INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: November 15, 2013

RE: IDS Blast Finishing / 097 - 33334 - 00524

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

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, 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
FNPER.dot 6/13/13

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New Source Review and Federally Enforceable State Operating Permit OFFICE OF AIR QUALITY

IDS Blast Finishing
2717 Tobey Drive
Indianapolis, Indiana 46219

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

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

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No. F097-33334-00524	
Issued by: Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 15, 2013 Expiration Date: November 15, 2018

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary surface finishing operation (metal fabrication, finishing, and coating).

Source Address:	2717 Tobey Drive, Indianapolis, Indiana 46219
General Source Phone Number:	317-545-0665
SIC Code:	7699 and 7532
County Location:	Marion (Warren Township)
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) One (1) Blast Room, identified as SB1, constructed in 2003, with a maximum capacity of 1818 lbs/hr of StarBlast media, using baghouse CE5 as control, and exhausting indoors.

(b) One (1) Empire shot blast unit, identified as SB2, constructed in 2005, with a maximum capacity of 2480 lbs/hr of glass bead media, using baghouse CE6 as control, and exhausting to the indoors.

(c) One (1) Gibson shot blast unit, identified as SB3, constructed in 2003, with a maximum capacity of 7920 lbs/hr of steel shot, using baghouse CE7 as control, and exhausting to the indoors.

(d) One (1) Goff shot blast unit, identified as SB4, constructed in 2003, with a maximum capacity of 3234 lbs/hr of steel shot, using baghouse CE8 as control, and exhausting to the indoors.

(e) Two (2) LS shot blast units, identified as SB5 and SB6, constructed in 2003, with a maximum capacity of 1294 lbs/hr of steel shot each, using baghouse CE10 and CE11, respectively, as control, and exhausting to the indoors.

(f) Four (4) Pauli shot blast units, identified as SB7, SB8, SB12, SB13, constructed in 2003, with a maximum capacity of 424 lbs/hr of glass bead media each, using baghouse CE12, CE13, CE16, and CE17, respectively, as control, and exhausting to the indoors.

(g) One (1) Empire barrel blaster, identified as SB10, constructed in 2003, with a maximum capacity of 1030 lbs/hr of steel shot, using baghouse CE14 as control, and exhausting to the indoors.

(h) One (1) shot blast unit, identified as SB11, constructed in 2003, with a maximum capacity of 530 lbs/hr of aluminum oxide, using baghouse CE18 as control, and exhausting to the indoors.

(i) One (1) Guyson shot blast unit, identified as SB14, constructed in 2003, with a maximum capacity of 530 lbs/hr of aluminum oxide, using baghouse CE15 as control, and exhausting to the indoors.

(j) One (1) Pauli shot blast unit, identified as SB15, constructed in 2005, with a maximum capacity of 259 lbs/hr of soda blast media, using baghouse CE20 as control, and exhausting to the indoors.

(k) One (1) wheelabrator, identified as SB16, constructed in 2003, with a maximum capacity of 31,769 lbs/hr of steel grit, using baghouse CE21 as control, and exhausting to the indoors.

(l) One (1) paint booth, identified as SC2, approved for construction in 2013, with a maximum capacity of 0.333 units per hour, equipped with dry filters, identified as CE2, for control, and exhausting to stack S11 and S18.

(m) One (1) powder coating booth, identified as SC3, approved for construction in 2013, with a maximum capacity of 200 pounds per hour of powder coating, equipped with a dry filters, identified as CE3, and exhausting to the indoors.

(n) One (1) dip tank, identified as SC4, constructed in 2005, with a maximum capacity of 0.11 gallons of coating per hour.

(o) One (1) roll coating operation, identified as SC5, constructed in 2002, with a maximum capacity of 1.15 gallons of coating per hour.

Under 40 CFR Part 60, Subpart EE, emission units SC2, SC4, and SC5 are considered affected facilities

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, which include:

(1) One (1) furnace, identified as EC1, constructed in 1992, with a maximum heat input capacity of 0.28 MMBtu/hour, and exhausting to stack S1.

(2) Two (2) furnaces, identified as EC2 and EC3, constructed in 2009, with a maximum heat input capacity of 0.12 MMBtu/hour each, and exhausting to stack S2.

(3) One (1) pressure washer, identified as EC4, with a maximum heat input capacity of 0.33 MMBtu/hour, exhausting to stack S3.

(4) One (1) furnace, identified as EC5, constructed in 2006, with a maximum heat input capacity of 0.12 MMBtu/hour, exhausting to stack S6.

(5) One (1) furnace, identified as EC6, constructed in 1992, with a maximum heat input capacity of 0.15 MMBtu/hour, exhausting to stack S7.

(6) One (1) furnace, identified as EC7, constructed in 1992, with a maximum heat input capacity of 0.32 MMBtu/hour, exhausting to stack S8.

(7) One (1) make-up air unit, identified as EC9, approved for construction in 2013, with a maximum heat input capacity of 3.42 MMBtu/hour, exhausting to stack S18.

(8) One (1) curing oven, identified as EC10, approved for construction in 2013, with a maximum heat input capacity of 2.0 MMBtu/hour, exhausting of stack S14.

(9) One (1) small burn off oven, identified as EC11, constructed in 2004, with a maximum heat input capacity of 0.85 MMBtu/hour, exhausting to stack S15.

(10) One (1) large burn off oven, identified as EC12, constructed in 2005, with a maximum heat input capacity of 2.88 MMBtu/hour, exhausting to stack S16.

(11) One (1) furnace, identified as EC13, constructed in 2006, with a maximum heat input capacity of 0.32 MMBtu/hour, exhausting to stack S17.

A.4 FESOP Applicability [326 IAC 2-8-2]

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

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F097-33334-00524, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

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

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

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(1) it contains a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

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

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

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

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

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

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee 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 Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.12 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly

signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

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

(a) All terms and conditions of permits established prior to F097-33334-00524 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

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

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

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

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

(b) Emission Trades [326 IAC 2-8-15(b)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

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

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

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

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

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

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

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

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

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

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

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

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

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

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

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

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

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

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

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

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

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

(b) For existing units:
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

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

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

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.13 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

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

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

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following, where applicable:

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

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or

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

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

Stratospheric Ozone Protection

C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) Blast Room, identified as SB1, constructed in 2003, with a maximum capacity of 1818 lbs/hr of StarBlast media, using baghouse CE5 as control, and exhausting indoors.

(b) One (1) Empire shot blast unit, identified as SB2, constructed in 2005, with a maximum capacity of 2480 lbs/hr of glass bead media, using baghouse CE6 as control, and exhausting to the indoors.

(c) One (1) Gibson shot blast unit, identified as SB3, constructed in 2003, with a maximum capacity of 7920 lbs/hr of steel shot, using baghouse CE7 as control, and exhausting to the indoors.

(d) One (1) Goff shot blast unit, identified as SB4, constructed in 2003, with a maximum capacity of 3234 lbs/hr of steel shot, using baghouse CE8 as control, and exhausting to the indoors.

(e) Two (2) LS shot blast units, identified as SB5 and SB6, constructed in 2003, with a maximum capacity of 1294 lbs/hr of steel shot each, using baghouse CE10 and CE11, respectively, as control, and exhausting to the indoors.

(f) Four (4) Pauli shot blast units, identified as SB7, SB8, SB12, SB13, constructed in 2003, with a maximum capacity of 424 lbs/hr of glass bead media each, using baghouse CE12, CE13, CE16, and CE17, respectively, as control, and exhausting to the indoors.

(g) One (1) Empire barrel blaster, identified as SB10, constructed in 2003, with a maximum capacity of 1030 lbs/hr of steel shot, using baghouse CE14 as control, and exhausting to the indoors.

(h) One (1) shot blast unit, identified as SB11, constructed in 2003, with a maximum capacity of 530 lbs/hr of aluminum oxide, using baghouse CE18 as control, and exhausting to the indoors.

(i) One (1) Guyson shot blast unit, identified as SB14, constructed in 2003, with a maximum capacity of 530 lbs/hr of aluminum oxide, using baghouse CE15 as control, and exhausting to the indoors.

(j) One (1) Pauli shot blast unit, identified as SB15, constructed in 2005, with a maximum capacity of 259 lbs/hr of soda blast media, using baghouse CE20 as control, and exhausting to the indoors.

(k) One (1) wheelabrator, identified as SB16, constructed in 2003, with a maximum capacity of 31,769 lbs/hr of steel grit, using baghouse CE21 as control, and exhausting to the indoors.

