5),(6),(7),(d),(e),(f)
- (g) 40 CFR 63.11510
- (h) 40 CFR 63.11511
- (i) 40 CFR 63.11512
- (j) Table 1 to Subpart WWWWWW of Part 63

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

Registration Quarterly Report

Source Name: Fox Group dba Bruce Fox, Inc.
 Source Address: 1909 McDonald Lane, New Albany, Indiana 47150
 Registration No.: 043-32500-00035
 Facility: Paint Booth #1 (EU-01)
 Parameter: VOC Input (pounds per day)
 Limit: less than fifteen (15) pounds per day to render 326 IAC 8-2-9 not applicable

Quarter: _____ Year: _____

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

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

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION**

Registration Quarterly Report

Source Name: Fox Group dba Bruce Fox, Inc.
 Source Address: 1909 McDonald Lane, New Albany, Indiana 47150
 Registration No.: 043-32500-00035
 Facility: Paint Booth #2 (EU-02)
 Parameter: VOC Input (pounds per day)
 Limit: less than fifteen (15) pounds per day to render 326 IAC 8-2-9 not applicable

Quarter: _____ **Year:** _____

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

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

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

Registration Quarterly Report

Source Name: Fox Group dba Bruce Fox, Inc.
 Source Address: 1909 McDonald Lane, New Albany, Indiana 47150
 Registration No.: 043-32500-00035
 Facility: Paint Booth #5 (EU-05)
 Parameter: VOC Input (pounds per day)
 Limit: less than fifteen (15) pounds per day to render 326 IAC 8-2-9 not applicable

Quarter: _____ Year: _____

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

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

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

Registration Quarterly Report

Source Name: Fox Group dba Bruce Fox, Inc.
Source Address: 1909 McDonald Lane, New Albany, Indiana 47150
Registration No.: 043-32500-00035
Facility: Paint Booth #6 (EU-06)
Parameter: VOC Input (pounds per day)
Limit: less than fifteen (15) pounds per day to render 326 IAC 8-2-9 not applicable

Quarter: _____ Year: _____

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

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

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

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

**REGISTRATION
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Fox Group dba Bruce Fox, Inc.
Address:	1909 McDonald Lane
City:	New Albany, Indiana 47150
Phone Number:	(812) 945-3511
Registration No.:	043-32500-00035

- I hereby certify that Fox Group dba Bruce Fox, Inc. is:
- I hereby certify that Fox Group dba Bruce Fox, Inc. is:
- still in operation.
 - no longer in operation.
 - in compliance with the requirements of Registration No. 043-32500-00035.
 - not in compliance with the requirements of Registration No. 043-32500-00035.

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

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

Noncompliance:

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

Attachment A

Title 40: Protection of Environment

Part 63 - National Emission Standards for Hazardous Air Pollutants

Subpart WWWW—National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations

Source: 73 FR 37741, July 1, 2008, unless otherwise noted.

Applicability and Compliance Dates

§ 63.11504 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a plating and polishing facility that is an area source of hazardous air pollutant (HAP) emissions and meets the criteria specified in paragraphs (a)(1) through (3) of this section.

(1) A plating and polishing facility is a plant site that is engaged in one or more of the processes listed in paragraphs (a)(1)(i) through (vi) of this section.

(i) Electroplating other than chromium electroplating (i.e., non-chromium electroplating).

(ii) Electroless or non-electrolytic plating.

(iii) Other non-electrolytic metal coating processes, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and thermal spraying.

(iv) Dry mechanical polishing of finished metals and formed products after plating or thermal spraying.

(v) Electroforming.

(vi) Electropolishing.

(2) A plating or polishing facility is an area source of HAP emissions, where an area source is any stationary source or group of stationary sources within a contiguous area under common control that does not have the potential to emit any single HAP at a rate of 9.07 megagrams per year (Mg/yr) (10 tons per year (tpy)) or more and any combination of HAP at a rate of 22.68 Mg/yr (25 tpy) or more.

(3) Your plating and polishing facility uses or has emissions of compounds of one or more plating and polishing metal HAP, which means any compound of any of the following metals: cadmium, chromium, lead, manganese, and nickel, as defined in § 63.11511, "What definitions apply to this subpart?" With the exception of lead, plating and polishing metal HAP also include any of these metals in the elemental form.

(b) [Reserved]

[73 FR 37741, July 1, 2008, as amended at 76 FR 57919, Sept. 19, 2011]

§ 63.11505 What parts of my plant does this subpart cover?

(a) This subpart applies to each new or existing affected source, as specified in paragraphs (a)(1) through (3) of this section, at all times. A new source is defined in § 63.11511, "What definitions apply to this subpart?"

(1) Each tank that contains one or more of the plating and polishing metal HAP, as defined in § 63.11511, "What definitions apply to this subpart?", and is used for non-chromium electroplating; electroforming; electropolishing; electroless plating or other non-electrolytic metal coating operations, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating.

(2) Each thermal spraying operation that applies one or more of the plating and polishing metal HAP, as defined in § 63.11511, "What definitions apply to this subpart?"

(3) Each dry mechanical polishing operation that emits one or more of the plating and polishing metal HAP, as defined in § 63.11511, "What definitions apply to this subpart?"

(b) An affected source is existing if you commenced construction or reconstruction of the affected source on or before March 14, 2008.

(c) An affected source is new if you commenced construction or reconstruction of the affected source after March 14, 2008.

(d) This subpart does not apply to any of the process units or operations described in paragraphs (d)(1) through (6) of this section.

(1) Process units that are subject to the requirements of 40 CFR part 63, subpart N (National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks).

(2) Research and development process units, as defined in § 63.11511, "What definitions apply to this subpart?"

(3) Process units that are used strictly for educational purposes.

(4) Plating, polishing, coating, or thermal spraying conducted to repair surfaces or equipment.

(5) Dry mechanical polishing conducted to restore the original finish to a surface.

(6) Any plating or polishing process that uses process materials that contain cadmium, chromium, lead, or nickel (as the metal) in amounts less than 0.1 percent by weight, or that contain manganese in amounts less than 1.0 percent by weight (as the metal), as used. Information used to determine the amount of plating and polishing metal HAP in materials used in the plating or polishing process may include information reported on the Material Safety Data Sheet for the material, but is not required. For plating or polishing tanks, the HAP content may be determined from the final bath contents "as used" to plate or to polish.

(e) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, "Title V," provided you are not otherwise required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the

previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57919, Sept. 19, 2011]

§ 63.11506 What are my compliance dates?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions of this subpart no later than July 1, 2010.

(b) If you own or operate a new affected source for which the initial startup date is on or before July 1, 2008, you must achieve compliance with the provisions of this subpart no later than July 1, 2008.

(c) If you own or operate a new affected source for which the initial startup date is after July 1, 2008, you must achieve compliance with the provisions of this subpart upon initial startup of your affected source.

Standards and Compliance Requirements

§ 63.11507 What are my standards and management practices?

(a) If you own or operate an affected new or existing non-cyanide electroplating, electroforming, or electropolishing tank (hereafter referred to as an "electrolytic" process tank, as defined in § 63.11511, "What definitions apply to this subpart?") that contains one or more of the plating and polishing metal HAP and operates at a pH of less than 12, you must comply with the requirements in paragraph (a)(1), (2), or (3) of this section, and implement the applicable management practices in paragraph (g) of this section, as practicable.

(1) You must use a wetting agent/fume suppressant in the bath of the affected tank, as defined in § 63.11511, "What definitions apply to this subpart?" and according to paragraphs (a)(1)(i) through (iii) of this section.

(i) You must initially add the wetting agent/fume suppressant in the amounts recommended by the manufacturer for the specific type of electrolytic process.

(ii) You must add wetting agent/fume suppressant in proportion to the other bath chemistry ingredients that are added to replenish the bath, as in the original make-up of the bath, or in proportions such that the bath contents are returned to that of the original make-up of the bath.

(iii) If a wetting agent/fume suppressant is included in the electrolytic process bath chemicals used in the affected tank according to the manufacturer's instructions, it is not necessary to add additional wetting agent/fume suppressants to the tank to comply with this rule.

(2) You must capture and exhaust emissions from the affected tank to any one of the following emission control devices: composite mesh pad, packed bed scrubber, or mesh pad mist eliminator, according to paragraphs (a)(2)(i) and (ii) of this section.

(i) You must operate all capture and control devices according to the manufacturer's specifications and operating instructions.

(ii) You must keep the manufacturer's specifications and operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(3) You must cover the tank surface according to paragraph (a)(3)(i) or (ii) of this section.

(i) For batch electrolytic process tanks, as defined in § 63.11511, "What definitions apply to this subpart?", you must use a tank cover, as defined in § 63.11511, over all of the effective surface area of the tank for at least 95 percent of the electrolytic process operating time.

(ii) For continuous electrolytic process tanks, as defined in § 63.11511, "What definitions apply to this subpart?", you must cover at least 75 percent of the surface of the tank, as defined in § 63.11511, whenever the electrolytic process tank is in operation.

(b) If you own or operate an affected new or existing "flash" or short-term electroplating tank, as defined in § 63.11511, "What definitions apply to this subpart?", that uses or emits one or more of the plating and polishing metal HAP, you must comply with the requirements specified in paragraph (b)(1) or (b)(2), and implement the applicable management practices in paragraph (g) of this section, as practicable.

(1) You must limit short-term or "flash" electroplating to no more than 1 cumulative hour per day or 3 cumulative minutes per hour of plating time.

(2) You must use a tank cover, as defined in § 63.11511, "What definitions apply to this subpart?", for at least 95 percent of the plating time.

(c) If you own or operate an affected new or existing process tank that is used both for short-term electroplating and for electrolytic processing of longer duration (i.e., processing that does not meet the definition of short-term or flash electroplating) and contains one or more of the plating and polishing metal HAP, you must meet the requirements specified in paragraph (a) or (b) of this section, whichever apply to the process operation, and implement the applicable management practices in paragraph (g) of this section, as practicable.

(d) If you own or operate an affected new or existing electroplating tank that uses cyanide in the plating bath, operates at pH greater than or equal to 12, and contains one or more of the plating and polishing metal HAP, you must comply with the requirements in paragraphs (d)(1) and (2) of this section:

(1) You must measure and record the pH of the bath upon startup of the bath, as defined in § 63.11511, "What definitions apply to this subpart?" No additional pH measurements are required.

(2) You must implement the applicable management practices in paragraph (g) of this section, as practicable.

(e) If you own or operate an affected new or existing dry mechanical polishing machine that emits one or more of the plating and polishing metal HAP, you must operate a capture system that captures particulate matter (PM) emissions from the dry mechanical polishing process and transports the emissions to a cartridge, fabric, or high efficiency particulate air (HEPA) filter, according to paragraphs (e)(1) and (2) of this section.

(1) You must operate all capture and control devices according to the manufacturer's specifications and operating instructions.

(2) You must keep the manufacturer's specifications and operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(f) If you own or operate an affected thermal spraying operation that applies one or more of the plating and polishing metal HAP, you must meet the applicable requirements specified in paragraphs (f)(1) through (3) of this section, and the applicable management practices in paragraph (g) of this section.

(1) For existing permanent thermal spraying operations, you must operate a capture system that collects PM emissions from the thermal spraying process and transports the emissions to a water curtain, fabric filter, cartridge, or HEPA filter, according to paragraphs (f)(1)(i) and (ii) of this section.

(2) For new permanent thermal spraying operations, you must operate a capture system that collects PM emissions from the thermal spraying process and transports the emissions to a fabric, cartridge, or HEPA filter, according to paragraphs (f)(2)(i) and (ii) of this section.

(3) For temporary thermal spraying operations, as defined in § 63.11511 "What definitions apply to this subpart?", you must meet the applicable requirements specified in paragraphs (f)(3)(i) and (ii) of this section.

(i) You must document the amount of time the thermal spraying occurs each day, and where it is conducted.

(ii) You must implement the applicable management practices specified in paragraph (g) of this section, as practicable.

(g) If you own or operate an affected new or existing plating and polishing process unit that contains, applies, or emits one or more of the plating and polishing metal HAP, you must implement the applicable management practices in paragraphs (g)(1) through (12) of this section, as practicable.

(1) Minimize bath agitation when removing any parts processed in the tank, as practicable except when necessary to meet part quality requirements.

(2) Maximize the draining of bath solution back into the tank, as practicable, by extending drip time when removing parts from the tank; using drain boards (also known as drip shields); or withdrawing parts slowly from the tank, as practicable.

(3) Optimize the design of barrels, racks, and parts to minimize dragout of bath solution (such as by using slotted barrels and tilted racks, or by designing parts with flow-through holes to allow the tank solution to drip back into the tank), as practicable.

(4) Use tank covers, if already owned and available at the facility, whenever practicable.

(5) Minimize or reduce heating of process tanks, as practicable (e.g., when doing so would not interrupt production or adversely affect part quality).

(6) Perform regular repair, maintenance, and preventive maintenance of racks, barrels, and other equipment associated with affected sources, as practicable.

(7) Minimize bath contamination, such as through the prevention or quick recovery of dropped parts, use of distilled/de-ionized water, water filtration, pre-cleaning of parts to be plated, and thorough rinsing of pre-treated parts to be plated, as practicable.

(8) Maintain quality control of chemicals, and chemical and other bath ingredient concentrations in the tanks, as practicable.

(9) Perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and periodic washdowns, as practicable.

(10) Minimize spills and overflow of tanks, as practicable.

(11) Use squeegee rolls in continuous or reel-to-reel plating tanks, as practicable.

(12) Perform regular inspections to identify leaks and other opportunities for pollution prevention.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57920, Sept. 19, 2011]

§ 63.11508 What are my compliance requirements?

(a) If you own or operate an affected source, you must submit a Notification of Compliance Status in accordance with § 63.11509(b) of "What are my notification, reporting, and recordkeeping requirements?"

(b) You must be in compliance with the applicable management practices and equipment standards in this subpart at all times.

(c) To demonstrate initial compliance, you must satisfy the requirements specified in paragraphs (c)(1) through (11) of this section.

(1) If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), "What are my standards and management practices?", and you use a wetting agent/fume suppressant to comply with this subpart, you must demonstrate initial compliance according to paragraphs (c)(1)(i) through (iv) of this section.

(i) You must add wetting agent/fume suppressant to the bath of each affected tank according to manufacturer's specifications and instructions.

(ii) You must state in your Notification of Compliance Status that you add wetting agent/fume suppressant to the bath according to manufacturer's specifications and instructions.

(iii) You must implement the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(2) If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), "What are my standards and management practices?", and you use a control system, as defined in § 63.11511, "What definitions apply to this subpart?", to comply with this subpart, you must demonstrate initial compliance according to paragraphs (c)(2)(i) through (v) of this section.