(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 2-8-4(1)]

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

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from each of the shot blast units shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.1.2 FESOP and PSD Minor Limits [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 and in order to render 326 IAC 2-2 not applicable, PM, PM10, and PM2.5 emissions (after control) from the shot blasters shall not exceed the limits contained in the table below:

Shot Blast Units	PM Emission Limit (lbs/hr)	PM10 andPM2.5 Emission Limit (lbs/hr)
SB1	0.73	0.73
SB2	0.93	0.93
SB3	1.27	1.09
SB4	0.52	0.44
SB5	0.21	0.18
SB6	0.21	0.18
SB7	0.17	0.17
SB8	0.17	0.17
SB10	0.41	0.41
SB11	0.21	0.21
SB12	0.17	0.17
SB13	0.17	0.17
SB14	0.21	0.21
SB15	0.10	0.10
SB16	10.17	8.74

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 from other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period, PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.4 Particulate Control

(a) In order to comply with Condition D.1.1 and D.1.2, the dust collectors used for particulate control shall be in operation and controlling emissions from the shot blast units at all times these facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.1.5 Filter Inspections

The Permittee shall perform semi-annual inspections of the filters associated with the dust collectors for each shot blast unit to verify that they are being operated and maintained in accordance with the manufacturer's specifications. All defective filters shall be replaced. A record shall be kept of the results of each inspection.

D.1.6 Parametric Monitoring

The Permittee shall record the pressure drop across the dust collector used in conjunction with the Blast Room (SB1), at least once per day when this process is in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 3.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.7 Testing Requirements [326 IAC 2-8-5(a)(1)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall:

(a) Not later than one hundred and eighty (180) days after the issuance of this permit (FESOP F097-33334-00524), the Permittee shall perform PM, PM10, and PM2.5 testing for one (1) of the emission units (after control) within Group 1 as specified in the following table, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. The source will test the emission unit for which the longest period of time has passed since the last valid compliance test for the Group 1 emission units. In addition to these requirements, IDEM may require compliance testing when necessary to determine if these facilities are in compliance. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 includes filterable and condensable PM10. PM2.5 includes filterable and condensable PM2.5.

EMISSION UNIT GROUPINGS			
Group	**Emission Unit ID**	**Emission Unit Description**	**Control Device**
Group 1	SB1	Blast Room	Baghouse CE5
	SB2	Empire Shot Blast Unit	Baghouse CE6
	SB3	Gibson Shot Blast Unit	Baghouse CE7

(b) Not later than one hundred and eighty (180) days after the issuance of this permit (FESOP F097-33334-00524), the Permittee shall perform PM, PM10, and PM2.5 testing on wheelabrator (SB16) (after control), utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in

accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 includes filterable and condensable PM10. PM2.5 includes filterable and condensable PM2.5.

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

D.1.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.6, the Permittee shall maintain a daily record of the pressure drop across the dust collector controlling the Blast Room (SB1). The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g., the process did not operate that day).

(a) To document the compliance status with Condition D.1.5, the Permittee shall maintain records of the semi-annual inspections required under Condition D.1.5.

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(l) One (1) paint booth, identified as SC2, approved for construction in 2013, with a maximum capacity of 0.333 units per hour, equipped with dry filters, identified as CE2, for control, and exhausting to stack S11 and S18.

(m) One (1) powder coating booth, identified as SC3, approved for construction in 2013, with a maximum capacity of 200 pounds per hour of powder coating, equipped with a dry filters, identified as CE3, and exhausting to the indoors.

(o) One (1) roll coating operation, identified as SC5, constructed in 2002, with a maximum capacity of 1.15 gallons of coating per hour.

Under 40 CFR Part 60, Subpart EE, emission units SC2, SC4, and SC5 are considered affected facilities

(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 2-8-4(1)]

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

(a) Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from the powder coating booth (SC3) shall not exceed three hundredths (0.03) grain per dry standard cubic foot (dscf)).

(b) Pursuant to 326 IAC 6.5-1-2(h), paint booth (SC2) shall be controlled by a dry particulate filter, water wash, or an equivalent control device subject to the following:

(1) The source shall operate the control device in accordance with manufacturer's specifications.

(2) If overspray is visibly detected at the exhaust or accumulates on the ground, the source shall inspect the control device and do either of the following no later than four (4) hours after the observation:

(A) Repair the control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(B) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(3) If overspray is visibly detected, the source shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detectable at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

D.2.2 FESOP and PSD Minor Limits [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 and in order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

(a) PM, PM10, amd PM2.5 emissions (after control) from the powder coating booth (SC3) shall not exceed 2.00 pounds per hour, each.

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 from other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period, PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.2.3 Volatile Organic Compound (VOC) Content Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, when coating miscellaneous metal parts and products in the paint booth (SC2) and the roll coating operation (SC5), the Permittee shall comply with the following:

(a) No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products may cause, allow, or permit the discharge into the atmosphere of any VOC in excess of the following:

(1) Fifty-two hundredths (0.52) kilogram per liter (four and three-tenths (4.3) pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies clear coatings. A clear coating is a coating that:

(A) lacks color or opacity; and

(B) is transparent and uses the undercoat as a reflectant base or undertone color.

(2) Forty-two hundredths (0.42) kilogram per liter (three and five-tenths (3.5) pounds per gallon) of coating excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to ninety (90) degrees Celsius (one hundred ninety-four (194) degrees Fahrenheit).

(3) Forty-two hundredths (0.42) kilogram per liter (three and five-tenths (3.5) pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings. Extreme performance coatings are coatings designed for exposure to:

(A) Temperatures consistently above ninety-five (95) degrees Celsius;

(B) detergents;

(C) abrasive or scouring agents;

(D) solvents;

(E) corrosive atmospheres;

(F) outdoor weather at all times; or

(G) similar environmental conditions.

(4) Thirty-six hundredths (0.36) kilogram per liter (three (3) pounds per gallon) of coating, excluding water, delivered to a coating applicator for all other coatings and coating application systems.

(b) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not be limited to, the following:

(1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(4) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(5) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.5 Particulate Control

(a) In order to comply with Condition D.2.1(a) and D.2.2, the dust collector for particulate control of the powder coating booth, identified as SC3, shall be in operation and controlling emissions at all times this facility is in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.6 Broken or Failed Dust Collector Detection

(a) For a single compartment dust collector controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C - Response to Excursions or Exceedances).

(b) For a single compartment dust collector controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the unit. Operations may continue only if the event qualifies as an emergency and the Registrant satisfies the requirements of the emergency provisions of this permit (Section C - Response to Excursions or Exceedances).

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

D.2.7 Dry Filter Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters associated with the paint booth (SC2). To monitor the performance of the dry filters, weekly observations shall be made of the overspray from paint booth SC2 stacks S11 and S18, while the booth is in operation. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

(b) Monthly inspections shall be performed of the coating emissions from paint booth SC2 stacks S11 and S18 and the presence of overspray on the sides of the building and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.2.8 Filter Inspections

The Permittee shall perform semi-annual inspections of the filters associated with the dust collector for powder coating booth SC3 to verify that they are being operated and maintained in accordance with the manufacturer's specifications. All defective filters shall be replaced. A record shall be kept of the results of each inspection.

D.2.9 Testing Requirements [326 IAC 2-8-5(a)(1)][326 IAC 2-1.1-11]

Not later than one hundred and eighty (180) days after the issuance of this permit (FESOP F097-33334-00524), in order to demonstrate compliance with Conditions D.2.1(a) and D.2.2, the Permittee shall perform PM, PM_{10}, and $PM_{2.5}$ testing on the powder coating booth (SC3) dust collector exhaust, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 includes filterable and condensable PM10. PM2.5 includes filterable and condensable PM2.5.

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

D.2.10 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1(b)(3), the Permittee shall maintain a record of any actions taken if overspray is visibly detected.

(b) To document compliance with Condition D.2.7, the Permittee shall maintain a log of weekly overspray observations and daily and monthly inspections.

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, which include:

(1) One (1) furnace, identified as EC1, constructed in 1992, with a maximum heat input capacity of 0.28 MMBtu/hour, and exhausting to stack S1.

(2) Two (2) furnaces, identified as EC2 and EC3, constructed in 2009, with a maximum heat input capacity of 0.12 MMBtu/hour each, and exhausting to stack S2.

(3) One (1) pressure washer, identified as EC4, with a maximum heat input capacity of 0.33 MMBtu/hour, exhausting to stack S3.

(4) One (1) furnace, identified as EC5, constructed in 2006, with a maximum heat input capacity of 0.12 MMBtu/hour, exhausting to stack S6.

(5) One (1) furnace, identified as EC6, constructed in 1992, with a maximum heat input capacity of 0.15 MMBtu/hour, exhausting to stack S7.

(6) One (1) furnace, identified as EC7, constructed in 1992, with a maximum heat input capacity of 0.32 MMBtu/hour, exhausting to stack S8.

(7) One (1) make-up air unit, identified as EC9, approved for construction in 2013, with a maximum heat input capacity of 3.42 MMBtu/hour, exhausting to stack S18.

(8) One (1) curing oven, identified as EC10, approved for construction in 2013, with a maximum heat input capacity of 2.0 MMBtu/hour, exhausting of stack S14.

(9) One (1) small burn off oven, identified as EC11, constructed in 2004, with a maximum heat input capacity of 0.85 MMBtu/hour, exhausting to stack S15.

(10) One (1) large burn off oven, identified as EC12, constructed in 2005, with a maximum heat input capacity of 2.88 MMBtu/hour, exhausting to stack S16.

(11) One (1) furnace, identified as EC13, constructed in 2006, with a maximum heat input capacity of 0.32 MMBtu/hour, exhausting to stack S17.

(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 2-8-4(1)]

D.3.1 Particulate Matter (PM) Limitations [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from each of the natural gas combustion units shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.3.2 Incinerator [326 IAC 4-2-2]

(a) Pursuant to 326 IAC 4-2-2, the small burn off oven (EC11) and large burn-off oven (EC12), shall:

(1) Consist of primary and secondary chambers or the equivalent.

(2) Be equipped with a primary burner unless burning only wood products.

(3) Comply with 326 IAC 5-1 and 326 IAC 2.

(4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in subsection (c).

(5) Not emit particulate matter in excess of five-tenths (0.5) pound of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.

(6) If any of the requirements of subdivisions (1) through (5) are not met, then the owner or operator shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

(b) An owner or operator developing an operation and maintenance plan pursuant to subsection (a)(4) must comply with the following:

(1) The operation and maintenance plan must be designed to meet the particulate matter emission limitation specified in subsection (a)(5) and include the following:

(A) Procedures for receiving, handling, and charging waste.
(B) Procedures for incinerator startup and shutdown.
(C) Procedures for responding to a malfunction.
(D) Procedures for maintaining proper combustion air supply levels.
(E) Procedures for operating the incinerator and associated air pollution control systems.
(F) Procedures for handling ash.
(G) A list of wastes that can be burned in the incinerator.

(2) Each incinerator operator shall review the plan before initial implementation of the operation and maintenance plan and annually thereafter.

(3) The operation and maintenance plan must be readily accessible to incinerator operators.

(4) The owner or operator of the incinerator shall notify the department, in writing, thirty (30) days after the operation and maintenance plan is initially developed pursuant to this section.

(c) The owner or operator of the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.

SECTION E.1 FACILITY OPERATION CONDITIONS

Emissions Unit Description:

(l) One (1) paint booth, identified as SC2, approved for construction in 2013, with a maximum capacity of 0.333 units per hour, equipped with dry filters, identified as CE2, for control, and exhausting to stack S11 and S18.

(n) One (1) dip tank, identified as SC4, constructed in 2005, with a maximum capacity of 0.11 gallons of coating per hour.

(o) One (1) roll coating operation, identified as SC5, constructed in 2002, with a maximum capacity of 1.15 gallons of coating per hour.

Under 40 CFR Part 60, Subpart EE, emission units SC2, SC4, and SC5 are considered affected facilities

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

New Source Performance Standards (NSPS) Requirements

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

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, for the paint booth (SC2), powder coating booth (SC3), dip tank (SC4), and roll coating operation (SC5), except as otherwise specified in 40 CFR 60, Subpart EE.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.1.2 NSPS Subpart EE Requirements - Standards of Performance for Surface Coating of Metal Furniture [40 CFR Part 60, Subpart EE] [326 IAC 12-1]

Pursuant to CFR Part 60, Subpart EE, the affected facility to which the provisions of this subpart apply is each metal furniture surface coating operation in which organic coatings are applied, on which construction, modification, or reconstruction is commenced after November 28, 1980. The surface coating operations, consisting of paint booth SC2, powder coating booth SC3, dip tank SC4, and roll coating operation SC5, combined, use less than 3,842 liters (1,014.95 gallons) of coatings (as applied) per year, and are therefore only subject to the following portions of Subpart EE:

(1) 40 CFR 60.310(c)
(2) 40 CFR 60.311

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
FESOP Permit No.: F097-33334-00524

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)_____

☐ Report (specify)_____

☐ Notification (specify)_____

☐ Affidavit (specify)_____

☐ Other (specify)_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
FESOP Permit No.: F097-33334-00524

This form consists of 2 pages **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
FESOP Permit No.: F097-33334-00524

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

Page 2 of 2

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

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

Attachment A
to Federally Enforceable State Operating Permit F097-33334-00524

IDS Blast Finishing
2717 Tobey Drive,
Indianapolis, IN 46219

40 CFR 60, Subpart EE—Standards of Performance for Surface Coating of Metal Furniture

Source: 47 FR 49287, Oct. 29, 1982, unless otherwise noted.

§ 60.310 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each metal furniture surface coating operation in which organic coatings are applied.

(b) This subpart applies to each affected facility identified in paragraph (a) of this section on which construction, modification, or reconstruction is commenced after November 28, 1980.

(c) Any owner or operator of a metal furniture surface coating operation that uses less than 3,842 liters of coating (as applied) per year and keeps purchase or inventory records or other data necessary to substantiate annual coating usage shall be exempt from all other provisions of this subpart. These records shall be maintained at the source for a period of at least 2 years.

[47 FR 49287, Oct. 29, 1982, as amended at 50 FR 18248, Apr. 30, 1985]

§ 60.311 Definitions and symbols.

(a) All terms used in this subpart not defined below are given the meaning in the Act and in subpart A of this part.

Bake oven means a device which uses heat to dry or cure coatings.

Dip coating means a method of applying coatings in which the part is submerged in a tank filled with the coatings.

Electrodeposition (EDP) means a method of applying coatings in which the part is submerged in a tank filled with the coatings and in which an electrical potential is used to enhance deposition of the coatings on the part.

Electrostatic spray application means a spray application method that uses an electrical potential to increase the transfer efficiency of the coatings.

Flash-off area means the portion of a surface coating operation between the coating application area and bake oven.

Flow coating means a method of applying coatings in which the part is carried through a chamber containing numerous nozzles which direct unatomized streams of coatings from many different angles onto the surface of the part.

Organic coating means any coating used in a surface coating operation, including dilution solvents, from which volatile organic compound emissions occur during the application or the curing process. For the purpose of this regulation, powder coatings are not included in this definition.

Powder coating means any surface coating which is applied as a dry powder and is fused into a continuous coating film through the use of heat.

Spray application means a method of applying coatings by atomizing and directing the atomized spray toward the part to be coated.

Surface coating operation means the system on a metal furniture surface coating line used to apply and dry or cure an organic coating on the surface of the metal furniture part or product. The surface coating operation may be a prime coat or a top coat operation and includes the coating application station(s), flash-off area, and curing oven.

Transfer efficiency means the ratio of the amount of coating solids deposited onto the surface of a part or product to the total amount of coating solids used.

VOC content means the proportion of a coating that is volatile organic compounds (VOC's), expressed as kilograms of VOC's per liter of coating solids.

VOC emissions means the mass of volatile organic compounds (VOC's), expressed as kilograms of VOC's per liter of applied coating solids, emitted from a metal furniture surface coating operation.

(b) All symbols used in this subpart not defined below are given the meaning in the Act and in subpart A of this part.

C_a=the VOC concentration in each gas stream leaving the control device and entering the atmosphere (parts per million by volume, as carbon)

C_b=the VOC concentration in each gas stream entering the control device (parts per million by volume, as carbon)

C_f=the VOC concentration in each gas stream emitted directly to the atmosphere (parts per million by volume, as carbon)

D_c=density of each coating, as received (kilograms per liter)

D_d=density of each diluent VOC-solvent (kilograms per liter)

D_r=density of VOC-solvent recovered by an emission control device (kilograms per liter)

E=VOC destruction efficiency of the control device (fraction)

F=the proportion of total VOC's emitted by an affected facility that enters the control device (fraction)

G=the volume-weighted average mass of VOC's in coatings consumed in a calendar month per unit volume of coating solids applied (kilograms per liter)

L_c=the volume of each coating consumed, as received (liters)

L_d=the volume of each diluent VOC-solvent added to coatings (liters)

L_r=the volume of VOC-solvent recovered by an emission control device (liters)

L_s=the volume of coating solids consumed (liters)

M_d=the mass of diluent VOC-solvent consumed (kilograms)

M_o=the mass of VOC's in coatings consumed, as received (kilograms)

M_r=the mass of VOC's recovered by an emission control device (kilograms)

N=the volume weighted average mass of VOC emissions to the atmosphere per unit volume of coating solids applied (kilograms per liter)

Q_a=the volumetric flow rate of each gas stream leaving the control device and entering the atmosphere (dry standard cubic meters per hour)

Q_b=the volumetric flow rate of each gas stream entering the control device (dry standard cubic meters per hour)

Q_f=the volumetric flow rate of each gas stream emitted directly to the atmosphere (dry standard cubic meters per hour)

R=the overall VOC emission reduction achieved for an affected facility (fraction)

T=the transfer efficiency (fraction)

V_s=the proportion of solids in each coating (or input stream), as received (fraction by volume)

W_o=the proportion of VOC's in each coating (or input stream), as received (fraction by weight)

§ 60.312 Standard for volatile organic compounds (VOC).

(a) On and after the date on which the initial performance test required to be conducted by §60.8(a) is completed, no owner or operator subject to the provisions of this subpart shall cause the discharge into the atmosphere of VOC emissions from any metal furniture surface coating operation in excess of 0.90 kilogram of VOC per liter of coating solids applied.

§ 60.313 Performance tests and compliance provisions.

(a) Section 60.8(d) and (f) do not apply to the performance test procedures required by this subpart.