(i) You must install a control system designed to capture emissions from the affected tank and exhaust them to a composite mesh pad, packed bed scrubber, or mesh pad mist eliminator.

(ii) You must state in your Notification of Compliance Status that you have installed the control system according to the manufacturer's specifications and instructions.

(iii) You must implement the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(v) You must follow the manufacturer's specifications and operating instructions for the control systems at all times.

(3) If you own or operate an affected batch electrolytic process tank, as defined in § 63.11511, "What definitions apply to this subpart?" that contains one or more of the plating and polishing metal HAP and which is subject to the requirements in § 63.11507(a), "What are my standards and management practices?" and you use a tank cover, as defined in § 63.11511, to comply with § 11507(a), (b) or (c) of this subpart, you must demonstrate initial compliance according to paragraphs (c)(3)(i) through (iv) of this section.

(i) You must install a tank cover on the affected tank.

(ii) You must state in your Notification of Compliance Status that you operate the tank with the cover in place at least 95 percent of the electrolytic process operating time.

(iii) You must implement the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(4) If you own or operate an affected continuous electrolytic process tank, as defined in § 63.11511, "What definitions apply to this subpart?" that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), "What are my standards and management practices?" and you cover the tank surface to comply with § 11507(a), (b) or (c) of this subpart, you must demonstrate initial compliance according to paragraphs (c)(4)(i) through (iv) of this section.

(i) You must cover at least 75 percent of the surface area of the affected tank.

(ii) You must state in your Notification of Compliance Status that you operate the tank with the surface cover in place whenever the continuous electrolytic process is in operation.

(iii) You must implement the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(5) If you own or operate an affected flash or short-term electroplating tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(b), "What are my standards and management practices?" and you comply with § 11507(a), (b) or (c) of this subpart by limiting the plating time of the affected tank, you must demonstrate initial compliance according to paragraphs (c)(5)(i) through (iii) of this section.

(i) You must state in your Notification of Compliance Status that you limit short-term or flash electroplating to no more than 1 cumulative hour per day, or 3 cumulative minutes per hour of plating time.

(ii) You must implement the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(iii) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(6) If you own or operate an affected flash or short-term electroplating tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(b), "What are my standards and management practices?" and you comply with § 11507(a), (b) or (c) of this subpart by operating the affected tank with a cover, you must demonstrate initial compliance according to paragraphs (c)(6)(i) through (iv) of this section.

(i) You must install a tank cover on the affected tank.

(ii) You must state in your Notification of Compliance Status that you operate the tank with the cover in place at least 95 percent of the plating time.

(iii) You must implement the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(iv) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(7) If you own or operate an affected tank that contains one or more of the plating and polishing metal HAP, uses cyanide in the bath, and is subject to the management practices specified in § 63.11507(d), "What are my standards and management practices?", you must demonstrate initial compliance according to paragraphs (c)(7)(i) through (iii) of this section.

(i) You must report in your Notification of Compliance Status the pH of the bath solution that was measured at startup, as defined in § 63.11511, according to the requirements of § 63.11507(d)(1).

(ii) You must implement the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(iii) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11490(g), "What are my standards and management practices?", as practicable.

(8) If you own or operate an affected dry mechanical polishing operation that emits one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(e), "What are my standards and management practices?", you must demonstrate initial compliance according to paragraphs (c)(8)(i) through (iii) of this section.

(i) You must install a control system that is designed to capture PM emissions from the polishing operation and exhaust them to a cartridge, fabric, or HEPA filter.

(ii) You must state in your Notification of Compliance Status that you have installed the control system according to the manufacturer's specifications and instructions.

(iii) You must keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(9) If you own or operate an existing affected permanent thermal spraying operation that applies one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(f)(1), "What are my standards and management practices?", you must demonstrate initial compliance according to paragraphs (c)(9)(i) through (iii) of this section.

(i) You must install a control system that is designed to capture PM emissions from the thermal spraying operation and exhaust them to a water curtain, or a cartridge, fabric, or HEPA filter.

(ii) You must state in your Notification of Compliance Status that you have installed and are operating the control system according to the manufacturer's specifications and instructions.

(iii) You must keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(10) If you own or operate a new affected permanent thermal spraying operation that applies one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(f)(2), "What are my standards and management practices?", you must demonstrate initial compliance according to paragraphs (c)(10)(i) through (iii) of this section.

(i) You must install and operate a control system that is designed to capture PM emissions from the thermal spraying operation and exhaust them to a cartridge, fabric, or HEPA filter.

(ii) You must state in your Notification of Compliance Status that you have installed and operate the control system according to the manufacturer's specifications and instructions.

(iii) You must keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(11) If you own or operate an affected temporary thermal spraying operation that applies one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(f)(3), "What are my standards and management practices?", you must demonstrate initial compliance according to paragraphs (c)(11)(i) and (ii) of this section.

(i) You must implement the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(ii) You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in § 63.11507(g), "What are my standards and management practices?", as practicable.

(d) To demonstrate continuous compliance with the applicable management practices and equipment standards specified in this subpart, you must satisfy the requirements specified in paragraphs (d)(1) through (8) of this section.

(1) You must always operate and maintain your affected source, including air pollution control equipment.

(2) You must prepare an annual compliance certification according to the requirements specified in § 63.11509(c), "Notification, Reporting, and Recordkeeping," and keep it in a readily-accessible location for inspector review.

(3) If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), "What are my standards and management practices?", and you use a wetting agent/fume suppressant to comply with this subpart, you must demonstrate continuous compliance according to paragraphs (d)(3)(i) through (iii) of this section.

(i) You must record that you have added the wetting agent/fume suppressant to the tank bath in the original make-up of the tank.

(ii) For tanks where the wetting agent/fume suppressant is a separate ingredient from the other tank additives, you must demonstrate continuous compliance according to paragraphs (d)(3)(ii) (A) and (B) this section.

(A) You must add wetting agent/fume suppressant in proportion to the other bath chemistry ingredients that are added to replenish the tank bath, as in the original make-up of the tank; or in proportion such that the bath is brought back to the original make-up of the tank.

(B) You must record each addition of wetting agent/fume suppressant to the tank bath.

(iii) You must state in your annual compliance certification that you have added wetting agent/fume suppressant to the bath according to the manufacturer's specifications and instructions.

(4) If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), "What are my standards and management practices?", and you use a control system to comply with this subpart; an affected dry mechanical polishing operation that is subject to § 63.11507(e); or an affected thermal spraying operation that is subject to § 63.11507(f)(1) or (2), you must demonstrate continuous compliance according to paragraphs (d)(4)(i) through (v) of this section.

(i) You must operate and maintain the control system according to the manufacturer's specifications and instructions.

(ii) Following any malfunction or failure of the capture or control devices to operate properly, you must take immediate corrective action to return the equipment to normal operation according to the manufacturer's specifications and operating instructions.

(iii) You must state in your annual certification that you have operated and maintained the control system according to the manufacturer's specifications and instructions.

(iv) You must record the results of all control system inspections, deviations from proper operation, and any corrective action taken.

(v) You must keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.

(5) If you own or operate an affected flash or short-term electroplating tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(b), "What are my standards and management practices?" and you comply with § 11507(a), (b) or (c) of this subpart

by limiting the plating time for the affected tank, you must demonstrate continuous compliance according to paragraphs (d)(5)(i) through (iii) of this section.

(i) You must limit short-term or flash electroplating to no more than 1 cumulative hour per day or 3 cumulative minutes per hour of plating time.

(ii) You must record the times that the affected tank is operated each day.

(iii) You must state in your annual compliance certification that you have limited short-term or flash electroplating to no more than 1 cumulative hour per day or 3 cumulative minutes per hour of plating time.

(6) If you own or operate an affected batch electrolytic process tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements of § 63.11507(a), "What are my standards and management practices?" or a flash or short-term electroplating tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(b), and you comply with § 11507(a), (b) or (c) of this section by operating the affected tank with a cover, you must demonstrate continuous compliance according to paragraphs (d)(6)(i) through (iii) of this section.

(i) You must operate the tank with the cover in place at least 95 percent of the electrolytic process operating time.

(ii) You must record the times that the tank is operated and the times that the tank is covered on a daily basis.

(iii) You must state in your annual certification that you have operated the tank with the cover in place at least 95 percent of the electrolytic process time.

(7) If you own or operate an affected continuous electrolytic process tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in § 63.11507(a), "What are my standards and management practices?" and you comply with § 11507(a), (b) or (c) of this subpart by operating the affected tank with a cover, you must demonstrate continuous compliance according to paragraphs (d)(7)(i) and (ii) of this section.

(i) You must operate the tank with at least 75 percent of the surface covered during all periods of electrolytic process operation.

(ii) You must state in your annual certification that you have operated the tank with 75 percent of the surface covered during all periods of electrolytic process operation.

(8) If you own or operate an affected tank or other operation that is subject to the management practices specified in § 63.11507(g), "What are my standards and management practices?", you must demonstrate continuous compliance according to paragraphs (d)(8)(i) and (ii) of this section.

(i) You must implement the applicable management practices during all times that the affected tank or process is in operation.

(ii) You must state in your annual compliance certification that you have implemented the applicable management practices, as practicable.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57920, Sept. 19, 2011]

§ 63.11509 What are my notification, reporting, and recordkeeping requirements?

(a) If you own or operate an affected source, as defined in § 63.11505(a), "What parts of my plant does this subpart cover?", you must submit an Initial Notification in accordance with paragraphs (a)(1) through (4) of this section by the dates specified.

(1) The Initial Notification must include the information specified in § 63.9(b)(2)(i) through (iv) of the General Provisions of this part.

(2) The Initial Notification must include a description of the compliance method (e.g., use of wetting agent/fume suppressant) for each affected source.

(3) If you start up your affected source on or before July 1, 2008, you must submit an Initial Notification not later than 120 calendar days after July 1, 2008.

(4) If you startup your new affected source after July 1, 2008, you must submit an Initial Notification when you become subject to this subpart.

(b) If you own or operate an affected source, you must submit a Notification of Compliance Status in accordance with paragraphs (b)(1) through (3) of this section.

(1) The Notification of Compliance Status must be submitted before the close of business on the compliance date specified in § 63.11506, "What are my compliance dates?"

(2) The Notification of Compliance Status must include the items specified in paragraphs (b)(2)(i) through (iv) of this section.

(i) List of affected sources and the plating and polishing metal HAP used in, or emitted by, those sources.

(ii) Methods used to comply with the applicable management practices and equipment standards.

(iii) Description of the capture and emission control systems used to comply with the applicable equipment standards.

(iv) Statement by the owner or operator of the affected source as to whether the source is in compliance with the applicable standards or other requirements.

(3) If a facility makes a change to any items in (b)(2)(i), iii, and (iv) of this section that does not result in a deviation, an amended Notification of Compliance Status should be submitted within 30 days of the change.

(c) If you own or operate an affected source, you must prepare an annual certification of compliance report according to paragraphs (c)(1) through (7) of this section. These reports do not need to be submitted unless a deviation from the requirements of this subpart has occurred during the reporting year, in which case, the annual compliance report must be submitted along with the deviation report.

(1) If you own or operate an affected electroplating, electroforming, or electropolishing tank that is subject to the requirements in § 63.11507(a)(1), "What are my standards and management practices?", you must state in your annual compliance certification that you have added wetting agent/fume suppressant to the bath according to the manufacturer's specifications and instructions.

(2) If you own or operate any one of the affected sources listed in paragraphs (c)(2)(i) through (iii) of this section, you must state in your annual certification that you have operated and maintained the control system according to the manufacturer's specifications and instructions.

(i) Electroplating, electroforming, or electropolishing tank that is subject to the requirements in § 63.11507(a), "What are my standards and management practices?", and you use a control system to comply with this subpart;

(ii) Dry mechanical polishing operation that is subject to § 63.11507(e); or

(iii) Permanent thermal spraying operation that is subject to § 63.11507(f)(1) or (2).

(3) If you own or operate an affected flash or short-term electroplating tank that is subject to the requirements in § 63.11507(b), "What are my standards and management practices?" and you comply with § 11507(a), (b) or (c) of this subpart by limiting the plating time of the affected tank, you must state in your annual compliance certification that you have limited short-term or flash electroplating to no more than 1 cumulative hour per day or 3 cumulative minutes per hour of plating time.

(4) If you own or operate an affected batch electrolytic process tank that is subject to the requirements of § 63.11507(a) or a flash or short-term electroplating tank that is subject to the requirements in § 63.11507(b), "What are my standards and management practices?" and you comply with § 11507(a), (b) or (c) of this subpart by operating the affected tank with a cover, you must state in your annual certification that you have operated the tank with the cover in place at least 95 percent of the electrolytic process time.

(5) If you own or operate an affected continuous electrolytic process tank that is subject to the requirements of § 63.11507(a), "What are my standards and management practices?" and you comply with § 11507(a), (b) or (c) of this subpart by operating the affected tank with a cover, you must state in your annual certification that you have covered at least 75 percent of the surface area of the tank during all periods of electrolytic process operation.

(6) If you own or operate an affected tank or other affected plating and polishing operation that is subject to the management practices specified in § 63.11507(g), "What are my standards and management practices?" you must state in your annual compliance certification that you have implemented the applicable management practices, as practicable.

(7) Each annual compliance report must be prepared no later than January 31 of the year immediately following the reporting period and kept in a readily-accessible location for inspector review. If a deviation has occurred during the year, each annual compliance report must be submitted along with the deviation report, and postmarked or delivered no later than January 31 of the year immediately following the reporting period.

(d) If you own or operate an affected source, and any deviations from the compliance requirements specified in this subpart occurred during the year, you must report the deviations, along with the corrective action taken, and submit this report to the delegated authority.

(e) You must keep the records specified in paragraphs (e)(1) through (3) of this section.

(1) A copy of any Initial Notification and Notification of Compliance Status that you submitted and all documentation supporting those notifications.

(2) The records specified in § 63.10(b)(2)(i) through (iii) and (xiv) of the General Provisions of this part.

(3) The records required to show continuous compliance with each management practice and equipment standard that applies to you, as specified in § 63.11508(d), "What are my compliance requirements?"

(f) You must keep each record for a minimum of 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1) of the General Provisions to part 63. You may keep the records offsite for the remaining 3 years.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57920, Sept. 19, 2011]

Other Requirements and Information

§ 63.11510 What General Provisions apply to this subpart?

If you own or operate a new or existing affected source, you must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 1 of this subpart.

§ 63.11511 What definitions apply to this subpart?

Terms used in this subpart are defined in this section.

Batch electrolytic process tank means a tank used for an electrolytic process in which a part or group of parts, typically mounted on racks or placed in barrels, is placed in the tank and immersed in an electrolytic process solution as a single unit (i.e., as a batch) for a predetermined period of time, during which none of the parts are removed from the tank and no other parts are added to the tank, and after which the part or parts are removed from the tank as a unit.