(b) The owner or operator of an affected facility shall conduct an initial performance test as required under §60.8(a) and thereafter a performance test each calendar month for each affected facility according to the procedures in this section.

(c) The owner or operator shall use the following procedures for determining monthly volume-weighted average emissions of VOC's in kilograms per liter of coating solids applied (G).

(1) An owner or operator shall use the following procedures for any affected facility which does not use a capture system and control device to comply with the emissions limit specified under §60.312. The owner or operator shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating or by an analysis of each coating, as received, using Method 24. The Administrator may require the owner or operator who uses formulation data supplied by the manufacturer of the coating to determine the VOC content of coatings using Method 24. The owner or operator shall determine the volume of coating and the mass of VOC-solvent used for thinning purposes from company records on a monthly basis. If a common coating distribution system serves more than one affected facility or serves both affected and existing facilities, the owner or operator shall estimate the volume of coating used at each facility by using the average dry weight of coating and the surface area coated by each affected and existing facility or by other procedures acceptable to the Administrator.

(i) Calculate the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied (G) during each calendar month for each affected facility, except as provided under §60.313(c)(2) and (c)(3). Each monthly calculation is considered a performance test. Except as provided in paragraph (c)(1)(iv) of this section, the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied (G) each calendar month will be determined by the following procedures.

(A) Calculate the mass of VOC's used (M_o+M_d) during each calendar month for each affected facility by the following equation:

$$M_o + M_d = \sum_{i=1}^{n} L_{ci} D_{ci} W_{oi} + \sum_{j=1}^{m} L_{dj} D_{dj}$$

($\Sigma L_{dj} D_{dj}$ will be 0 if no VOC solvent is added to the coatings, as received.)

Where: n is the number of different coatings used during the calendar month and m is the number of different diluent VOC-solvents used during the calendar month.

(B) Calculate the total volume of coating solids used (L_s) in each calendar month for each affected facility by the following equation:

$$L_s = \sum_{i=1}^{n} L_{ci} V_{si}$$

Where: n is the number of different coatings used during the calendar month.

Select the appropriate transfer efficiency from table 1. If the owner or operator can demonstrate to the satisfaction of the Administrator that transfer efficiencies other than those shown are appropriate, the Administrator will approve their use on a case-by-case basis. Transfer efficiency values for application methods not listed below shall be determined by the Administrator on a case-by-case basis. An owner or operator must submit sufficient data for the Administrator to judge the accuracy of the transfer efficiency claims.

Table 1—Transfer Efficiencies

Application methods	Transfer efficiency (T)
Air atomized spray	0.25
Airless spray	.25
Manual electrostatic spray	.60
Nonrotational automatic electrostatic spray	.70
Rotating head electrostatic spray (manual and automatic)	.80
Dip coat and flow coat	.90
Electrodeposition	.95

Where more than one application method is used within a single surface coating operation, the owner or operator shall determine the composition and volume of each coating applied by each method through a means acceptable to the Administrator and compute the weighted average transfer efficiency by the following equation:

$$T = \frac{\sum_{i=1}^{n} L_{cik} V_{sik} T_k}{\sum_{k=1}^{p} L_s}$$

Where n is the number of coatings used and p is the number of application methods used.

(C) Calculate the volume-weighted average mass of VOC's consumed per unit volume of coating solids applied (G) during the calendar month for each affected facility by the following equation:

$$G = \frac{M_o + M_d}{L_s T}$$

(ii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during the calendar month for each affected facility by the following equation:

N=G

(iii) Where the volume-weighted average mass of VOC discharged to the atmosphere per unit volume of coating solids applied (N) is less than or equal to 0.90 kilogram per liter, the affected facility is in compliance.

(iv) If each individual coating used by an affected facility has a VOC content, as received, which when divided by the lowest transfer efficiency at which the coating is applied, results in a value equal to or less than 0.90 kilogram per liter, the affected facility is in compliance provided no VOC's are added to the coatings during distribution or application.

(2) An owner or operator shall use the following procedures for any affected facility that uses a capture system and a control device that destroys VOC's (e.g., incinerator) to comply with the emission limit specified under §60.312.

(i) Determine the overall reduction efficiency (R) for the capture system and control device. For the initial performance test the overall reduction efficiency (R) shall be determined as prescribed in paragraphs (c)(2)(i) (A), (B), and (C) of this section. In subsequent months, the owner or operator may use the most recently determined overall reduction efficiency (R) for the performance test providing control device and capture system operating conditions have not changed. The procedure in, paragraphs (c)(2)(i) (A), (B), and (C), of this section, shall be repeated when directed by the Administrator or when the owner or operator elects to operate the control device or capture system at conditions different from the initial performance test.

(A) Determine the fraction (F) of total VOC's emitted by an affected facility that enters the control device using the following equation:

$$F = \frac{\sum_{j=1}^{n} C_{aj} Q_{aj}}{\sum_{j=1}^{n} C_{aj} Q_{aj} + \sum_{i=1}^{m} C_{di} Q_{di}}$$

Where

n is the number of gas streams entering the control device and

m is the number of gas streams emitted directly to the atmosphere.

(B) Determine the destruction efficiency of the control device (E) using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation:

$$E = \frac{\sum_{j=1}^{n} Q_{aj} C_{aj} - \sum_{i=1}^{m} Q_{di} C_{di}}{\sum_{j=1}^{n} Q_{aj} C_{aj}}$$

Where:

n is the number of gas streams entering the control device, and

m is the number of gas streams leaving the contol device and entering the atmosphere.

(C) Determine overall reduction efficiency (R) using the following equation:

R=EF

(ii) Calculate the volume-weighted average of the total mass of VOC's per unit volume of coating solids applied (G) during each calendar month for each affected facility using equations in paragraphs (c)(1)(i) (A), (B), and (C) of this section.

(iii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during each calendar month by the following equation:

N=G(1−R)

(iv) If the volume-weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.90 kilogram per liter of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test.

(3) An owner or operator shall use the following procedure for any affected facility which uses a control device that recovers the VOC's (e.g., carbon adsorber) to comply with the applicable emission limit specified under §60.312.

(i) Calculate the total mass of VOC's consumed (M_o+M_d) and the volume-weighted average of the total mass of VOC's per unit volume of coating solids applied (G) during each calendar month for each affected facility using equations in paragraph (c)(1)(i) (A), (B), and (C) of this section.

(ii) Calculate the total mass of VOC's recovered (M_r) during each calendar month using the following equation:

$M_r=L_rD_r$

(iii) Calculate overall reduction efficiency of the control device (R) for each calendar month for each affected facility using the following equation:

$$R = \frac{M_r}{M_o + M_d}$$

(iv) Calculate the volume-weighted average mass of VOC's emitted to the atmosphere (N) for each calendar month for each affected facility using equation in paragraph (c)(2)(iii) of this section.

(v) If the weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.90 kilogram per liter of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test.

[47 FR 49287, Oct. 29, 1982, as amended at 65 FR 61759, Oct. 17, 2000]

§ 60.314 Monitoring of emissions and operations.

(a) The owner or operator of an affected facility which uses a capture system and an incinerator to comply with the emission limits specified under §60.312 shall install, calibrate, maintain, and operate temperature measurement devices according to the following procedures:

(1) Where thermal incineration is used, a temperature measurement device shall be installed in the firebox. Where catalytic incineration is used, a temperature measurement device shall be installed in the gas stream immediately before and after the catalyst bed.

(2) Each temperature measurement device shall be installed, calibrated, and maintained according to the manufacturer's specifications. The device shall have an accuracy of the greater of 0.75 percent of the temperature being measured expressed in degrees Celsius or ±2.5 °C.

(3) Each temperature measurement device shall be equipped with a recording device so that a permanent continuous record is produced.

(b) The owner or operator of an affected facility which uses a capture system and a solvent recovery system to comply with the emission limits specified under §60.312 shall install the equipment necessary to determine the total volume of VOC-solvent recovered daily.

§ 60.315 Reporting and recordkeeping requirements.

(a) The reporting requirements of §60.8(a) apply only to the initial performance test. Each owner or operator subject to the provisions of this subpart shall include the following data in the report of the initial performance test required under §60.8(a):

(1) Except as provided in paragraph (a)(2) of this section, the volume-weighted average mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) for a period of one calendar month from each affected facility.

(2) For each affected facility where compliance is determined under the provisions of §60.313(c)(1)(iv), a list of the coatings used during a period of one calendar month, the VOC content of each coating calculated from data determined using Method 24 or supplied by the manufacturer of the coating, and the minimum transfer efficiency of any coating application equipment used during the month.

(3) For each affected facility where compliance is achieved through the use of an incineration system, the following additional information will be reported:

(i) The proportion of total VOC's emitted that enters the control device (F),

(ii) The VOC reduction efficiency of the control device (E),

(iii) The average combustion temperature (or the average temperature upstream and downstream of the catalyst bed), and

(iv) A description of the method used to establish the amount of VOC's captured and sent to the incinerator.

(4) For each affected facility where compliance is achieved through the use of a solvent recovery system, the following additional information will be reported:

(i) The volume of VOC-solvent recovered (L_r), and

(ii) The overall VOC emission reduction achieved (R).

(b) Following the initial performance test, the owner or operator of an affected facility shall identify, record, and submit a written report to the Administrator every calendar quarter of each instance in which the volume-weighted average of the total mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under §60.312. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Administrator semiannually.

(c) Following the initial performance test, the owner or operator of an affected facility shall identify, record, and submit at the frequency specified in §60.7(c) the following:

(1) Where compliance with §60.312 is achieved through the use of thermal incineration, each 3-hour period when metal furniture is being coated during which the average temperature of the device was more than 28 °C below the

average temperature of the device during the most recent performance test at which destruction efficiency was determined as specified under §60.313.

(2) Where compliance with §60.312 is achieved through the use of catalytic incineration, each 3-hour period when metal furniture is being coated during which the average temperature of the device immediately before the catalyst bed is more than 28 °C below the average temperature of the device immediately before the catalyst bed during the most recent performance test at which destruction efficiency was determined as specified under §60.313. Additionally, when metal furniture is being coated, all 3-hour periods during which the average temperature difference across the catalyst bed is less than 80 percent of the average temperature difference across the catalyst bed during the most recent performance test at which destruction efficiency was determined as specified under §60.313 will be recorded.

(3) For thermal and catalytic incinerators, if no such periods as described in paragraphs (c)(1) and (c)(2) of this section occur, the owner or operator shall state this in the report.

(d) Each owner or operator subject to the provisions of this subpart shall maintain at the source, for a period of at least 2 years, records of all data and calculations used to determine VOC emissions from each affected facility. Where compliance is achieved through the use of thermal incineration, each owner or operator shall maintain, at the source, daily records of the incinerator combustion chamber temperature. If catalytic incineration is used, the owner or operator shall maintain at the source daily records of the gas temperature, both upstream and downstream of the incinerator catalyst bed. Where compliance is achieved through the use of a solvent recovery system, the owner or operator shall maintain at the source daily records of the amount of solvent recovered by the system for each affected facility.

[47 FR 49287, Oct. 29, 1982, as amended at 55 FR 51383, Dec. 13, 1990; 65 FR 61759, Oct. 17, 2000]

§ 60.316 Test methods and procedures.

(a) The reference methods in appendix A to this part except as provided under §60.8(b) shall be used to determine compliance with §60.312 as follows:

(1) Method 24, or coating manufacturer's formulation data, for use in the determination of VOC content of each batch of coating as applied to the surface of the metal parts. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern.

(2) Method 25 for the measurement of VOC concentration.

(3) Method 1 for sample and velocity traverses.

(4) Method 2 for velocity and volumetric flow rate.

(5) Method 3 for gas analysis.

(6) Method 4 for stack gas moisture.

(b) For Method 24, the coating sample must be at least a 1 liter sample in a 1 liter container taken at a point where the sample will be representative of the coating material as applied to the surface of the metal part.

(c) For Method 25, the minimum sampling time for each of 3 runs is 60 minutes and the minimum sample volume is 0.003 dry standard cubic meters except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Administrator.

(d) The Administrator will approve testing of representative stacks on a case-by-case basis if the owner or operator can demonstrate to the satisfaction of the Administrator that testing of representative stacks yields results comparable to those that would be obtained by testing all stacks.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Source Specific Operating Agreement (SSOA) Transitioning to a Federally Enforceable State Operating Permit (FESOP) with New Source Review (NSR)

Source Description and Location

Source Name: **IDS Blast Finishing**
Source Location: **2717 Tobey Drive, Indianapolis, IN 46219**
County: **Marion (Warren Township)**
SIC Code: **7699 (Repair Shops and Related Services) and 7532 (Top, Body, and Upholstery Repair Shops and Paint Shops)**
Operation Permit No.: **F097-33334-00524**
Permit Reviewer: **Adam Wheat**

On June 21, 2013, the Office of Air Quality (OAQ) received an application from IDS Blast Finishing related to the construction and operation of new emission units at an existing source and transition from a SSOA to a FESOP with New Source Review.

Existing Approvals

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

(a) Source Specific Operating Agreement No. 097-25545-00524, issued on December 20, 2007.

(b) Administrative Amendment No. 097-27908-00524, issued on June, 4, 2009.

Due to this application, the source is transitioning from a SSOA to a FESOP with New Source Review.

County Attainment Status

The source is located in Marion County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O_3	Attainment effective November 8, 2007, 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	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.

[1]Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005. Unclassifiable or attainment effective federally July 11, 2013, for PM2.5.

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

(b) $PM_{2.5}$
Marion County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5,}$ $SO_{2,}$ and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Marion 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

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Background and Description of Permitted Emission Units

The Office of Air Quality (OAQ) has reviewed an application, submitted by IDS Blast Finishing on April 16, 2013 and June 21, 2013, relating to transition from its current SSOA to a FESOP, the removal of Surface Coating Booth 1 (SC1), and the addition of paint booth (SC2).

The source consists of the following permitted emission units:

(a) One (1) Blast Room, identified as SB1, constructed in 2003, with a maximum capacity of 1818 lbs/hr of StarBlast media, using baghouse CE5 as control, and exhausting indoors.

(b) One (1) Empire shot blast unit, identified as SB2, constructed in 2005, with a maximum capacity of 2480 lbs/hr of glass bead media, using baghouse CE6 as control, and exhausting to the indoors.

(c) One (1) Gibson shot blast unit, identified as SB3, constructed in 2003, with a maximum capacity of 7920 lbs/hr of steel shot, using baghouse CE7 as control, and exhausting to the indoors.

(d) One (1) Goff shot blast unit, identified as SB4, constructed in 2003, with a maximum capacity of 3234 lbs/hr of steel shot, using baghouse CE8 as control, and exhausting to the indoors.

(e) Two (2) LS shot blast units, identified as SB5 and SB6, constructed in 2003, with a maximum capacity of 1294 lbs/hr of steel shot each, using baghouse CE10 and CE11, respectively, as control, and exhausting to the indoors.

(f) Four (4) Pauli shot blast units, identified as SB7, SB8, SB12, SB13, constructed in 2003, with a maximum capacity of 424 lbs/hr of glass bead media each, using baghouse CE12, CE13, CE16, and CE17, respectively, as control, and exhausting to the indoors.

(g) One (1) Empire barrel blaster, identified as SB10, constructed in 2003, with a maximum capacity of 1030 lbs/hr of steel shot, using baghouse CE14 as control, and exhausting to the indoors.

(h) One (1) shot blast unit, identified as SB11, constructed in 2003, with a maximum capacity of 530 lbs/hr of aluminum oxide, using baghouse CE18 as control, and exhausting to the indoors.

(i) One (1) Guyson shot blast unit, identified as SB14, constructed in 2003, with a maximum capacity of 530 lbs/hr of aluminum oxide, using baghouse CE15 as control, and exhausting to the indoors.

(j) One (1) Pauli shot blast unit, identified as SB15, constructed in 2005, with a maximum capacity of 259 lbs/hr of soda blast media, using baghouse CE20 as control, and exhausting to the indoors.

(k) One (1) wheelabrator, identified as SB16, constructed in 2003, with a maximum capacity of 31,769 lbs/hr of steel grit, using baghouse CE21 as control, and exhausting to the indoors.

(l) One (1) Finishing Systems paint booth, identified as SC2, approved for construction in 2013, with a maximum capacity of 0.333 units per hour, equipped with dry filters, identified as CE2, for control, and exhausting to stack S11 and S18.

(m) One (1) Finishing Systems powder coating booth, identified as SC3, approved for construction in 2013, with a maximum capacity of 200 pounds per hour of powder coating, equipped with a dry filters, identified as CE3, and exhausting to the indoors.

(n) One (1) dip tank, identified as SC4, constructed in 2005, with a maximum capacity of 0.11 gallons of coating per hour.

(o) One (1) roll coating operation, identified as SC5, constructed in 2002, with a maximum capacity of 1.15 gallons of coating per hour.

Under 40 CFR Part 60, Subpart EE, emission units SC2, SC4, and SC5 are considered affected facilities

Insignificant Activities

The source also consists of the following insignificant activities:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, which include:

(1) One (1) furnace, identified as EC1, constructed in 1992, with a maximum heat input capacity of 0.28 MMBtu/hour, and exhausting to stack S1.

(2) Two (2) furnaces, identified as EC2 and EC3, constructed in 2009, with a maximum heat input capacity of 0.12 MMBtu/hour each, and exhausting to stack S2.

(3) One (1) pressure washer, identified as EC4, with a maximum heat input capacity of 0.33 MMBtu/hour, exhausting to stack S3.

(4) One (1) furnace, identified as EC5, constructed in 2006, with a maximum heat input capacity of 0.12 MMBtu/hour, exhausting to stack S6.

(5) One (1) furnace, identified as EC6, constructed in 1992, with a maximum heat input capacity of 0.15 MMBtu/hour, exhausting to stack S7.

(6) One (1) furnace, identified as EC7, constructed in 1992, with a maximum heat input capacity of 0.32 MMBtu/hour, exhausting to stack S8.