Bath means the liquid contents of a tank, as defined in this section, which is used for electroplating, electroforming, electropolishing, or other metal coating processes at a plating and polishing facility.

Bench-scale means any operation that is small enough to be performed on a bench, table, or similar structure so that the equipment is not directly contacting the floor.

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

Cartridge filter means a type of control device that uses perforated metal cartridges containing a pleated paper or non-woven fibrous filter media to remove PM from a gas stream by sieving and other mechanisms. Cartridge filters can be designed with single use cartridges, which are removed and disposed after reaching capacity, or continuous use cartridges, which typically are cleaned by means of a pulse-jet mechanism.

Composite mesh pad means a type of control device similar to a mesh pad mist eliminator except that the device is designed with multiple pads in series that are woven with layers of material with varying fiber diameters, which produce a coalescing effect on the droplets or PM that impinge upon the pads.

Continuous electrolytic process tank means a tank that uses an electrolytic process and in which a continuous metal strip or other type of continuous substrate is fed into and removed from the tank continuously. This process is also called reel-to-reel electrolytic plating.

Control device means equipment that is part of a control system that collects and/or reduces the quantity of a pollutant that is emitted to the air. The control device receives emissions that are transported from the process by the capture system.

Control system means the combination of a capture system and a control device. The capture system is designed to collect and transport air emissions from the affected source to the control device. The overall control efficiency of any control system is a combination of the ability of the system to capture the air emissions (i.e., the capture efficiency) and the control device efficiency. Consequently, it is important to achieve good capture to ensure good overall control efficiency. Capture devices that are known to provide high capture efficiencies include hoods, enclosures, or any other duct intake devices with ductwork, dampers, manifolds, plenums, or fans.

Conversion coatings are coatings that form a hard metal finish on an object when the object is submerged in a tank bath or solution that contains the conversion coatings. Conversion coatings for the purposes of this rule include coatings composed of chromium, as well as the other plating and polishing metal HAP, where no electrical current is used.

Cyanide plating means plating processes performed in tanks that use cyanide as a major bath ingredient and that operate at pH of 12 or more, and use or emit any of the plating and polishing metal HAP, as defined in this section. Electroplating and electroforming are performed with or without cyanide. The cyanide in the bath works to dissolve the HAP metal added as a cyanide compound (e.g., cadmium cyanide) and creates free cyanide in solution, which helps to corrode the anode. These tanks are self-regulating to a pH of 12 due to the caustic nature of the cyanide bath chemistry. The cyanide in the bath is a major bath constituent and not an additive; however, the self-regulating chemistry of the bath causes the bath to act as if wetting agents/fume suppressants are being used and to ensure an optimum plating process. All cyanide plating baths at pH greater than or equal to 12 have cyanide-metal complexes in solution. The metal HAP to be plated is not emitted because it is either bound in the metal-cyanide complex or reduced at the cathode to elemental metal, and plated onto the immersed parts. Cyanide baths are not intentionally operated at pH less 12 since unfavorable plating conditions would occur in the tank, among other negative effects.

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

- (1) Fails to meet any requirement or obligation established by this rule including, but not limited to, any equipment standard (including emissions and operating limits), management practice, or operation and maintenance requirement;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this rule and that is included in the operating permit for any affected facility required to obtain such a permit;
or
- (3) Fails to meet any equipment standard (including emission and operating limits), management standard, or operation and maintenance requirement in this rule during startup, shutdown, or malfunction.

Dry mechanical polishing means a process used for removing defects from and smoothing the surface of finished metals and formed products after plating or thermal spraying with any of the plating and polishing metal HAP, as defined in this section, using automatic or manually-operated machines that have hard-faced abrasive wheels or belts and where no liquids or fluids are used to trap the removed

metal particles. The affected process does not include polishing with use of pastes, liquids, lubricants, or any other added materials.

Electroforming means an electrolytic process using or emitting any of the plating and polishing metal HAP, as defined in this section, that is used for fabricating metal parts. This process is essentially the same as electroplating except that the plated substrate (mandrel) is removed, leaving only the metal plate. In electroforming, the metal plate is self-supporting and generally thicker than in electroplating.

Electroless plating means a non-electrolytic process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which metallic ions in a plating bath or solution are reduced to form a metal coating at the surface of a catalytic substrate without the use of external electrical energy. Electroless plating is also called non-electrolytic plating. Examples include, but are not limited to, chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating.

Electrolytic plating processes means electroplating and electroforming that use or emit any of the plating and polishing metal HAP, as defined in this section, where metallic ions in a plating bath or solution are reduced to form a metal coating on the surface of parts and products using electrical energy.

Electroplating means an electrolytic process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which metal ions in solution are reduced onto the surface of the work piece (the cathode) via an electrical current. The metal ions in the solution are usually replenished by the dissolution of metal from solid metal anodes fabricated of the same metal being plated, or by direct replenishment of the solution with metal salts or oxides; electroplating is also called electrolytic plating.

Electropolishing means an electrolytic process performed in a tank after plating that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which a work piece is attached to an anode immersed in a bath, and the metal substrate is dissolved electrolytically, thereby removing the surface contaminant; electropolishing is also called electrolytic polishing. For the purposes of this subpart, electropolishing does not include bench-scale operations.

Fabric filter means a type of control device used for collecting PM by filtering a process exhaust stream through a filter or filter media. A fabric filter is also known as a baghouse.

Filters, for the purposes of this part, include cartridge, fabric, or HEPA filters, as defined in this section.

Flash electroplating means an electrolytic process performed in a tank that uses or emits any of the plating and polishing metal HAP, as defined in this section, and that is used no more than 3 cumulative minutes per hour or no more than 1 cumulative hour per day.

General Provisions of this part (40 CFR part 63, subpart A) means the section of the Code of Federal Regulations (CFR) that addresses air pollution rules that apply to all HAP sources addressed in part 63, which includes the National Emission Standards for Hazardous Air Pollutants (NESHAP).

HAP means hazardous air pollutant as defined from the list of 188 chemicals and compounds specified in the CAA Amendments of 1990; HAP are also called "air toxics." The five plating and polishing metal HAP, as defined in this section, are on this list of 188 chemicals.

High efficiency particulate air (HEPA) filter means a type of control device that uses a filter composed of a mat of randomly arranged fibers and is designed to remove at least 99.97 percent of airborne particles that are 0.3 micrometers or larger in diameter.

Maintenance is any process at a plating and polishing facility that is performed to keep the process equipment or the facility operating properly and is not performed on items to be sold as products.

Major facility for HAP is any facility that emits greater than 10 tpy of any HAP, or that emits a combined total of all HAP of over 25 tpy, where the HAP used to determine the total facility emissions are not restricted to only plating and polishing metal HAP or from only plating and polishing operations.

Mesh pad mist eliminator means a type of control device, consisting of layers of interlocked filaments densely packed between two supporting grids that remove liquid droplets and PM from the gas stream through inertial impaction and direct interception.

Metal coating operation means any process performed either in a tank that contains liquids or as part of a thermal spraying operation, that applies one or more plating and polishing metal HAP, as defined in this section, to the surface of parts and products used in manufacturing. These processes include but are not limited to: non-chromium electroplating; electroforming; electropolishing; non-electrolytic metal coating processes, such as chromate conversion coating, electroless nickel plating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and thermal or flame spraying.

Metal HAP content of material used in plating and polishing is the HAP content as determined from an analysis or engineering estimate of the HAP contents of the tank bath or solution, in the case of plating, metal coating, or electropolishing; or the HAP content of the metal coating being applied in the case of thermal spraying. Safety data sheet (SDS) information may be used in lieu of testing or engineering estimates but is not required to be used.

New source means any affected source for which you commenced construction or reconstruction after March 14, 2008.

Non-cyanide electrolytic plating and electropolishing processes means electroplating, electroforming, and electropolishing that uses or emits any of the plating and polishing metal HAP, as defined in this section, performed without cyanide in the tank. These processes do not use cyanide in the tank and operate at pH values less than 12. These processes use electricity and add or remove metals such as metal HAP from parts and products used in manufacturing. Both electroplating and electroforming can be performed with cyanide as well.

Non-electrolytic plating means a process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which metallic ions in a plating bath or solution are reduced to form a metal coating at the surface of a catalytic substrate without the use of external electrical energy. Non-electrolytic plating is also called electroless plating. Examples include chromate conversion coating, nickel acetate sealing, electroless nickel plating, sodium dichromate sealing, and manganese phosphate coating.

Packed-bed scrubber means a type of control device that includes a single or double packed bed that contains packing media on which PM and droplets impinge and are removed from the gas stream. The packed-bed section of the scrubber is followed by a mist eliminator to remove any water entrained from the packed-bed section.

Plating and polishing facility means a facility engaged in one or more of the following processes that uses or emits any of the plating and polishing metal HAP, as defined in this section: electroplating processes other than chromium electroplating (*i.e.*, non-chromium electroplating); electroless plating; other non-electrolytic metal coating processes performed in a tank, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; thermal spraying; and the dry mechanical polishing of finished metals and formed products after plating or thermal spraying.

Plating is performed in a tank or thermally sprayed so that a metal coating is irreversibly applied to an object. Plating and polishing does not include any bench-scale processes.

Plating and polishing metal HAP means any compound of any of the following metals: cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form, with the exception of lead. Any material that does not contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), and does not contain manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as reported on the Material Safety Data Sheet for the material, is not considered to be a plating and polishing metal HAP.

Plating and polishing process tanks means any tank in which a process is performed at an affected plating and polishing facility that uses or has the potential to emit any of the plating and polishing metal HAP, as defined in this section. The processes performed in plating and polishing tanks include the following: electroplating processes other than chromium electroplating (*i.e.*, non-chromium electroplating) performed in a tank; electroless plating; and non-electrolytic metal coating processes, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and electropolishing. This term does not include tanks containing solutions that are used to clean, rinse or wash parts prior to placing the parts in a plating and polishing process tank, or subsequent to removing the parts from a plating and polishing process tank. This term also does not include any bench-scale operations.

PM means solid or particulate matter that is emitted into the air.

Repair means any process used to return a finished object or tool back to its original function or shape.

Research and development process unit means any process unit that is used for conducting research and development for new processes and products and is not used to manufacture products for commercial sale, except in a *de minimis* manner.

Short-term plating means an electroplating process that uses or emits any of the plating and polishing metal HAP, as defined in this section, and that is used no more than 3 cumulative minutes per hour or 1 hour cumulative per day.

Startup of the tank bath is when the components or relative proportions of the various components in the bath have been altered from the most recent operating period. Startup of the bath does not include events where only the tank's heating or agitation and other mechanical operations are turned back on after being turned off for a period of time.

Tank cover for batch process units means a solid structure made of an impervious material that is designed to cover the entire open surface of a tank or process unit that is used for plating or other metal coating processes.

Tank cover for continuous process units, means a solid structure or combination of structures, made of an impervious material that is designed to cover at least 75 percent of the open surface of the tank or process unit that is used for continuous plating or other continuous metal coating processes.

Temporary thermal spraying means a thermal spraying operation that uses or emits any of the plating and polishing metal HAP, as defined in this section, and that lasts no more than 1 hour in duration during any one day and is conducted in situ. Thermal spraying that is conducted in a dedicated thermal spray booth or structure is not considered to be temporary thermal spraying.

Thermal spraying (also referred to as metal spraying or flame spraying) is a process that uses or emits any of the plating and polishing metal HAP, as defined in this section, in which a metallic coating is applied by projecting heated, molten, or semi-molten metal particles onto a substrate. Commonly-used thermal spraying methods include high velocity oxy-fuel (HVOF) spraying, flame spraying, electric arc spraying, plasma arc spraying, and detonation gun spraying. This operation does not include spray painting at ambient temperatures.

Water curtain means a type of control device that draws the exhaust stream through a continuous curtain of moving water to scrub out suspended PM.

Wetting agent/fume suppressant means any chemical agent that reduces or suppresses fumes or mists from a plating and polishing tank by reducing the surface tension of the tank bath.

[73 FR 37741, July 1, 2008, as amended at 76 FR 57921, Sept. 19, 2011]

§ 63.11512 Who implements and enforces this subpart?

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

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

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (5) of this section.

(1) Approval of an alternative non-opacity emissions standard under 40 CFR 63.6(g), of the General Provisions of this part.

(2) Approval of an alternative opacity emissions standard under § 63.6(h)(9), of the General Provisions of this part.

(3) Approval of a major change to test methods under § 63.7(e)(2)(ii) and (f), of the General Provisions of this part. A "major change to test method" is defined in § 63.90.

(4) Approval of a major change to monitoring under § 63.8(f), of the General Provisions of this part. A "major change to monitoring" is defined in § 63.90.

(5) Approval of a major change to recordkeeping and reporting under § 63.10(f), of the General Provisions of this part. A "major change to recordkeeping/reporting" is defined in § 63.90.

§ 63.11513 [Reserved]

Table 1 to Subpart WWWW of Part 63—Applicability of General Provisions to Plating and Polishing Area Sources

As required in § 63.11510, “What General Provisions apply to this subpart?”, you must meet each requirement in the following table that applies to you.

Citation	Subject
63.1 ¹	Applicability.
63.2	Definitions.
63.3	Units and abbreviations.
63.4	Prohibited activities.
63.6(a), (b)(1)-(b)(5), (c)(1), (c)(2), (c)(5), and (j)	Compliance with standards and maintenance requirements.
63.10(a), (b)(1), (b)(2)(i)-(iii), (xiv), (b)(3), (d)(1), (f)	Recordkeeping and reporting.
63.12	State authority and delegations.
63.13	Addresses of State air pollution control agencies and EPA regional offices.
63.14	Incorporation by reference.
63.15	Availability of information and confidentiality.

¹ Section 63.11505(e), “What parts of my plant does this subpart cover?”, exempts affected sources from the obligation to obtain title V operating permits.

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

Technical Support Document (TSD) for a Registration

Source Description and Location

Source Name:	Fox Group dba Bruce Fox, Inc.
Source Location:	1909 McDonald Lane, New Albany, Indiana 47150
County:	Floyd
SIC Code:	3499 (Fabricated Metal Products, Not Elsewhere Classified)
Registration No.:	043-32500-00035
Permit Reviewer:	Ryan Graunke

On November 9, 2012 the Office of Air Quality (OAQ) received an application from Fox Group dba Bruce Fox related to the operation of a stationary plaque and trophy manufacturing plant.

Source Definition

This company consists of the following plants:

- (a) Fox Group dba Bruce Fox, Inc. is located at 1909 McDonald Lane, New Albany, Indiana 47150, Plant ID: 043-00035; and
- (b) AsemPac is located at 5300 Foundation Blvd, New Albany, Indiana 47150, Plant ID: 043-00064.