(7) One (1) make-up air unit, identified as EC9, approved for construction in 2013, with a maximum heat input capacity of 3.42 MMBtu/hour, exhausting to stack S18.

(8) One (1) curing oven, identified as EC10, approved for construction in 2013, with a maximum heat input capacity of 2.0 MMBtu/hour, exhausting of stack S14.

(9) One (1) small burn off oven, identified as EC11, constructed in 2004, with a maximum heat input capacity of 0.85 MMBtu/hour, exhausting to stack S15.

(10) One (1) large burn off oven, identified as EC12, constructed in 2005, with a maximum heat input capacity of 2.88 MMBtu/hour, exhausting to stack S16.

(11) One (1) furnace, identified as EC13, constructed in 2006, with a maximum heat input capacity of 0.32 MMBtu/hour, exhausting to stack S17.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP

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.

Pollutant	Potential To Emit (tons/year)
PM	1,613
PM10(1)	1,480
PM2.5(1)	1,480
SO_2	0.03
NO_x	4.68
VOC	30.3
CO	3.94
GHGs as CO_2e	5,656
Highest Single HAP	3.96 (Xylene)
Total HAPs	6.52

(1) 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) and particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers (PM2.5), not particulate matter (PM), are each considered as a "regulated air pollutant".

(a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM, PM10, and PM2.5 are each greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are each less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.

(b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) 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).

(c) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

PTE of the Entire Source After Issuance of the FESOP

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

	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)									
Process/ Emission Unit	PM	PM10*	PM2.5*	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Shot Blast Units	68.5	60.9	60.9	-	-	-	-	-	-	-
Surface Coating	9.74	9.74	9.74	-	-	30.0	-	-	6.43	3.96 (Xylene)
Natural Gas Combustion	0.09	0.36	0.36	0.03	4.68	0.26	3.94	5,656	0.09	0.08 (Hexane)
Total PTE of Entire Source	**78.3**	**71.0**	**71.0**	**0.03**	**4.68**	**30.3**	**3.94**	**5,656**	**6.52**	**3.96 (Xylene)**
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	N/A	N/A

*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

(a) FESOP and PSD Minor Status

This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

(1) PM emissions (after control) from the shot blasters shall not exceed the limits contained in the table below:

Shotblast Unit	PM Emission Limit (lbs/hour)
SB1	0.73
SB2	0.93
SB3	1.27
SB4	0.52
SB5	0.21
SB6	0.21
SB7	0.17
SB8	0.17
SB10	0.41
SB11	0.21
SB12	0.17
SB13	0.17
SB14	0.21
SB15	0.10
SB16	10.17

Note: The source can comply with the above-listed limits using a control device having a minimum control efficiency of 96%, as demonstrated in TSD Appendix A.

(2) PM10 and PM2.5 emissions (after control) from the shot blasters shall not exceed the limits contained in the table below:

Shotblast Unit	PM10 and PM2.5 Emission Limit (lbs/hour)
SB1	0.73
SB2	0.93
SB3	1.09
SB4	0.44
SB5	0.18
SB6	0.18
SB7	0.17
SB8	0.17
SB10	0.41
SB11	0.21
SB12	0.17
SB13	0.17
SB14	0.21
SB15	0.10
SB16	8.74

Note: The source can comply with the above-listed limits using a control device having a minimum control efficiency of 96%, as demonstrated in TSD Appendix A.

(3) PM, PM10, amd PM2.5 emissions (after control) from the powder coating booth (SC3) shall not exceed 2.00 pounds per hour, each.

Note: The source can comply with the above-listed limit using a control device having a minimum control effiency of 98%, as demonstrated in TSD Appendix A.

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period, PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) The requirements of the New Source Performance Standard for Surface Coating of Metal Furniture, 40 CFR 60, Subpart EE (326 IAC 12), apply to each metal furniture surface coating operation in which organic coatings are applied, which were constructed, modified, or reconstructed after November 28,1980. While the source was constructed after 1980 and coats metal furniture on occasion using organic coatings, pursuant to 40 CFR 60.310(c), the source uses less than 3842 liters (1014.95 gallons) of coating for metal furniture and therefore if the source keeps purchase or inventory records or other data necessary to substantiate annual coating usage the source shall be exempt from all other provisions of this subpart.

The facilities subject to this rule include the following:

(l) One (1) paint booth, identified as SC2, approved for construction in 2013, with a maximum capacity of 0.333 units per hour, equipped with dry filters, identified as CE2, for control, and exhausting to stack S11 and S18.

(n) One (1) dip tank, identified as SC4, constructed in 2005, with a maximum capacity of 0.11 gallons of coating per hour.

(o) One (1) roll coating operation, identified as SC5, constructed in 2002, with a maximum capacity of 1.15 gallons of coating per hour.

Applicable portions of the NSPS are the following:

(1) 40 CFR 60.310(c)
(2) 40 CFR 60.311

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the surface coating operations except as otherwise specified in 40 CFR 60, Subpart EE.

Pursuant to 40 CFR 60.311 (Definitions), the powder coating booth (SC3) is not subject to the requirements of 40 CFR Part 60, Subpart EE, since powder coatings are not included in the definition of "organic coating".

(b) The requirements of the New Source Performance Standard for Automobile and Light Duty Truck Surface Coating, 40 CFR 60, Subpart MM (326 IAC 12), are not included in the permit, since this source is not located at an automobile or light-duty truck assembly plant.

(c) The requirements of the New Source Performance Standard for Industrial Surface Coating: Large Appliance, 40 CFR 60, Subpart SS (326 IAC 12), are not included in the permit, since the surface coating operation is not located in a large appliance surface coating line.

(d) There are no other 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)

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors (40 CFR Part 63, Subpart EEE) are not included in this permit for the insignificant paint burn-off ovens. The paint that is burned off of the metal parts, prior to their reuse, is not considered to be a hazardous waste, as that term is defined and characterized in 40 CFR 261.3, 40 CFR 261.10, and 40 CFR 261.20-24.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP): Surface Coating of Automobiles and Light-Duty Trucks, 40 CFR 63, Subpart IIII (4I), (326 IAC 20-85), is not included in the permit, since this source does not coat automobile or light duty truck body parts and is not a major source of HAPs.

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Metal Furniture, 40 CFR 63, Subpart RRRR (326 IAC 20-78), are not included in the permit, since this source is not considered a major source of HAPs.

(h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Miscellaneous Metal Parts and Products Surface Coating, 40 CFR 63, Subpart MMMM (326 IAC 20-80), are not included in the permit, since this source is not considered a major source of HAPs.

(i) The requirements of the National Emission Standards for the Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD, (326 IAC 20-95), are not included in the permit, since this source is not considered a major source of HAPs.

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

Compliance Assurance Monitoring (CAM)

(k) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to 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 2-8-4 (FESOP)
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

(b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

(c) 326 IAC 2-3 (Emission Offset) and 326 IAC 2-1.1-5 (Nonattainment New Source Review)
This source is not subject to the requirements of 326 IAC 2-3 and 326 IAC 2-1.1-5, since Marion County (Warren Township) is attainment for all criteria pollutants.

(d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
This source is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the *source* is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

(e) 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.

(f) 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 thirty percent (30%) 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.

(g) 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.

(h) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(i) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

State Rule Applicability Determination - Individual Facilities

Shot Blasting

(a) 326 IAC 6.5 (Particulate Matter Limitations except Lake County)
The requirements of 326 IAC 6.5 apply to facilities located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne, which have the potential to emit one hundred (100) tons or more, or actual emissions of ten (10) tons or more of particulate matter per year. The shot blast operation has potential particulate matter emissions greater than one hundred (100) tons per year and actual emissions have the potential to exceed ten (10) tons or more per year. Therefore, the source is subject to the requirements of 326 IAC 6.5. Pursuant to 326 IAC 6.5-1-2(a), the particulate emissions from the shot blasting units, shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

In order to comply with this requirement, the dust collectors for particulate control shall be in operation at all times that the shot blasting units are in operation

Surface Coating

(b) 326 IAC 6.5 (Particulate Matter Limitations except Lake County)
This rule applies to sources or facilities with a potential to emit particulate matter located in the counties of Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne that are specifically listed in 326 IAC 6.5-2 through 6.5-10 or sources located in the above mentioned counties with either the potential to emit on hundred (100) tons or more per year or actual emissions of ten (10) tons or more. This source is located in Marion County, is not

specifically listed in 326 IAC 6.5-6 and has an unlimited potential to emit particulate greater than 100 tons per year.

(a) Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from the powder coating booth (SC3) shall not exceed three hundredths (0.03) grain per dry standard cubic foot (dscf)).

(b) Pursuant to 326 IAC 6.5-1-2(h), paint booth (SC2) shall be controlled by a dry particulate filter, water wash, or an equivalent control device subject to the following:

(1) The source shall operate the control device in accordance with manufacturer's specifications.

(2) If overspray is visibly detected at the exhaust or accumulates on the ground, the source shall inspect the control device and do either of the following no later than four (4) hours after the observation:

(A) Repair the control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(B) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(3) If overspray is visibly detected, the source shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detectable at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

(c) The dip tank (SC4) and the roll coating operation (SC5) are not subject to the requirements of 326 IAC 6.5, since they do not emit particulate emissions.

(c) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The requirements of 326 IAC 8-1-6 does not apply due to the following:

(A) The requirements of 326 IAC 8-1-6 do not apply to SC2 and SC5, since each unit is subject to the requirements of 326 IAC 8-2-9.

(B) The requirements of 326 IAC 8-1-6 do not apply to SC4 and SC3, since each unit has unlimited VOC potential emissions of less than twenty-five (25) tons per year.

(d) 326 IAC 8-2-9 (VOC Rules: Miscellaneous Metal and Plastic Parts Coating Operation)
Pursuant to 326 IAC 8-2-1(a)(4) and 326 IAC 8-2-9(a)(1), the paint booth (SC2) and the roll coating operation (SC5) are subject to the requirements of 326 IAC 8-2-9, since each performs miscellaneous metal coating operations and has actual emissions of greater than fifteen (15) pounds of VOC per day before add-on controls. This source performs surface coating of miscellaneous metal commercial and/or industrial equipment under 326 IAC 8-2-9(a)(1)(D).

(1) Pursuant to 326 IAC 8-2-9, when coating miscellaneous metal parts and products in the paint booth (SC2) and the roll coating operation (SC5), the Permittee shall not allow the discharge into the atmosphere VOC in excess of the following:

(A) Four and three-tenths (4.3) pounds per gallon of coating, excluding water, as delivered to the applicator in each paint booth where clear coatings are applied. A clear coating is a coating that:

(i) lacks color or opacity; and

(ii) is transparent and uses the undercoat as a reflectant base or undertone color.

(B) Three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator in each paint booth where units are air dried or forced warm air dried at temperatures up to ninety (90) degrees Celsius (one hundred ninety-four (194) degrees Fahrenheit).

(C) Three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator in each paint booth where extreme performance coatings are applied. Extreme performance coatings are designed for exposure to:

(i) Temperatures consistently above 95 degrees Celsius;

(ii) detergents;

(iii) abrasive or scouring agents;

(iv) solvents;

(v) corrosive atmosphere;

(vi) outdoor weather at all times; or

(vii) similar environmental conditions

(D) Three (3) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator in each paint booth for all other coatings and coating application systems.

(2) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not be limited to, the following:

(i) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(ii) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(iii) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(iv) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(v) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

Curing Oven

(e) 326 IAC 4-2-2 (Incinerators)
The natural gas-fired powder coat curing oven (EC10) is not an incinerator, as defined by 326 IAC 1-2-34, since it does not burn waste substances. Therefore, the natural gas-fired powder coat curing oven is not subject to 326 IAC 4-2-2.

(f) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The natural gas-fired powder coat curing oven (EC10) is not subject to 326 IAC 6-2, since it is not a source of indirect heating.

(g) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the natural gas-fired powder coat curing oven (EC10) is not subject to the requirements of 326 IAC 6-3-2, since it has potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

(h) 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
Pursuant to 326 IAC 7-1.1-1, the natural gas-fired powder coat curing oven (EC10) is not subject to the requirements of 326 IAC 7-1, since it has unlimited sulfur dioxide (SO_2) emissions less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

(i) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The natural gas-fired powder coat curing oven (EC10) is not subject to the requirements of 326 IAC 8-1-6, since it has unlimited VOC potential emissions of less than twenty-five (25) tons per year.

Burn-off Ovens

(j) 326 IAC 4-2-2 (Incinerators)
The small burn off oven (EC11) and large burn-off oven (EC12) each meet the definition of an incinerator, as defined in 326 IAC 1-2-34, because each is used to remove paint from metal parts prior to recoating by means of raising the temperature of the coated substrate (metal) to the point where the coating (paint, etc.) is thermally degraded. Therefore, the requirements of 326 IAC 4-2 apply to this emission unit.

Pursuant to 326 IAC 4-2-2 (Incinerators), the Permittee shall comply with the following for the small burn off oven (EC11) and large burn-off oven (EC12):

(1) All incinerators shall comply with the following requirements:

(A) Consist of primary and secondary chambers or the equivalent.

(B) Be equipped with a primary burner unless burning only wood products.

(C) Comply with 326 IAC 5-1 and 326 IAC 2.

(D) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in subsection (3).

(E) Not emit particulate matter in excess of one (1) of the following:

(i) Three-tenths (0.3) pound of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with a maximum solid waste capacity of greater than or equal to two hundred (200) pounds per hour.

(ii) Five-tenths (0.5) pound of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air for incinerators with solid waste capacity less than two hundred (200) pounds per hour.

(F) If any of the requirements of subdivisions (A) through (E) are not met, then the owner or operator shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

(2) An incinerator is exempt from subsection (1)(E) if subject to a more stringent particulate matter emission limit in 40 CFR 52 Subpart P, State Implementation Plan for Indiana.

(3) An owner or operator developing an operation and maintenance plan pursuant to subsection (1)(D) must comply with the following:

(A) The operation and maintenance plan must be designed to meet the particulate matter emission limitation specified in subsection (1)(E) and include the following:

(i) Procedures for receiving, handling, and charging waste.

(ii) Procedures for incinerator startup and shutdown.

(iii) Procedures for responding to a malfunction.

(iv) Procedures for maintaining proper combustion air supply levels.

(v) Procedures for operating the incinerator and associated air pollution control systems.

(vi) Procedures for handling ash.

(vii) A list of wastes that can be burned in the incinerator.

(B) Each incinerator operator shall review the plan before initial implementation of the operation and maintenance plan and annually thereafter.

(C) The operation and maintenance plan must be readily accessible to incinerator operators.

(D) The owner or operator of the incinerator shall notify the department, in writing, thirty (30) days after the operation and maintenance plan is initially developed pursuant to this section.

(4) The owner or operator of the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.

Natural Gas-Fired Units

(k) 326 IAC 6.5 (Particulate Matter Limitations except Lake County)
This rule applies to sources or facilities with a potential to emit particulate matter located in the counties of Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne that are specifically listed in 326 IAC 6.5-2 through 6.5-10 or sources located in the above mentioned counties with either the potential to emit one hundred (100) tons or more per year or actual emissions of ten (10) tons or more. This source is located in Marion County, is not specifically listed in 326 IAC 6.5-6 but has an unlimited potential to emit of greater than one

hundred (100) tons per year. Therefore, the source is subject to the requirements of 326 IAC 6.5. Pursuant to 326 IAC 6.5-1-2(a), the particulate emissions from the natural gas combustion units, shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

(l) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Each of the natural gas-fired units at this source is exempt from the requirements of 326 IAC 6-3, because pursuant to 326 IAC 6-3-2(c)(3), each unit is subject to a more restrictive particulate matter (PM) emission limitation under 326 IAC 6.5 (Particulate Matter Limitations Except Lake County).

(m) 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
Pursuant to 326 IAC 7-1.1-1, each of the natural gas-fired units at this source is not subject to the requirements of 326 IAC 7-1.1, since each has unlimited sulfur dioxide (SO_2) emissions less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

(n) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the natural gas-fired units at this source is not subject to the requirements of 326 IAC 8-1-6, since the potential unlimited VOC emissions from each unit is less than twenty-five (25) tons per year.

Compliance Determination, Monitoring and Testing Requirements

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

Emission Unit/Control	Operating Parameters	Frequency	Range
Shot Blast Units/Dust Collectors	Filter Inspections	Semi-annually	Normal/Abnormal
Blast Room (SB1)/Dust Collector	Pressure Drop	Once per day	3.0 to 6.0 inches of water
Powder Coating Booth SC3/Dust Collector	Filter Inspections	Semi-annually	Normal/Abnormal
Paint Booth SC2/Paint Filter Wall	Filter Inspections	Once per day	Normal/Abnormal
	Overspray	Once per week	Normal/Abnormal
	Stack Exhaust Observations	Once per month	Normal/Abnormal

These monitoring conditions are necessary to document compliance with the 326 IAC 6.5 PM emissions limitations and because the dust collectors for the shot blast units and the cartridge filter for the powder coating booth must operate properly to ensure compliance with the PSD Minor and FESOP limits.

(b) The testing requirements applicable to this source are as follows:

Testing Requirements				
Emission Unit/Group	**Control Device**	**Pollutant**	**Timeframe for Testing**	**Frequency of Testing**
Group 1 (SB1, SB2, and SB3)	Dust Collectors	PM/PM10/PM2.5	Not later than one hundred and eighty (180) days after issuance of this permit (097-33334-00524)	One unit within Group 1 once every 5 years
SB16	Dust Collectors	PM/PM10/PM2.5	Not later than one hundred and eighty (180) days after issuance of this permit (097-33334-00524)	Once every 5 years
Powder Coating Booth SC3	Dust Collector	PM/PM10/PM2.5	Not later than one hundred and eighty (180) days after issuance of this permit (097-33334-00524)	Once every 5 years

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 June 21, 2013.