In order to consider both plants as one single source, all three of the following criteria must be met:

- (1) The plants must have common ownership/control;
- (2) The plants must have the same SIC code; and
- (3) The plants must be located on contiguous or adjacent properties.

These plants have common ownership/control and have the same SIC code; however, IDEM does not consider the two plants to be adjacent because the properties are 2.8 miles apart and only a small percentage (<2%) of the production process is split between the two plants. Therefore, based on this evaluation these plants will not be considered one (1) source, as defined by 326 IAC 2-7-1(22).

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Floyd County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Attainment effective October 23, 2001, for the 1-hour ozone standard for the Louisville area, including Floyd County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standard (NAAQS) for purposes of 40 CFR Part 51, Subpart X. The 1-hour standard was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM _{2.5} .	

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

- (b) **PM_{2.5}**
 U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Floyd County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a lawsuit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM_{2.5} promulgated on May 8, 2008. These rules became effective on July 15, 2008. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

- (c) **Other Criteria Pollutants**
 Floyd County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Unpermitted Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Fox Group dba Bruce Fox, Inc. on November 9, 2012, relating to operation of an existing stationary plaque and trophy manufacturing plant.

The source consists of the following unpermitted emission units:

- (a) One (1) paint booth, identified as Paint Booth #1 (EU-01), for the spray application of paints, enamels, and clear coats, installed in the late 1960's, with a maximum capacity of 12.5 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-17;

- (b) One (1) paint booth, identified as Paint Booth #2 (EU-02), for the spray application of paints, enamels, and clear coats, installed in the late 1960's, with a maximum capacity of 6.25 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-18;
- (c) One (1) paint booth, identified as Paint Booth #3 (EU-03), for the spray application of paints, enamels, and clear coats, installed in the late 1960's, with a maximum capacity of 12.5 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-19;
- (d) One (1) paint booth, identified as Paint Booth #4 (EU-04), for the spray application of paints, enamels, and clear coats, installed in the 1970's, with a maximum capacity of 1.9 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-02;
- (e) One (1) paint booth, identified as Paint Booth #5 (EU-05), for the spray application of paints, enamels, and clear coats, installed in the 1970's, with a maximum capacity of 12.5 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-01;
- (f) One (1) paint booth, identified as Paint Booth #6 (EU-06), for the spray application of paints, enamels, and clear coats, installed in the mid-1980's, with a maximum capacity of 25 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting to stack S-09;
- (g) One (1) paint booth, identified as Paint Booth #7 (EU-07), for the spray application of silver reducer & sensitizer in preparation for electroforming, installed in the 1970's, with a maximum capacity of 3.1 trophy and plaque units per hour, using less than 5 gallons of coating per day, using fiberglass paint filters as control, and exhausting indoors;

Note: The seven (7) paint booths (EU-01, EU-02, EU-03, EU-04, EU-05, EU-06, and EU-07) are considered separate facilities because they coat different products and do not operate in a sequence.

- (h) One (1) brass electroplating bath, identified as Brass #1 (EU-08), with a total volume of 185 gallons and a maximum capacity of 5.63 square feet of plating surface area, using a current density of 10 amperes per square feet, and exhausting indoors;
- (i) One (1) brass electroplating bath, identified as Brass #2 (EU-09), with a total volume of 185 gallons and a maximum capacity of 5.63 square feet of plating surface area, using a current density of 10 amperes per square feet, and exhausting indoors;
- (j) One (1) copper electroplating bath, identified as Bright Acid Copper (EU-10), with a total volume of 92 gallons and a maximum capacity of 5.00 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (k) One (1) copper electroplating bath, identified as Copper Strike (EU-11), with a total volume of 156 gallons and a maximum capacity of 5.00 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (l) One (1) nickel electroplating bath, identified as Nickel (EU-12), with a total volume of 185 gallons and a maximum capacity of 4.17 square feet of plating surface area, using a current density of 40 amperes per square feet, and exhausting indoors;

Under 40 CFR 63, Subpart WWWW, this unit is considered an affected facility.

- (m) One (1) gold electroplating bath, identified as BF Gold (EU-13), with a total volume of 68 gallons and a maximum capacity of 2.67 square feet of plating surface area, using a current density of 5 amperes per square feet, and exhausting indoors;
- (n) One (1) silver electroplating bath, identified as Silver (EU-14), with a total volume of 85 gallons and a maximum capacity of 4.50 square feet of plating surface area, using a current density of 5 amperes per square feet, and exhausting indoors;
- (o) One (1) zinc electroplating bath, identified as Viro Black (EU-15), with a total volume of 48 gallons and a maximum capacity of 2.08 square feet of plating surface area, using a current density of 10 amperes per square feet, and exhausting indoors;
- (p) One (1) zinc electroless plating bath, identified as Zincate (EU-16), with a total volume of 100 gallons and a maximum capacity of 2.43 square feet of plating surface area, and exhausting indoors;
- (q) One (1) copper electroplating bath, identified as Copper Cyanide (EU-17), with a total volume of 160 gallons and a maximum capacity of 5.63 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (r) One (1) copper electroforming bath, identified as Bright Acid Copper (EU-18), with a total volume of 250 gallons and a maximum capacity of 29.17 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (s) One (1) copper electroforming bath, identified as Regular Acid Copper (EU-19), with a total volume of 480 gallons and a maximum capacity of 8.67 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (t) One (1) copper electroforming bath, identified as Regular Acid Copper (EU-20), with a total volume of 400 gallons and a maximum capacity of 25.28 square feet of plating surface area, using a current density of 12 amperes per square feet, and exhausting indoors;
- (u) One (1) acid dip bath with a total volume of 66 gallons for cleaning electroplated units;
- (v) One (1) alkaline dip bath with a total volume of 56 gallons for cleaning electroplated units;
- (w) One (1) copper/brass oxidizing dip bath with a total volume of 50 gallons for finishing electroplated units;
- (x) One (1) silver oxidizing dip bath with a total volume of 40 gallons for finishing electroplated units;
- (y) Three (3) natural gas-fired manual pot furnaces, identified as Spin Casting (EU-21), each with maximum heat input rating of 0.01 million Btu per hour, one (1) furnace with a maximum capacity of 150 pounds of lead alloy per hour and two (2) furnaces each with a maximum capacity of 100 pounds of pewter per hour, and exhausting to S-03;
- (z) One (1) natural gas-fired crucible furnace, identified as Speed Casting (EU-22), with a maximum heat input rating of 0.325 million Btu per hour and a maximum capacity of 20 pounds of aluminum or bronze per hour, and exhausting to S-04;
- (aa) One (1) natural gas-fired open hearth furnace, identified as Kiln Casting (EU-23), with a maximum heat input rating of 0.24 million Btu per hour and a maximum capacity of 1 pound of wax per hour, and exhausting to S-05;
- (bb) Two (2) hand-operated abrasive blasting units for blasting cast metal pieces, one (1) unit using steel shot and one (1) backup unit using aluminum oxide as abrasive media, each with one (1)

- nozzle at a maximum media throughput of 13 pounds of media per hour, each with a maximum product throughput of 0.6 pounds of cast metal per hour, and exhausting indoors;
- (cc) One (1) two-part etching bath, identified as EU-24, with a maximum capacity of 6.25 trophy and plaque units per hour, with one (1) 90 gallon tank of acid etcher and one (1) 40 gal tank of alkaline stripper, and exhausting to S-11;
 - (dd) One (1) Timesaver sander, for sanding polyurethane foam on electroformed pieces, with a maximum throughput of 4.29 pieces per hour, using a cyclone for particulate control, and exhausting indoors;
 - (ee) One (1) CNC mill for piecework milling of aluminum parts, using a dedicated vacuum for particulate control, and exhausting indoors;
 - (ff) One (1) silver emulsion typesetting operation with a maximum throughput of 3.33 linear feet of film per hour and a usage rate of 0.014 gallons each of developer and fixer per linear feet of film, and using either photographic film development, installed in late 1990, or an inkjet printer, installed in 2012;
 - (gg) Two (2) hand-operated abrasive etching units using aluminum oxide as abrasive media, each with one (1) nozzle at a maximum media throughput of 0.02 pounds of aluminum oxide per hour, each with a maximum product throughput of 3.24 pounds of etched glass per hour, and exhausting indoors;
 - (hh) One (1) Instapak foam system for packing delicate trophies and plaques for shipping.
 - (ii) Three (3) space heaters, identified as H001, H002, and H003, each with a maximum heat input rating of 0.08 million Btu per hour;
 - (jj) Two (2) space heaters, identified as H004 and H005, each with a maximum heat input rating of 0.30 million Btu per hour;
 - (kk) One (1) space heater, identified as H006, with a maximum heat input rating of 0.13 million Btu per hour;
 - (ll) One (1) makeup air heater, identified as H007, with a maximum heat input rating of 3.85 million Btu per hour;
 - (mm) One (1) space heater, identified as H008, with a maximum heat input rating of 0.09 million Btu per hour;
 - (nn) One (1) space heater, identified as H009, with a maximum heat input rating of 0.10 million Btu per hour; and
 - (oo) Paved roads and parking lots with public access.

Enforcement Issues

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Registration

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM ₁₀ *	PM _{2.5}	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Paint booths (EU-01 to EU-07)	1.44	1.44	1.44			16.7			6.18	2.97 (Xylene)
Electroplating (EU-04 to EU-17)	0.08	0.08	0.08						0.04	0.03 (Nickel)
Electroforming (EU-18 to EU-20)	0.18	0.18	0.18	-	-	-	-	-	-	-
Electroplating prep and finish	-	-	-	-	-	-	-	-	0.00002	0.00002 (HF)
Casting (EU-21 to EU-23)	1.03	1.28	-	-	-	-	-	-	0.01	0.003 (Lead)
Abrasive blasting	0.77	0.57	-	-	-	-	-	-	-	-
Etching (EU-24)	-	-	-	-	-	-	-	-	0.68	0.68 (HCl)
Timesaver sander	1.70	1.70	1.70	-	-	-	-	-	-	-
CNC mill	1.64	1.64	1.64	-	-	-	-	-	-	-
Typesetting	-	-	-	-	-	0.44	-	-	0.10	0.10 (Hydroquinone)
Abrasive etching	0.002	0.001	-	-	-	-	-	-	-	-
Instapak foam system	-	-	-	-	-	-	-	-	-	-
Natural gas	0.05	0.18	0.18	0.01	2.41	0.13	2.02	2,906	0.05	0.04 (Hexane)
Paved roads	0.14	0.03	0.01	-	-	-	-	-	-	-
Total PTE of Entire Source	7.02	7.11	5.23	0.01	2.41	17.2	2.02	2,906	7.06	2.97 (Xylene)
Exemptions Levels**	5	5	5	10	10	10	25	100,000	25	10
Registration Levels**	25	25	25	25	25	25	100	100,000	25	10

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 **The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of PM, PM₁₀, PM_{2.5}, and VOC are within the ranges listed in 326 IAC 2-5.1-2(a)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

- (c) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Secondary Lead Smelters, 40 CFR 60, Subpart L (326 IAC 12), are not included in the registration, since the Spin Casting pot furnaces (EU-21) do not smelt lead-bearing scrap material and are not secondary lead smelters, as defined in 40 CFR 60.121.
- (b) The requirements of the New Source Performance Standard for Secondary Brass and Bronze Production Plants, 40 CFR 60, Subpart M (326 IAC 12), are not included in the registration, since the Speed Casting crucible furnace (EU-22) casts bronze into the shape of finished products, pursuant to 40 CFR 60.130(a).
- (c) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chromium Emissions From Hard and Decorative Electroplating and Chromium Anodizing Tanks, 40 CFR 63, Subpart N (326 IAC 20-8), are not included in the registration, since the source does not perform chromium electroplating or chromium anodizing, as defined in 40 CFR 63.341.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) From Secondary Lead Smelting, 40 CFR 63, Subpart X (326 IAC 20-13), are not included in the registration, since the Spin Casting pot furnaces (EU-21) do not smelt lead-bearing scrap material. Therefore, they are not secondary lead smelters, as defined in 40 CFR 63.542.
- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production, 40 CFR 63, Subpart RRR (326 IAC 20-70), are not included in the registration, since the Speed Casting crucible furnace (EU-22) only melts clean charge and is not a sweat furnace, thermal chip dryer, or scrap dryer/delacquering kiln/decorating kilns. Therefore, it is not a secondary aluminum production facility as defined in 40 CFR 63.1503.
- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Metal Parts and Products, 40 CFR 63, Subpart MMMM (326 IAC 20-80), are not included in the registration, since the source is not a major source of HAPs.
- (h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Copper Smelting Area Sources, 40 CFR 63, Subpart FFFFFFF, are not included in the registration, since the Speed Casting crucible furnace (EU-22) does not process or smelt copper scrap. Therefore, it is not a secondary copper smelter as defined in 40 CFR 63.11158.
- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH, are not included in the registration, since the source does not perform paint stripping using methylene chloride (MeCl), spray application of coatings to motor vehicles and mobile equipment, or spray application of coatings that contain a target HAP (compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd)).

- (j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Nonferrous Metals Processing Area Sources, 40 CFR 63, Subpart TTTTTT, are not included in the registration, since the Spin Casting pot furnaces (EU-21) and the Speed Casting crucible furnace (EU-22) do not melt post-consumer nonferrous metal scrap. Therefore they are not secondary nonferrous metals processing facilities, as defined in 40 CFR 63.11472,
- (k) The nickel electroplating bath (EU-12) is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Plating and Polishing Operations (40 CFR 63, Subpart WWWWWW), because it is a non-chromium electroplating facility, is an area source of HAP emissions and emits plating and polishing metal HAPs, as defined in 40 CFR 63.11511. All other electroplating and electroforming baths are not subject to this subpart because they do not emit plating and polishing metal HAPs, as defined in 40 CFR 63.11511.

Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63.11504
- (2) 40 CFR 63.11505(a)(1),(b),(e)
- (3) 40 CFR 63.11506(a)
- (4) 40 CFR 63.11507(a),(g)
- (5) 40 CFR 63.11508
- (6) 40 CFR 63.11509(a),(b),(c)(1),(4),(5),(6),(7),(d),(e),(f)
- (7) 40 CFR 63.11510
- (8) 40 CFR 63.11511
- (9) 40 CFR 63.11512
- (10) Table 1 to Subpart WWWWWW of Part 63

40 CFR 63, Subpart WWWWWW does not require testing.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the nickel electroplating bath (EU-12) except as otherwise specified in 40 CFR 63, Subpart WWWWWW.

- (l) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Nine Metal Fabrication and Finishing Source Categories, 40 CFR 63, Subpart XXXXXX, are not included in the registration because, although the source performs dry abrasive blasting on materials that contain metal HAPs, the only metal HAP in this process is elemental lead, which is not considered a metal fabrication and finishing HAP, as defined in 40 CFR 63.11522.
- (m) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Aluminum, Copper and Other Nonferrous Foundries, 40 CFR 63, Subpart ZZZZZZ, are not included in the registration, since the Spin Casting pot furnaces (EU-21) and the Speed Casting crucible furnace (EU-22) because they are existing operations as of February 9, 2009, and each had an annual melt production, as defined in 40 CFR 63.11556, less than 600 tons in calendar year 2010, pursuant to 40 CFR 63.11544(4)(i)
- (n) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (o) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the registration, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination - Entire Source

The following state rules are applicable to the source:

- (a) 326 IAC 2-5.1-2 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.
- (b) 326 IAC 2-2 Prevention of Significant Deterioration (PSD) Requirements
The source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit all attainment regulated criteria pollutants are less than 250 tons per year, the potential to emit greenhouse gases (GHGs) is less than the PSD subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1). The potential to emit for 326 IAC 2-2 applicability were based potential emissions before control. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

- (h) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.
- (i) 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)
The source is not subject to the requirements of 326 IAC 8-7-2 because it does not have the potential to emit equal or greater than one hundred (100) tons per year of VOC and does not have coating facilities that have potential to emit equal to or greater than ten (10) tons per year of VOC.

State Rule Applicability Determination - Individual Facilities

Paint Booths

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(15), the seven (7) paint booths (EU-01, EU-02, EU-03, EU-04, EU-05, EU-06, and EU-07) are exempt from 326 IAC 6-3-2 because they each use less than five (5) gallons per day.

- (b) 326 IAC 8-2-9 (Surface Coating VOC Emission Limitations: Miscellaneous Metal and Plastic Parts)

Pursuant to 326 IAC 8-2-1, the provisions of 326 IAC 8-2-9 apply to miscellaneous metal coating operations existing as of July 1, 1990, located in Clark, Elkhart, Floyd, Lake, Marion, Porter, or St. Joseph counties, and which have actual VOC emissions of greater than fifteen (15) pounds per day before add-on controls. The potential VOC emissions of Paint Booths #1, #2, #5, and #6 (EU-1, EU-02, EU-05, and EU-06) are each greater than fifteen (15) pounds per day, but the source has opted to limit the VOC input to less than fifteen (15) pounds per day each in order to render the requirements of 326 IAC 8-2-9 not applicable. Therefore, the owner or operator of this source shall comply with the following:

- (1) The VOC input for Paint Booths #1, #2, #5, and #6 (EU-1, EU-02, EU-05, and EU-06) shall each be less than fifteen (15) pounds per day, including coatings, dilution solvents, and cleaning solvents.

Compliance with this limit renders the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) not applicable.

- (2) To document compliance with this limit, the owner or operator of this source shall maintain records for the total VOC input to Paint Booths #1, #2, #5, and #6 (EU-1, EU-02, EU-05, and EU-06). These records shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC emission limit for Paint Booths #1, #2, #5, and #6 (EU-1, EU-02, EU-05, and EU-06):

- (A) The amount and VOC content of each coating material, dilution solvent, and cleanup solvent used for each day. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount of materials used.

- (B) The total VOC usage for each day.

- (3) Quarterly reports containing the daily VOC input to each paint booth must be submitted.

Paint Booths #3, #4, and #7 (EU-03, EU-04, and EU-07) existed as of July 1, 1990, are located in Floyd County, and coat metal parts and products. However, pursuant to 326 IAC 8-2-1(a)(3), Paint

Booths #3, #4, and #7 (EU-03, EU-04, and EU-07) are not subject to 326 IAC 8-2-9 because they each have potential and actual VOC emissions less than fifteen (15) pounds per day.

Electroplating and Electroforming Baths

- (c) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the ten (10) electroplating baths (EU-08, EU-09, EU-10, EU-11, EU-12, EU-13, EU-14, EU-15, EU-16, EU-17) and three (3) electroplating baths (EU-18, EU-19, EU-20) are exempt from 326 IAC 6-3-2 because they each have potential PM emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.
- (d) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Casting

- (e) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the three (3) Spin Casting pot furnaces (EU-21), one (1) Speed Casting crucible furnace (EU-22), and one (1) Kiln Casting open hearth furnace (EU-23) are exempt from 326 IAC 6-3-2 because they each have potential PM emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.

Abrasive Blasting

- (f) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the two (2) abrasive blasting units are exempt from 326 IAC 6-3-2 because they each have potential PM emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.

Etching Bath

- (g) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the etching bath (EU-24) is exempt from 326 IAC 6-3-2 because it has potential PM emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.

Timesaver Sander

- (h) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the Timesaver sander is exempt from 326 IAC 6-3-2 because it has potential PM emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.

CNC Mill

- (i) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the CNC mill is exempt from 326 IAC 6-3-2 because it has potential PM emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.

Typesetting Operation

- (i) 326 IAC 8-2-9 (Surface Coating VOC Emission Limitations: Miscellaneous Metal and Plastic Parts)
The typesetting operation was constructed after July 1, 1990 and coats metal parts and products. However, pursuant to 326 IAC 8-2-1(a)(3), the typesetting operation is not subject to 326 IAC 8-2-9 because it has potential and actual VOC emissions less than fifteen (15) pounds per day.

Abrasive Etching

- (k) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the two (2) abrasive etching units are exempt from 326 IAC 6-3-2 because they each have potential PM emissions less than five hundred fifty-one thousandths (0.551) pounds per hour.

Natural Gas Heaters

- (l) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The natural gas-fired heaters are not subject to 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating), because, pursuant to 326 IAC 1-2-19, these emission units do not meet the definition of an indirect heating unit.
- (m) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The natural gas-fired combustion units are exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight.
- (n) 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)
This source is not subject to 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations) because the potential to emit sulfur dioxide from each natural gas-fired combustion unit is less than twenty-five (25) tons per year and ten (10) pounds per hour.
- (o) 326 IAC 9-1-1 (Carbon Monoxide Emission Limits)
The natural gas-fired combustion units are not subject to 326 IAC 9-1-1 (Carbon Monoxide Emission Limits) because there are no applicable emission limits for the source under 326 IAC 9-1-2.
- (p) 326 IAC 10-1-1 (Nitrogen Oxides Control)
The natural gas-fired combustion units are not subject to 326 IAC 10-1-1 (Nitrogen Oxides Control) because they have potential to emit NO_x less than forty (40) tons per year.

Compliance Determination, Monitoring and Testing Requirements

- (a) The compliance determination requirements applicable to this source are as follows:

Compliance with the VOC input limit to avoid 326 IAC 8-2-9 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.
- (b) There are no compliance monitoring or testing requirements applicable to this source.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on November 9, 2012. Additional information was received on November 20, 2012, November 26, 2012, November 30, 2012, December 3, 2012, December 11, 2012, December 16, 2012, December 19, 2012, December 20, 2012, January 11, 2013, January 14, 2013, January 17, 2013, and January 31, 2013.

The operation of this source shall be subject to the conditions of the attached proposed Registration No. 043-32500-00035. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Ryan Graunke at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

**Appendix A: Emissions Calculations
Source Summary**

Company Name: Fox Group dba Bruce Fox, Inc.
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Unlimited PTE for Entire Source												
Process	Emission Unit IDs	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP	
Paint booths	EU-01 to EU-07	1.44	1.44	1.44	-	-	16.67	-	-	6.18	2.97	Xylene
Electroplating	EU-08 to EU-17	0.08	0.08	0.08	-	-	-	-	-	0.04	0.03	Nickel
Electroforming	EU-18 to EU-20	0.18	0.18	0.18	-	-	-	-	-	-	-	-
Electroplating prep and finish	N/A	-	-	-	-	-	-	-	-	0.00002	0.00002	HF
Casting	EU-21 to EU-23	1.03	1.28	-	-	-	-	-	-	0.01	0.003	Lead
Abrasive blasting	N/A	0.77	0.57	-	-	-	-	-	-	-	-	-
Etching	EU-24	-	-	-	-	-	-	-	-	0.68	0.68	HCl
Sanding	N/A	1.70	1.70	1.70	-	-	-	-	-	-	-	-
CNC Mill	N/A	1.64	1.64	1.64	-	-	-	-	-	-	-	-
Typesetting	N/A	-	-	-	-	-	0.44	-	-	0.10	0.10	Hydroquinone
Abrasive etching	N/A	0.0018	0.0013	-	-	-	-	-	-	-	-	-
Instapak foam	N/A	-	-	-	-	-	-	-	-	-	-	-
Natural gas	EU-21 to EU-23, H001 to H009	0.05	0.18	0.18	0.01	2.41	0.13	2.02	2,906	0.05	0.04	Hexane
Paved roads	N/A	0.14	0.03	0.01	-	-	-	-	-	-	-	-
Total		7.02	7.11	5.23	0.01	2.41	17.24	2.02	2905.80	7.06	2.97	Xylene

Notes:

Instapak foam system has no emissions according to the MSDSs provided by the source

**Appendix A: Emissions Calculations
Paint booths - VOC and PM**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Emission Unit	Emission Unit ID	Material	Density (lb/gal)	Weight % Volatile (H ₂ O & Organics)	Weight % Water	Weight % VOC	Volume % Water	Volume % Solids	Usage rate (gal/unit)	Maximum throughput (unit/hr)	Maximum usage (gal/day)	VOC content (lb/gal coating)	VOC content (lb/gal coating less water)	VOC content (lb/gal coating solids)	PTE of VOC (lb/hr)	PTE of VOC (lb/day)	PTE of VOC (ton/yr)	PTE of PM (ton/yr)	Transfer Efficiency
Paint Booth #1	EU-01	Clear Coat Lacquer	7.43	76.7%	0%	76.7%	0.0%	15.4%	0.0050	12.50	1.50	5.69	5.69	37.00	0.36	8.54	1.56	0.12	75%
		Black Lacquer	13.10	81.0%	0%	81.0%	0.0%	88.7%	0.0050	12.50	1.50	10.62	10.62	11.98	0.66	15.92	2.91	0.17	75%
Paint Booth #2	EU-02	Clear Coat Lacquer	7.43	76.7%	0%	76.7%	0.0%	15.4%	0.0100	6.25	1.50	5.69	5.69	37.00	0.36	8.54	1.56	0.12	75%
		Black Enamel Paint	7.98	58.4%	0%	58.4%	0.0%	34.9%	0.0100	6.25	1.50	4.66	4.66	13.36	0.29	6.99	1.28	0.23	75%
Paint Booth #3	EU-03	Clear Coat Lacquer	7.43	76.7%	0%	76.7%	0.0%	15.4%	0.0033	12.50	0.99	5.69	5.69	37.00	0.23	5.64	1.03	0.08	75%
Paint Booth #4	EU-04	Clear Coat Lacquer	7.43	76.7%	0%	76.7%	0.0%	15.4%	0.0220	1.90	1.00	5.69	5.69	37.00	0.24	5.71	1.04	0.08	75%
Paint Booth #5	EU-05	Clear Coat Lacquer	7.43	76.7%	0%	76.7%	0.0%	15.4%	0.0050	12.50	1.50	5.69	5.69	37.00	0.36	8.54	1.56	0.12	75%
		Black Lacquer	13.10	81.0%	0%	81.0%	0.0%	88.7%	0.0050	12.50	1.50	10.62	10.62	11.98	0.66	15.92	2.91	0.17	75%
Paint Booth #6	EU-06	Clear Coat Lacquer	7.43	76.7%	0%	76.7%	0.0%	15.4%	0.0025	25.00	1.50	5.69	5.69	37.00	0.36	8.54	1.56	0.12	75%
		Black Enamel Paint	7.98	58.4%	0%	58.4%	0.0%	34.9%	0.0025	25.00	1.50	4.66	4.66	13.36	0.29	6.99	1.28	0.23	75%
Paint Booth #7	EU-07	Silver Sensitizer	8.35	90.0%	90%	0.0%	90.0%	10.0%	0.0030	3.10	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.01	75%
Totals:															3.81	91.33	16.67	1.44	

Notes:

PM=PM₁₀=PM_{2.5}

Silver Sensitizer contains no VOC/HAPS, only silver nitrate and ammonia, as provided in MSDS
Density of silver sensitizer not provided and could not be calculated by MSDS, assumed to be same as water for purposes of calculating PTE of PM
All units are exempt from 326 IAC 6-3-2 since the maximum usage is each less than 5 gal/day
Paint Booth #1, Paint Booth #2, Paint Booth #5, and Paint Booth #6 are each limited to less than 15 pounds of VOC input per day to avoid 326 IAC 8-2-9

Methodology:

Density (lb/gal) = Specific gravity * Density of water (8.345 lb/gal) or Provided in MSDS
Weight % Volatile (H₂O & Organics) = Weight % VOC + Weight % Water
Weight % VOC (for Black Enamel Paint) = 1 - Weight % Solids (41.60% as provided in MSDS)
Volume % Water = Weight % Water * Density (lb/gal) / Density of water (8.345 lb/gal)
Volume % Solids (for Black Lacquer) = 1 - Volume % Volatiles (11.35% as provided in MSDS)
Maximum usage (gal/day) = Usage rate (gal/unit) * Maximum throughput (unit/hr) * 24 hrs/day
VOC content (lb/gal coating) = Density (lb/gal) * Weight % VOC
VOC content (lb/gal coating less coating) = Density (lb/gal) * Weight % VOC / (1-Volume % Water)
VOC content (lb/gal coating solids) = Density (lb/gal) * Weight % VOC / Volume % Solids
PTE of VOC (lb/hr) = VOC content (lb/gal coating) * Usage rate (gal/unit) * Maximum throughput (unit/hr)
PTE of VOC (lb/day) = VOC content (lb/gal coating) * Usage rate (gal/unit) * Maximum throughput (unit/hr) * 24 hrs/day
PTE of VOC (ton/yr) = VOC content (lb/gal coating) * Usage rate (gal/unit) * Maximum throughput (unit/hr) * 8760 hrs/yr * 1 ton/2000 lbs
PTE of PM (ton/yr) = Usage rate (gal/unit) * Maximum throughput (unit/hr) * Density (lb/gal) * (1-Weight % volatile) * (1-Transfer efficiency) * 8760 hrs/yr * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
Paint booths - HAPs**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Emission Unit	Emission Unit ID	Material	Density (Lb/Gal)	Usage rate (gal/unit)	Maximum throughput (unit/hr)	Toulene		Glycol Ether		Ethylene Glycol		Xylene		Cobalt naphthenate		Ethylbenzene		Naphthalene		
						% Weight	PTE (ton/yr)	% Weight	PTE (ton/yr)	% Weight	PTE (ton/yr)	% Weight	PTE (ton/yr)	% Weight	PTE (ton/yr)	% Weight	PTE (ton/yr)	% Weight	PTE (ton/yr)	
Paint Booth #1	EU-01	Clear Coat Lacquer	7.43	0.0050	12.50	5%	0.10	3%	0.06	-	-	-	-	-	-	-	-	-	-	-
		Black Lacquer	13.10	0.0050	12.50	5%	0.18	10%	0.36	2%	0.07	31%	1.11	-	-	-	-	-	-	-
Paint Booth #2	EU-02	Clear Coat Lacquer	7.43	0.0100	6.25	5%	0.10	3%	0.06	-	-	-	-	-	-	-	-	-	-	-
		Black Enamel Paint	7.98	0.0100	6.25	19%	0.42	2%	0.04	-	-	17%	0.37	0.3%	0.01	4.3%	0.09	0.2%	0.00	
Paint Booth #3	EU-03	Clear Coat Lacquer	7.43	0.0033	12.50	5%	0.07	3%	0.04	-	-	-	-	-	-	-	-	-	-	
Paint Booth #4	EU-04	Clear Coat Lacquer	7.43	0.0220	1.90	5%	0.07	3%	0.04	-	-	-	-	-	-	-	-	-	-	
Paint Booth #5	EU-05	Clear Coat Lacquer	7.43	0.0050	12.50	5%	0.10	3%	0.06	-	-	-	-	-	-	-	-	-	-	
		Black Lacquer	13.10	0.0050	12.50	5%	0.18	10%	0.36	2%	0.07	31%	1.11	-	-	-	-	-	-	
Paint Booth #6	EU-06	Clear Coat Lacquer	7.43	0.0025	25.00	5%	0.10	3%	0.06	-	-	-	-	-	-	-	-	-	-	
		Black Enamel Paint	7.98	0.0025	25.00	19%	0.42	2%	0.04	-	-	17%	0.37	0.3%	0.01	4.3%	0.09	0.2%	0.00	
Paint Booth #7	EU-07	Silver Sensitizer	8.35	0.0030	3.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Totals:						1.7305		1.1297		0.1435		2.9664		0.01311		0.1879		0.01		
																		Total HAPs:		6.18

Methodology:

PTE of HAP (ton/yr) = Weight % HAP * Usage rate (gal/unit) * Maximum throughput (unit/hr) * Density (lb/gal) * 8760 hrs/yr * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
Electroplating Metal and PM Emission Factors**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Emission factor calculation

Bath	Emission Unit ID	Total bath volume (gal)	Metal salt	Salt in bath (lb)	Metal	E _m (A-hr/mil-ft ²)	e _m	C _m (oz/gal)	D _m (A/ft ²)	E _f (grains/scfm)	E _f (grains/A-hr)	Weight % metal (in bath)	Mist emission factor (grains/A-hr)	Weight % solids	PM emission factor (grains/A-hr)
Brass #1	EU-08	185	Copper cyanide	46	Copper (I)	8.84	30%	2.82	10	2.74E-04	0.027	1.85%	1.48	12.3%	0.18
Brass #2	EU-09	185	Copper cyanide	46	Copper (I)	8.84	30%	2.82	10	2.74E-04	0.027	1.85%	1.48	12.3%	0.18
Bright Acid Copper	EU-10	92	Copper sulfate	149.5	Copper (II)	17.7	30%	6.62	12	1.55E-03	0.155	4.22%	3.66	10.6%	0.39
Copper Strike	EU-11	156	Copper cyanide*	28	Copper (I)	8.84	30%	0.73	12	8.53E-05	0.009	0.49%	1.75	61.9%	1.09
Nickel	EU-12	185	Nickel sulfate*	520	Nickel	19.0	93%	10.04	40	2.71E-03	0.271	5.85%	4.63	18.2%	0.84
			Nickel chloride*	100	Nickel	19.0	93%	2.14	40	5.76E-04	0.058	1.24%			
BF Gold	EU-13	68	Gold cyanide	8.6	Gold (I)	6.2	90%	1.40	5	1.59E-05	0.002	1.01%	0.16	3.7%	0.01
Silver	EU-14	85	Silver cyanide	32	Silver	6.16	90%	4.85	5	5.48E-05	0.005	3.07%	0.18	15.5%	0.03
Viro Black	EU-15	48	N/A	N/A	Zinc	13.7	30%	4.00	10	6.03E-04	0.060	2.07%	2.92	17.8%	0.52
			N/A	N/A	Cobalt	N/A	N/A	0.50	N/A	7.54E-05	0.008	N/A			
Zincate	EU-16	100	Zinc oxide	60.5	Zinc	13.7	30%	7.77	0	0.00E+00	0.000	4.02%	0.00	35.0%	0.00
Copper Cyanide	EU-17	160	Copper cyanide	56	Copper (I)	8.84	30%	3.97	12	4.64E-04	0.046	2.61%	0.02	12.2%	0.002

Notes:

Total bath volume, constituents of each bath, and current densities (D_m) provided by source
Emissions are due to mist from the bath released during the electroplating process
Copper used to calculate PM emissions for brass plating baths, since copper is the predominant metal
Electrical equivalents (E_m) are from AP-42 Section 12.20 Emission Factor Documentation Table 3-1
Cathode efficiencies (e_m) are from AP-42 Section 12.20, low end of range assumed as worst case
Cathode efficiency for Copper (II) and silver assumed as same for Copper (I) and gold, respectively
*Copper sulfate, nickel sulfate, nickel chloride are assumed to be in hydrated form
Viro black is an acid zinc-cobalt plating process. Full bath details were not available.
Cathode efficiency not provided for zinc in AP-42 Section 12.20, assumed as 30%, worst case
Concentration of metal and salts in Viro Black from AP-42 Section 12.20 Emission Factor Documentation Table 2-38
Cobalt emissions based on the mass ratio of zinc to cobalt in Viro Black bath
Viro Black bath density was not able to be calculated, assumed to be same as Zincate bath in worst-case
Zincate bath is 100% Broco Zincate 16, constituents and specific gravity provided in MSDS
Zincate bath is electroless

Methodology:

Emission factors calculated according to Equation 1 from AP-42 Section 12.20, as follows:

$$E_{f_m} = 3.3 \times 10^{-7} \cdot (E_{e_m}/e_m) \cdot C_m \cdot D_m$$

- Where: E_f = emission factor for metal "m" (grains/scfm)
- E_e = electrical equivalent for metal "m" (A-hr/mil-ft²)
- e_m = cathode efficiency for metal "m" (%)
- C_m = bath concentration for metal "m" (oz/gal)
- D_m = current density for metal "m", (A/ft²)

C_m (oz/gal) = Salt in bath (lb) * Weight % metal (in salt) * 16 oz/lb / Total bath volume (gal)
Weight % metal (in bath) = C_m (oz/gal) * 1 lb/16 oz / Density of bath solution (lb/gal)
E_f (grains/A-hr) = E_f (grains/scfm) * 100, from AP-42 Table 12.20-4
Mist emission factor (grains/A-hr) = E_f (grains/A-hr) / Weight % metal (in bath)
Weight % solids = Sum of salt and metal bath constituents (lb) / (Density of bath (lb/gal) * Total bath volume (gal))
PM emission factor (grains/A-hr) = Mist emission factor (grains/A-hr) * Weight % metal
E_f cobalt = E_f zinc * C_{zinc} (4 oz/gal) / C_{cobalt} (0.5 oz/gal)

Mass of metal in salt

Salt	Formula	Molar mass of salt (g/mol)	Metal	Molar mass of metal (g/mol)	Weight % metal (in salt)
Copper cyanide	CuCN	89.56	Copper (I)	63.55	71.0%
Copper sulfate (pentahydrate)	CuSO ₄ ·5H ₂ O	249.70	Copper (II)	63.55	25.4%
Nickel sulfate (hexahydrate)	NiSO ₄ ·6H ₂ O	262.85	Nickel	58.69	22.3%
Nickel chloride (hexahydrate)	NiCl ₂ ·6H ₂ O	237.69	Nickel	58.69	24.7%
Potassium gold cyanide	K[Au(CN) ₂]	285.10	Gold (I)	196.97	69.1%
Silver cyanide	AgCN	133.89	Silver	107.87	80.6%
Zinc oxide	ZnO	81.41	Zinc	65.38	80.3%

Methodology:

Weight % metal (in salt) = Molar mass of metal (g/mol) / Molar mass of salt (g/mol)

Densities of baths

Bath	Emission Unit ID	Bath constituents	Mass in bath (lb)	Density of bath (lb/gal)
Brass #1 & #2	EU-08 & EU-09	Copper cyanide	46.0	9.52
		Zinc cyanide	15.5	
		Sodium cyanide	75.0	
		Sodium carbonate	46.0	
		Rochelle salts	34.5	
		Water	1544	
Bright Acid Copper	EU-10	Copper sulfate (anhydrous)	95.6	9.79
		Sulfuric acid	82.5	
		Water	723	
Copper Strike	EU-11	Copper cyanide	84.8	9.39
		Potassium cyanide	50.0	
		Rochelle salts	28.0	
		Water	1302	
		Nickel sulfate (anhydrous)	306.3	
Nickel	EU-12	Nickel chloride (anhydrous)	54.6	10.73
		Boric acid	80.0	
		Water	1544	
		Potassium gold cyanide	8.6	
BF Gold	EU-13	Potassium carbonate	13.0	8.66
		Water	567.46	
		Silver cyanide	32.0	
Silver	EU-14	Potassium cyanide	80.0	9.88
		Potassium carbonate	18.5	
		Water	709.3	
		Zinc oxide	60.5	
Zincate	EU-16	Sodium hydroxide	363.0	12.10
		Water	786.5	
		Copper cyanide	56.0	
Copper Cyanide	EU-17	Potassium cyanide	89.0	9.50
		Potassium carbonate	40.0	
		Water	1335.2	
		Water	1335.2	

Notes:

Dissolution of salts assumed not to significantly affect volume
5.39 gal of sulfuric acid added to EU-10 bath, subtracted from total bath volume for calculating mass of water
Zincate bath is 30% sodium hydroxide and 5% zinc oxide, by weight, with remainder as water, as provided in MSDS

Calculations:

Mass of water = Total bath volume (gal) * Density of water (8.345 lb/gal)
Mass of sulfuric acid (EU-10) = Volume of sulfuric acid in bath (5.39 gal) * Density of sulfuric acid (15.3 lb/gal)
Mass of hydrated salts are converted to mass as anhydrous to minimize affect of dissolution on volume:
Mass (lb, anhydrous) = Mass in bath (lb) * (Molar mass of salt - molar mass hydrate) / Molar mass of salt
Density (lb/gal) = (Σ Mass of constituents in bath (lb)) / Total bath volume (gal)

Alternatives calculations for Zincate bath (EU-16):

Density (lb/gal) = Specific gravity * Density of water (8.345 lb/gal)
Mass in bath (lb) = Weight % of constituent (see note) * Total bath volume (gal) * Density of bath (lb/gal)

**Appendix A: Emissions Calculations
Electroplating CN Emission Factors**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Emission factor calculation

Bath	Emission Unit ID	Total bath volume (gal)	Cyanide salt	Salt in bath (lb)	CN content in bath (lb/gal)	Density of bath (lb/gal)	Weight % CN (in bath)	Mist emission factor (grains/A-hr)	CN emission factor (grains/A-hr)
Brass #1	EU-08	185	Copper cyanide	46	0.072	9.52	3.41%	1.481	0.050
			Zinc cyanide	15.5	0.037				
			Sodium cyanide	75	0.215				
			Total	136.5	0.324				
Brass #2	EU-09	185	Copper cyanide	46	0.072	9.52	3.41%	1.481	0.050
			Zinc cyanide	15.5	0.037				
			Sodium cyanide	75	0.215				
			Total	136.5	0.324				
Bright Acid Copper	EU-10	92	N/A						
Copper Strike	EU-11	156	Copper cyanide	28	0.052	9.79	1.84%	1.753	0.032
			Potassium cyanide	50	0.128				
			Total	78	0.180				
Nickel	EU-12	185	N/A						
BF Gold	EU-13	68	Potassium Gold Cyanide	8.6	0.023	8.66	0.27%	0.158	0.0004
Silver	EU-14	85	Silver cyanide	32	0.073	9.88	4.54%	0.158	0.007
			Potassium cyanide	80	0.376				
			Total	112	0.449				
Viro Black	EU-15	48	N/A						
Zincate	EU-16	100	N/A						
Copper Cyanide	EU-17	160	Copper cyanide	56	0.102	9.50	3.41%	0.018	0.001
			Potassium cyanide	89	0.222				
			Total	145	0.324				

Notes:

EU-10, EU-12, EU-15, and EU-16 contain no cyanide
Density of bath (lb/gal) and mist emissions (grains/A-hr) as calculated on Page 4 of this TSD.

Methodology:

Cyanide content in bath (lb/gal) = Salt in bath (lb) * Weight % CN (in salt) / Total bath volume (gal)
Weight % CN (in bath) = Total cyanide content in bath (lb/gal) / Density of bath (lb/gal)
CN emissions (grains/A-hr) = Mist emissions (grains/A-hr) * Weight % CN (in bath)

Mass of CN in salt

Salt/compound	Formula	Molar mass (g/mol)	Weight % CN (in salt)
Copper cyanide	CuCN	89.56	29.0%
Zinc cyanide	Zn(CN) ₂	117.44	44.3%
Sodium cyanide	NaCN	49.00	53.1%
Potassium cyanide	KCN	65.12	39.9%
Potassium gold cyanide	K[Au(CN) ₂]	285.10	18.2%
Silver cyanide	AgCN	133.89	19.4%
Cyanide	CN	26.00	-

Methodology:

Weight % CN (in salt) = Molar mass of CN (g/mol) / Molar mass of salt (g/mol)

**Appendix A: Emissions Calculations
Electroplating CN Emission Factors**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Electroplating								Emission Factors (grains/A-hr)				PTE (ton/yr)				PTE of PM (lb/hr)
Bath	Emission Unit ID	Max part length (in)	Max part width (in)	# Parts in bath at one time	Current density (A/ft ²)	Max surface area plated (ft ²)	Max capacity (A)	PM	Nickel (HAP)	Cobalt (HAP)	Cyanide (HAP)	PM	Nickel (HAP)	Cobalt (HAP)	Cyanide (HAP)	
Brass #1	EU-08	27	30	1	10	5.63	56.25	0.18	-	-	0.05047	0.0064	-	-	1.78E-03	0.0015
Brass #2	EU-09	27	30	1	10	5.63	56.25	0.18	-	-	0.05047	0.0064	-	-	1.78E-03	0.0015
Bright Acid Copper	EU-10	24	30	1	12	5.00	60.00	0.39	-	-	-	0.0146	-	-	-	0.0033
Copper Strike	EU-11	24	30	1	12	5.00	60.00	1.09	-	-	0.032236	0.0408	-	-	1.21E-03	0.0093
Nickel	EU-12	20	30	1	40	4.17	166.67	0.00	0.328411	-	-	0.0000	3.42E-02	-	-	0.0000
BF Gold	EU-13	16	24	1	5	2.67	13.33	0.01	-	-	0.00042	0.0000	-	-	3.50E-06	0.0000
Silver	EU-14	24	27	1	5	4.50	22.50	0.03	-	-	0.007158	0.0004	-	-	1.01E-04	0.0001
Viro Black	EU-15	12	25	1	10	2.08	20.83	0.52	-	0.06028	-	0.0068	-	7.86E-04	-	1.55E-03
Zincate	EU-16	14	25	1	0	2.43	0.00	0.00	-	-	-	0.0000	-	-	-	0.00E+00
Copper Cyanide	EU-17	27	30	1	12	5.63	67.50	0.02	-	-	0.000604	0.0007	-	-	2.55E-05	0.00017
Total:												0.0762	3.42E-02	7.86E-04	4.89E-03	
Total HAPs															3.99E-02	

Electroforming																PTE of PM (lb/hr)
Bath	Emission Unit ID	Max part length (in)	Max part width (in)	# Parts in bath at one time	Current density (A/ft ²)	Max surface area plated (ft ²)	Max capacity (A)	PM	Nickel (HAP)	Cobalt (HAP)	Cyanide (HAP)	PM	Nickel (HAP)	Cobalt (HAP)	Cyanide (HAP)	
Bright Acid Copper	EU-18	30	28	5	12	29.17	350.00	0.39	-	-	-	0.0851	-	-	-	0.01943
Regular Acid Copper	EU-19	48	26	1	12	8.67	104.00	0.39	-	-	-	0.0253	-	-	-	0.00577
Regular Acid Copper	EU-20	28	26	5	12	25.28	303.33	0.39	-	-	-	0.0737	-	-	-	0.01684
Total:												0.1841	-	-	-	
Total HAPs															-	

Notes:PM=PM₁₀=PM_{2.5}

Emissions factors calculated on Pages 4 and 5 of this TSD

EU-18, EU-19, and EU-20 are electroforming baths.

Emission factors for the electroforming baths could not be calculated, therefore the emission factors for the Bright Acid Copper bath (EU-10) were assumed.

All units are exempt from 326 IAC 6-3-2 because PTE of PM (lb/hr) is less than 0.551 for each unit

Methodology:Max surface area plated (ft²) = Max part length (in) * Max part width (in) * 1 ft²/144 in² * # parts in bath at one timeMax capacity (A) = Current density (A/ft²) * Max surface area plated (ft²)

PTE (ton/yr) = Emission Factor (grains/A-hr) * 1 lb/7000 grains * Max capacity (A) * 8760 hr/yr * 1 ton/2000 lbs

PTE of PM (lb/hr) = Emission Factor (grains/A-hr) * 1 lb/7000 grains * Max capacity (A)

**Appendix A: Emissions Calculations
Electroplating prep and finish**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Bath data, provided by source or calculated

Bath volume (gal)	Actane in bath (lb)	Density of bath (lb/gal)	Weight % Actane (in bath)	Weight % HF (in bath)	Temp (°F)	Exhaust rate (cfm/ft ²)	Total air (acfm)	Tank width (ft)	Tank length (ft)
66	30	8.80	5.2%	1.23%	68	0	0	3	2

Calculations from Esco Engineering

Vapor pressure of HF	Temp. (K)	Temp. (°R)	Vapor pressure of Water	1-MR	Vapor pressure of solution	Air velocity	HF loss (lb/hr/ft ² of surface)	HF loss (lb/hr)
0.0001672	293	528	17.46673786	0.99985278	17.4641665	0	7.075E-07	4.24E-06

PTE of HF (ton/yr)
1.86E-05

Notes:

Electroplating prep and finish are comprised of one acid bath, one alkaline cleaner, and two oxidizing baths (copper/brass and silver).

Alkaline cleaner and oxidizing baths contain no VOC or organic HAPs

Copper/brass oxidizing bath contains selenium dioxide, however it is a dip process, and there are no measureable emissions

Therefore, only HF emissions from the acid bath are calculated.

For density calculation, dissolution of salts assumed not to significantly affect volume

Acid in bath (Actane 73) is 30% Ammonium bifluoride (NH₄HF₂) and 5% Ammonium fluoride (NH₄F), by weight, worst-case as provided in MSDS

It is assumed that all the fluoride dissociates into hydrogen fluoride (HF) in the bath, as worst-case

Tank is exhausted indoors into ambient air, so the exhaust rate is zero

Calculations:

Calculation methodology derived from Esco Engineering, Kingville, Ontario - March 1993, except as provided below

Spreadsheet available at: <http://www.esco-engineering.ca/emission.zip>

Density of bath (lb/gal) = (Bath volume (gal) * Density of water (8.345 lb/gal) + Actane in bath (lb)) / Bath volume (gal)

Weight % Actane (in bath) = Actane in bath (lb) / (Bath volume (gal) * Density of bath (lb/gal))

Weight % HF (in bath) = Weight % Actane (in bath) * [30% NH₄HF₂ * (2 * Molar mass of HF (20.01 g/mol) / Molar Mass of NH₄HF₂ (57.04 g/mol)) + (Molar mass of HF (20.01 g/mol) / Molar Mass of NH₄F (37.037 g/mol))]

PTE of HCl (ton/yr) = HF loss (lb/hr) * 8760 hr/yr * 1 ton/2000 lb

Correction Factors:

The spreadsheet calculations give maximum values for emissions based on the assumptions i.e.

- all air passes over the whole liquid surface
- air above the liquid contains no acid vapor
- air/acid vapor/water vapor are uniformly mixed

In practice, some air will short-circuit, and only pass over some of the surface, and the mixture will not be uniform.

Also, the evaporation into the air will reduce the rate of evaporation towards the outlet end of the air flow.

Calculations on the effect of the build-up of acid and water vapors in the air show that this introduces an error of less than 10% (high) in the estimate, for typical pickling conditions.

Uneven air flow, and incomplete mixing, in closed picklers, have quite a significant effect in reducing rates of evaporation.

Assumptions

Evaporation into air at 60-80 deg F, 70% RH

Essentially atmospheric pressure

Either general building or lateral exhaust.

Less than 15% HF

Sources of Data:

Vapor pressure of acid and water over solutions:

HF - Encyclopaedia of Chemical Technology

Specific gravity of acid solutions:

HF - Allied Chemical bulletin "Hydrofluoric acid"

Emissions from open-top tanks:

Heat Losses from tanks, vats and kettles', Friedman, S.J., Heating and Ventilating, April 1948

Vapor pressure of water:

'Table of properties of pure compounds', DIPRR, AIChE, 1985

**Appendix A: Emissions Calculations
Casting (EU-21, EU-22, EU-23)**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Process	Type	Emission unit ID	Material	Max throughput (lb/hr)	PM emission factor (lb/ton material)	PM ₁₀ emission factor (lb/ton)	PTE of PM (ton/yr)	PTE of PM ₁₀ (ton/yr)	HAPS					
									Weight % lead (max)	Weight % Antimony (max)	Lead Emission Factor (lb/ton lead)	Antimony Emission Factor (lb/ton material)	PTE of lead (ton/yr)	PTE of antimony (ton/yr)
Spin Casting	Pot Furnace	EU-21	Linotype	150	0.04	0.87	0.013	0.286	84.65%	15%	0.010	0.006	0.003	0.002
			D3 Pewter	100	0.04	0.87	0.009	0.191	6%	5%	0.010	0.044	0.0001	0.010
			D3 Pewter	100	0.04	0.87	0.009	0.191	6%	5%	0.002	0.044	0.00003	0.010
Speed Casting	Crucible Furnace	EU-22	Aluminum	20	1.9	1.7	0.083	0.074	-	-	-	-	-	-
			Bronze	20	21	12.4	0.920	0.543	-	-	-	-	-	-
Kiln Casting	Open Heath Furnace	EU-23	Wax	1	-	-	-	-	-	-	-	-	-	-
Totals:							1.034	1.284					0.003	0.021
												Total HAPS:	0.014	

Notes:

Actual production of cast material is estimated at 2.1 lbs/day for NESHAP ZZZZZZ applicability determination

PM emission factors from AP-42, as follows:

EU-21: Section 12.11, Table 12.11-2 (Secondary Lead Processing, Casting - SCC 3-04-004-09)

EU-22: Section 12.8, Table 12.8-2 (Secondary Aluminum Smelting, Crucible Furnace - SCC 3-04-001-02)

EU-23: Section 12.9, Table 12.9-2 (Secondary Copper Smelting, Crucible and Pot Furnace for Brass and Bronze- SCC 3-04-002-17)

PM₁₀ emission factors are from WebFIRE using respective SCCs

Lead emission factor Section 12.11, Table 12.11-2 (Secondary Lead Processing, Casting - SCC 3-04-004-09)

Antimony emission factors based on the percent of antimony in material as a percent of total PM emissions

Wax contains no HAPs or VOC's according to the MSDS provided by the source, PM emissions are negligible or non-existent

Methodology:

Antimony emission factor = PM emission factor (lb/ton material) * Weight % antimony(Max)

PTE (ton/yr) = Max throughput (lb/hr) * 1 lb/2000 ton * 8760 hr/yr * Emission factor (lb/ton) * 1 ton/2000 lbs

PTE of lead (ton/yr) = Max throughput (lb/hr) * Weight % lead * 1 lb/2000 ton * 8760 hr/yr * Emission factor (lb/ton lead) * 1 ton/2000 lbs

**Appendix A: Emission Calculations
Abrasive Blasting**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Emission Factors for Abrasives

Abrasive	lb PM/lb abrasive	lb PM ₁₀ /lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	0.70

Uncontrolled PTE of PM and PM₁₀

Abrasive type	Fraction of time of wet blasting	Amount of media in machine (lb/yr)	Hours of operation (hr/yr)	Flow rate (lb/hr)	Emission factors		PTE - PM			PTE - PM ₁₀		
					PM (lb/lb abrasive)	PM ₁₀ (lb/lb PM)	lb/hr	lb/day	ton/yr	lb/hr	lb/day	ton/yr
Steel shot	0%	100	8	13	0.004	0.86	0.05	1.20	0.219	0.04	1.03	0.19
Aluminum oxide	0%	100	8	13	0.010	0.70	0.13	3.00	0.548	0.09	2.10	0.38
Totals:							0.18	4.20	0.77	0.13	3.13	0.57

Notes:

Source has two abrasive blasting units, one using steel shot and a backup unit using aluminum oxide

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)

The source replaces the used steel shot annually, in worst case.

Flow rate was calculated based on the amount of media added to the the blasting unit each year and the annual hours of operation, as reported by the source

Details for the backup aluminum oxide unit were not available, assumed to be same as the steel shot unit, as worst case.

Methodology:

Flow rate (lb/hr) = Amount of media in machine (lb/yr) / Hours of operation (hr/yr)

PTE of PM (lb/hr) = Flow rate (lb/hr) * PM emission factor (lb/lb abrasive) * (1-Fraction of time of wet blasting/200)

PTE of PM₁₀ (lb/hr) = PTE of PM (lb/hr) * PM₁₀ emission factor (lb/lb PM)

PTE (lb/day) = PTE (lb/hr) * 24 hrs/day

PTE (ton/yr) = PTE (lb/hr) * 8760 hrs/yr * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
Etching Bath (EU-24)**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Bath data, provided by source

Weight % HCl	Weight % FeCl ₂	Temp (°F)	Exhaust rate (acfm)	# takeoffs	Tank width (ft)	Tank length (ft)	Freeboard (ft)
2	50	107	450	2	2	2	1.58

PTE of HCl (ton/yr)
0.68

Calculations from Esco Engineering

Vapor pressure of HCl	Temp (K)	Vapor pressure of Water	1-MR	Vapor pressure of solution	Air velocity	HCl loss (lb/hr/ft ² of surface)	HCl loss (lb/hr)	Exhaust conc. (ppmv)
5.13	314.67	60.21	0.40	23.99	0.59	0.039	0.16	61

Notes:

Etching bath is a two-part system in which the unit is dipped in Ferric Chloride (acid) and then Resist Stripper (alkaline). Resist Stripper contains no HAPs or VOC, therefore only HCl emissions from the Ferric Chloride bath are calculated. Weight % HCl and FeCl₂ are from MSDS for Ferric Chloride provided by source. Freeboard is the distance from the liquid surface to the underside of the cover. The # of takeoffs is the number of points at which air is exhausted from the tank - assumed equally spaced.

Calculations:

Calculation methodology derived from Esco Engineering, Kingville, Ontario - March 1993, except as provided below. Spreadsheet available at: <http://www.esco-engineering.ca/emission.zip>
PTE of HCl (ton/year) = HCl loss (lb/hr) * 8760 hr/yr * 1 ton/2000 lbs

Correction Factors:

The spreadsheet calculations give maximum values for emissions based on the assumptions i.e.

- all air passes over the whole liquid surface
- air above the liquid contains no acid vapor
- air/acid vapor/water vapor are uniformly mixed

In practice, some air will short-circuit, and only pass over some of the surface, and the mixture will not be uniform.

Also, the evaporation into the air will reduce the rate of evaporation towards the outlet end of the air flow.

Calculations on the effect of the build-up of acid and water vapors in the air show that this introduces an error of less than 10% (high) in the estimate, for typical pickling conditions.

Uneven air flow, and incomplete mixing, in closed picklers, have quite a significant effect in reducing rates of evaporation.

Assumptions

Evaporation into air at 60-80 deg F, 70%RH

Essentially atmospheric pressure

Tanks are covered, with multiple exhaust points, assumed equally spaced.

Sources of Data:

Vapor pressure of pickling solutions:

Dow Chemical, from 'Development of hydrochloric acid pickling of steel in India', Akerkar, D.D. and Shahani, NML Tech Journal, Vol 12, #11, 87-92, (1970)

Specific gravity of pickling solutions:

Esco Engineering lab work

Elevation of boiling point of ferrous chloride:

International Critical Tables, McGraw Hill, 1926

Emissions from open-top tanks:

Heat Losses from tanks, vats and kettles', Friedman, S.J., Heating and Ventilating, April 1948

Vapor pressure of water:

'Table of properties of pure compounds', DIPRR, AIChE, 1985

**Appendix A: Emissions Calculations
Timesaver Sander**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Sanding depth (in)	Sanding area (in ² /unit)	Material removed (in ³ /unit)	Max throughput (units/hr)	Foam density (lb/in ³)	PTE of PM (lb/hr)	PTE of PM (lb/day)	PTE of PM (ton/yr)
0.063	40.00	2.500	4.29	0.0363	0.39	9.33	1.70

Notes:

Timesaver sander sands polyurethane foam on electroformed pieces
A maximum of 15 units are sanded in 3.5 hours, as reported by the source
Foam density was measured and reported by the source

Methodology:

Material removed (in³/unit) = Sanding depth (in) * Sanding area (in²/unit)

Max throughput (units/hr) = 15 units / 3.5 hours

PTE of PM (lb/hr) = Material removed (in³/unit) * Max throughput (units/hr) * Foam density (lb/in³)

PTE of PM (lb/day) = Material removed (in³/unit) * Max throughput (units/hr) * Foam density (lb/in³) * 24 hrs/day

PTE of PM (ton/yr) = Material removed (in³/unit) * Max throughput (units/hr) * Foam density (lb/in³) * 8760 hr/yr * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
CNC Mill for Aluminum**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Aluminum fines collected (lb/day)	Operating hours (hr/day)	PM emissions (lb/hr)	PTE of PM (ton/yr)
1.5	4	0.375	1.6425

Note:

PM=PM₁₀=PM_{2.5}

Aluminum fines collected and operating hours are maximum daily values reported by source

Aluminum fines from CNC mill are collected by a dedicated vacuum at approximately 100% efficiency

Emissions are based on the fines collected in this vacuum, assuming no control

Methodology:

PM emissions (lb/hr) = Aluminum fines collected (lb/day) / Operating hours (hr/day)

PTE of PM = PM emissions (lb/hr) * 8760 hr/yr * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
Typesetting**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

PTE Calculations								HAP	
Material	Density (lb/gal)	Weight % VOC	Max usage (gal/hr)	VOC content (lb/gal material)	PTE of VOC (lb/hour)	PTE of VOC (lb/day)	PTE of VOC (ton/yr)	Weight % hydroquinone	PTE of hydroquinone (ton/yr)
Fuji QR-DI Developer	7.43	14.7%	0.046	1.09	0.05	1.20	0.22	7.0%	0.10
Fuji UR-F1 Fixer & Replenisher	10.71	10.0%	0.046	1.07	0.05	1.18	0.22	-	-
Totals:					0.10	2.39	0.44		0.10

Notes:

The typesetting operation is a silver emulsion process using either photographic film development or an inkjet printing system.

VOC content (lb/gal coating) and specific gravity provided in MSDS for Developer

Weight % VOC and density (lb/gal) provided in MSDS for Fixer & Replenisher

Methodology:

Density (lb/gal) (Developer) = Specific gravity (0.89) * Density of water (8.345 lb/gal)

Weight % VOC (Developer) = VOC content (lb/gal material) / Density (lb/gal)

VOC content (lb/gal material) (Fixer & Replenisher) = Weight % VOC * Density (lb/gal)

PTE of VOC (lb/hr) = VOC content (lb/gal material) * Max usage (gal/unit)

PTE of VOC (lb/day) = VOC content (lb/gal material) * Max usage (gal/unit) * 24 hrs/day

PTE of VOC (ton/yr) = VOC content (lb/gal material) * Max usage (gal/unit) * 8760 hrs/yr * 1 ton/2000 lbs

PTE of hydroquinone = Weight % hydroquinone * Density (lb/gal) * Max usage (gal/unit) * 8760 hrs/yr * 1 ton/2000 lbs

Usage Calculations

Material	Actual film usage (ft/day)	Hours of operation (hr/day)	Max film throughput (ft/hr)	Actual usage (gal/month)	Monthly days of operation (day/month)	Usage rate (gal/ft film)	Max usage (gal/hr)
Fuji QR-DI Developer	25.00	7.5	3.33	7.5	21.73	0.014	0.046
Fuji UR-F1 Fixer & Replenisher	25.00	7.5	3.33	7.5	21.73	0.014	0.046

Notes:

The source reported the actual film usage as 25 linear ft. per day, actual material usage as 7.5 gal. per month of each material

The operating hours of the typesetter are 7.5 hours per day, 5 days per week.

Methodology:

Max film throughput (ft/hr) = Actual film throughput (ft/day) / Hours of operation (hr/day)

Monthly days of operation (day/month) = 5 operating days per week * (365 days/yr / 7 days/week) / 12 months/yr

Usage rate (gal/ft film) = Actual usage (gal/month) / Actual film throughput (ft/day) / Monthly days of operation (day/month)

Max usage (gal/hr) = Max film throughput (ft/hr) * Usage rate (gal/ft film)

**Appendix A: Emission Calculations
Abrasive Etching**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Emission Factors for Abrasives

Abrasive	lb PM/lb abrasive	lb PM ₁₀ /lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	0.70

Uncontrolled PTE of PM and PM ₁₀					Emission factors		PTE - PM			PTE - PM ₁₀		
Abrasive type	Fraction of time of wet blasting	Replenished media (lb/day)	Hours of operation (hr/day)	Flow rate (lb/hr)	PM (lb/lb abrasive)	PM ₁₀ (lb/lb PM)	lb/hr	lb/day	ton/yr	lb/hr	lb/day	ton/yr
Aluminum oxide	0%	0.17	8	0.02	0.010	0.70	0.0002	0.005	0.0009	0.0001	0.0035	0.0006
Aluminum oxide	0%	0.17	8	0.02	0.010	0.70	0.0002	0.005	0.0009	0.0001	0.0035	0.0006
Totals:							0.0004	0.010	0.0018	0.0003	0.0070	0.0013

Notes:

Source has two abrasive etching units each with one nozzle

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)

The source replenishes each unit with 0.5 lbs of aluminum oxide every 3 days (worst-case)

Flow rate was calculated based on the amount of media added each day and the daily hours of operation, as reported by the source

Methodology:

Replenished media (lb/day) = 0.5 lb of aluminum oxide / 3 days

Flow rate (lb/hr) = Replenished media (lb/day) / Hours of operation (hr/day)

PTE of PM (lb/hr) = Flow rate (lb/hr) * PM emission factor (lb/lb abrasive) * (1-Fraction of time of wet blasting/200)

PTE of PM₁₀ (lb/hr) = PTE of PM (lb/hr) * PM₁₀ emission factor (lb/lb PM)

PTE (lb/day) = PTE (lb/hr) * 24 hrs/day

PTE (ton/yr) = PTE (lb/hr) * 8760 hrs/yr * 1 ton/2000 lbs

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Emission unit	Emission Unit ID	Number of Unit	Heat Input Capacity Each (MMBtu/hr/unit)	Total Potential Throughput (MMCF/yr)
Spin casting furnace	EU-21	3	0.01	0.3
Speed casting furnace	EU-22	1	0.325	2.8
Kiln casting furnace	EU-23	1	0.24	2.1
Space heater	H001-H003	3	0.08	2.1
Space heater	H004-H005	2	0.30	5.2
Space heater	H006	1	0.13	1.1
Makeup air	H007	1	3.85	33.1
Space heater	H008	1	0.09	0.8
Space heater	H009	1	0.10	0.9
Total:			5.61	48.1

	Pollutant						
	PM*	PM ₁₀ *	direct PM _{2.5} *	SO ₂	NO _x	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission (tons/yr)	0.05	0.2	0.18	0.01	2.4	0.1	2.0

*PM emission factor is filterable PM only. PM₁₀ emission factor is filterable and condensable PM₁₀ combined. PM_{2.5} emission factor is filterable and condensable PM_{2.5} combined.

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission (tons/yr)	5.054E-05	2.888E-05	1.805E-03	4.332E-02	8.183E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission (tons/yr)	1.203E-05	2.648E-05	3.370E-05	9.146E-06	5.054E-05
Total HAPs:					4.542E-02

	Greenhouse Gas		
	CO ₂	CH ₄	N ₂ O
Emission Factor (lb/MMCF)	120,000	2.3	2.2
Potential Emission (tons/yr)	2,888	0.1	0.1
Summed Potential Emissions (tons/yr)	2,888		
CO ₂ e Total (tons/yr)	2,906		

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Total Heat Input Capacity = ∑ (Heat Input Capacity Each (MMBtu/hr) * Number of Units)

Potential Throughput (MMCF) = Heat Input Capacity Each (MMBtu/hr) * Number of Units * 8,760 hrs/yr * High Heat Value (1 MMCF/1,020 MMBtu)

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

Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs

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

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

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

**Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads**

Company Name: Fox Group dba Bruce Fox
Address City IN Zip: 1909 McDonald Lane, New Albany, IN 47150
Permit No.: 043-32500-00035
Reviewer: Ryan Graunke

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Information (provided by source)

Type	Max number of vehicles per day	Number of one-way trips per day per vehicle	Max one-way trips per day (trip/day)	Max weight loaded (tons/trip)	Total weight driven per day (ton/day)	Max one-way distance (feet/trip)	Max one-way distance (mi/trip)	Max one-way miles (mi/day)	Max one-way miles (mi/yr)
Box truck (entering plant) (one-way trip)	1	4	4	1.0	4.0	456	0.086	0.3	126.1
Box truck (leaving plant) (one-way trip)	1	4	4	1.0	4.0	456	0.086	0.3	126.1
Passenger vehicle (entering plant) (one-way trip)	50	1	50	1.0	50.0	456	0.086	4.3	1576.1
Passenger vehicle (leaving plant) (one-way trip)	50	1	50	1.0	50.0	456	0.086	4.3	1576.1
Totals:			108		108.0			9.3	3404.5

Average vehicle weight per trip = tons/trip
Average miles per trip = miles/trip

Unmitigated Emission Factor, $E_i = k * (sL)^{0.91} * (W)^{1.02}$ (Equation 1 from AP-42 13.2.1)

	PM	PM ₁₀	PM _{2.5}	
where k =	0.011	0.0022	0.00054	= particle size multiplier (lb/vehicle miles traveled) (AP-42 Table 13.2.1-1)
W =	1.0	1.0	1.0	= average vehicle weight (tons)
sL =	9.7	9.7	9.7	= silt loading value (g/m ²) for paved roads at iron and steel production facilities - (AP-42 Table 13.2.1-3)

Mitigated emission factor takes natural mitigation due to precipitation into consideration

Mitigated Emission Factor, $E_{ext} = E_i * [1 - (p / 4 * N)]$ (Equation 2 from AP-42 13.2.1)

where p = days of rain greater than or equal to 0.01 inches (see AP-42 Figure 13.2.1-2)
N = days per year

	PM	PM ₁₀	PM _{2.5}	
Unmitigated Emission Factor, E_i (lb/mi) =	0.087	0.017	0.0043	lb/mile
Mitigated Emission Factor, E_{ext} (lb/mi) =	0.080	0.016	0.0039	lb/mile

	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM ₁₀ (tons/yr)	Unmitigated PTE of PM _{2.5} (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM ₁₀ (tons/yr)	Mitigated PTE of PM _{2.5} (tons/yr)
Process						
Box truck (entering plant) (one-way trip)	0.005	0.001	0.0003	0.005	0.001	0.0002
Box truck (leaving plant) (one-way trip)	0.005	0.001	0.0003	0.005	0.001	0.0002
Passenger vehicle (entering plant) (one-way trip)	0.069	0.014	0.003	0.063	0.013	0.003
Passenger vehicle (leaving plant) (one-way trip)	0.069	0.014	0.003	0.063	0.013	0.003
Totals:	0.148	0.030	0.007	0.135	0.027	0.007

Methodology:

Max one-way trips per day (trip/day) = Max number of vehicles per day * Number of one-way trips per day

Total weight driven per day (ton/day) = Max weight loaded (tons/trip) * Max one-way trips per day (trip/day)

Max one-way distance (mi/trip) = Max one-way distance (feet/trip) * 1 mi/5280 ft

Max one-way miles (mi/day) = Max one-way trips per day (trip/day) * Max one-way distance (mi/trip)

Max one-way miles (mi/yr) = Max one-way miles (mi/day) * 365 days/yr

Average vehicle weight per trip (ton/trip) = \sum Total weight driven per day (ton/day) / \sum Max trips per day (trip/day)

Average miles per trip (miles/trip) = \sum Max one-way distance (miles/day) / \sum Max trips per day (trip/day)

Unmitigated PTE (tons/yr) = Max one-way miles (miles/yr) * Unmitigated emission factor (lb/mile) * (1 ton/2000 lbs)

Mitigated PTE (tons/yr) = Max one-way miles (miles/yr) * Mitigated emission factor (lb/mile) * (1 ton/2000 lbs)



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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Indianapolis, Indiana 46204
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TO: Rick Cochran
Fox Group dba Bruce Fox, Inc.
1909 McDonald Lane
New Albany, IN 47150

DATE: February 14, 2013

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

SUBJECT: Final Decision
Registration
043-32500-00035

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:
Gary Parks, Responsible Official
Jennifer Bent, Consultant
Jennifer Triplett, Consultant
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	PWAY 2/14/2013 Fox Group dba Bruce Fox, Inc. 043-32500-00035 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
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1		Rick Cochran Fox Group dba Bruce Fox, Inc. 1909 McDonald Ln New Albany IN 47150 (Source CAATS)										
2		Gary Parks COO Fox Group dba Bruce Fox, Inc. 1909 McDonald Ln New Albany IN 47150 (RO CAATS)										
3		Mr. Robert Bottom Paddlewheel Alliance P.O. Box 35531 Louisville KY 40232-5531 (Affected Party)										
4		Floyd County Commissioners 2524 Corydon Pike, Ste 204 New Albany IN 47150 (Local Official)										
5		New Albany City Council and Mayors Office City County Building #316 New Albany IN 47150 (Local Official)										
6		Floyd County Health Department 1917 Bono Rd New Albany IN 47150-4607 (Health Department)										
7		Ms. Sue Green 1985 Kopley Road Georgetown IN 47122 (Affected Party)										
8		Jennifer Bent Environmental Compliance Source PO Box 6849 New Albany IN 47151 (Consultant)										
9		Jennifer Triplett Environmental Compliance Source PO Box 6849 New Albany In 47150 (Consultant)										
10		Resident 3007 Jason Drive New Albany IN 47150 (Affected Party)										
11		Kentuckiana Copy & Office Supply 1912 Unruh Court New Albany IN 47150 (Affected Party)										
12		Sally Beauty Supply 1929 McDonald Lane New Albany IN 47150 (Affected Party)										
13		Kaiser Home Support Service 1913 Unruh Court New Albany IN 47150 (Affected Party)										
14		Fox Hill Apartments 1905 McDonald Lane New Albany IN 47150 (Affected Party)										
15												

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