The operation of this source shall be subject to the conditions of the attached proposed New Source Review FESOP No. F097-33334-00524. The staff recommends to the Commissioner that this New Source Review FESOP be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Adam Wheat at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-8397 or toll free at 1-800-451-6027 extension 3-8397.

(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
Emissions Summary

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Uncontrolled Emissions Source Wide

Emission Units	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO	GHGs as CO2e	Total HAPs	Highest Single HAP	
Shot Blasting	1,156	1,022	1,022	-	-	-	-	-	-	-	-
Surface Coating	457.5	457.5	457.5	-	-	30.0	-	-	6.43	3.96	Xylene
Natural Gas Combustion	0.09	0.36	0.36	0.03	4.68	0.26	3.94	5,656	0.09	0.08	Hexane
Total	**1,613**	**1,480**	**1,480**	**0.03**	**4.68**	**30.3**	**3.94**	**5,656**	**6.52**	**3.96**	**Xylene**

Limited and Controlled Emissions Source Wide

Emission Units	PM	PM_{10}	PM2.5	SO_2	NO_x	VOC	CO	GHGs as CO2e	Total HAPs	Highest Single HAP	
Shot Blasting	68.5	60.9	60.9	-	-	-	-	-	-	-	-
Surface Coating	9.74	9.74	9.74	-	-	30.0	-	-	6.43	3.96	Xylene
Natural Gas Combustion	0.09	0.36	0.36	0.03	4.68	0.26	3.94	5,656	0.09	0.08	Hexane
Total	**78.3**	**71.0**	**71.0**	**0.03**	**4.68**	**30.3**	**3.94**	**5,656**	**6.52**	**3.96**	**Xylene**

Appendix A: Emission Calculations
Abrasive Blasting - Confined
Shotblast Units Summary

Company Name: **IDS Blast Finishing**
Source Address: **2717 Tobey Drive, Indianapolis, Indiana 46219**
Permit Number: **F097-33334-00524**
Reviewer: **Adam Wheat**

Shotblast Unit	Unlimited Potential to Emit		Potential to Emit after Controls		Limited Potential to Emit			
	PM	PM10/PM2.5	PM	PM10/PM2.5	PM	PM10/PM2.5	PM	PM10/PM2.5
	tons/year		tons/year		tons/year		lbs/hour	
SB1	79.64	79.64	0.08	0.08	3.19	3.19	0.73	0.73
SB2	101.54	79.64	0.10	0.10	4.06	4.06	0.93	0.93
SB3	138.76	119.33	1.39	1.19	5.55	4.77	1.27	1.09
SB4	56.66	48.73	0.57	0.49	2.27	1.95	0.52	0.44
SB5	22.68	19.50	0.23	0.20	0.91	0.78	0.21	0.18
SB6	22.68	19.50	0.23	0.20	0.91	0.78	0.21	0.18
SB7	18.58	18.58	0.02	0.02	0.74	0.74	0.17	0.17
SB8	18.58	18.58	0.02	0.02	0.74	0.74	0.17	0.17
SB10	45.13	45.13	0.05	0.05	1.81	1.81	0.41	0.41
SB11	23.23	23.23	0.02	0.02	0.93	0.93	0.21	0.21
SB12	18.58	18.58	0.02	0.02	0.74	0.74	0.17	0.17
SB13	18.58	18.58	0.02	0.02	0.74	0.74	0.17	0.17
SB14	23.23	23.23	0.02	0.02	0.93	0.93	0.21	0.21
SB15	11.33	11.33	0.01	0.01	0.45	0.45	0.10	0.10
SB16	556.59	478.67	11.13	9.57	44.53	38.29	10.17	8.74
Total	**1,156**	**1,022**	**13.90**	**12.00**	**68.49**	**60.91**	**15.64**	**13.91**

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB1

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	125
Sand	99
Steel	487
Soda	61
Soft Shot	225
Glass Bead	100
Star Blast	**143**

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate (FR1) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID1)

		Nozzle Pressure (psig)							
Nozzle Type (diameter)	Internal diameter, in	30	40	50	60	70	80	90	100
No. 2 (1/8 inch)	0.125	28	35	42	49	55	63	70	77
No. 3 (3/16 inch)	0.1875	65	80	94	107	122	135	149	165
No. 4 (1/4 inch)	0.25	109	138	168	195	221	255	280	309
No. 5 (5/16 inch)	0.3125	205	247	292	354	377	420	462	507
No. 6 (3/8 inch)	0.375	285	355	417	477	540	600	657	720
No. 7 (7/16 inch)	0.4375	385	472	560	645	755	820	905	940
No. 8 (1/2 inch)	0.5	503	615	725	835	945	1050	1160	1265
No. 10 (5/8 inch)	0.625	820	990	1170	1336	1510	1680	1850	2030
No. 12 (3/4 inch)	0.75	1140	1420	1670	1915	2160	2400	2630	2880
No. 16 (1 inch)	1	2030	2460	2900	3340	3780	4200	4640	5060

CALCULATIONS

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters
Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 =	99	lb/ft3
ID1 = Internal diameter of nozzle for sand blasting from Table 3 =	0.375	inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 =	720	lb/hr
D = Density of actual abrasive =	125	lb/ft3
ID = internal diameter of actual nozzle =	0.375	inch
FR = Flow rate of actual abrasive (lb/hr) =	909.1	lb/hr (per nozzle)

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) =	909.1		lb/hr (per nozzle)
w = fraction of time of wet blasting =	0		%
N = number of nozzles =	2		
EF = PM emission factor for actual abrasive from Table 1 =	0.010		lb PM/ lb abrasive
PM10 emission factor ratio for actual abrasive from Table 1 =	1.00		lb PM10 / lb PM
	PM	**PM10**	
Potential to Emit (before control) =	**18.182**	**18.182**	**lb/hr**
=	**436.36**	**436.36**	**lb/day**
=	**79.64**	**79.64**	**ton/yr**

Potential to Emit After Control

	PM	PM10	
Emission Control Device Efficiency =	**99.9%**	**99.9%**	
Potential to Emit (after control) =	**1.8E-02**	**1.8E-02**	**lb/hr**
=	**0.436**	**0.436**	**lb/day**
=	**0.080**	**0.080**	**ton/yr**

Limited Potential to Emit

	PM	PM10	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**7.3E-01**	**7.3E-01**	**lb/hr**
=	**17.455**	**17.455**	**lb/day**
=	**3.185**	**3.185**	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB2

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	125
Sand	99
Steel	487
Soda	61
Soft Shot	225
Glass Bead	100
Star Blast	143

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate (FR1) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID1)

		Nozzle Pressure (psig)							
Nozzle Type (diameter)	Internal diameter, in	30	40	50	60	70	80	90	100
No. 2 (1/8 inch)	0.125	28	35	42	49	55	63	70	77
No. 3 (3/16 inch)	0.1875	65	80	94	107	122	135	149	165
No. 4 (1/4 inch)	0.25	109	138	168	195	221	255	280	309
No. 5 (5/16 inch)	0.3125	205	247	292	354	377	420	462	507
No. 6 (3/8 inch)	0.375	285	355	417	477	540	600	657	720
No. 7 (7/16 inch)	0.4375	385	472	560	645	755	820	905	940
No. 8 (1/2 inch)	0.5	503	615	725	835	945	1050	1160	1265
No. 10 (5/8 inch)	0.625	820	990	1170	1336	1510	1680	1850	2030
No. 12 (3/4 inch)	0.75	1140	1420	1670	1915	2160	2400	2630	2880
No. 16 (1 inch)	1	2030	2460	2900	3340	3780	4200	4640	5060

CALCULATIONS

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters
Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 =	99	lb/ft3
ID1 = Internal diameter of nozzle for sand blasting from Table 3 =	0.25	inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 =	255	lb/hr
D = Density of actual abrasive =	100	lb/ft3
ID = internal diameter of actual nozzle =	0.25	inch
FR = Flow rate of actual abrasive (lb/hr) =	257.6	lb/hr (per nozzle)

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) =	257.6		lb/hr (per nozzle)
w = fraction of time of wet blasting =	0		%
N = number of nozzles =	9		
EF = PM emission factor for actual abrasive from Table 1 =	0.010		lb PM/ lb abrasive
PM10 emission factor ratio for actual abrasive from Table 1 =	1.00		lb PM10 / lb PM
	PM	**PM10**	
Potential to Emit (before control) =	**23.182**	**23.182**	**lb/hr**
=	**556.36**	**556.36**	**lb/day**
=	**101.54**	**101.54**	**ton/yr**

Potential to Emit After Control

	PM	PM10	
Emission Control Device Efficiency =	**99.9%**	**99.9%**	
Potential to Emit (after control) =	**2.3E-02**	**2.3E-02**	**lb/hr**
=	**0.556**	**0.556**	**lb/day**
=	**0.102**	**0.102**	**ton/yr**

Limited Potential to Emit

	PM	PM10	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**9.3E-01**	**9.3E-01**	**lb/hr**
=	**22.255**	**22.255**	**lb/day**
=	**4.061**	**4.061**	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB3

Company Name: **IDS Blast Finishing**
Source Address: **2717 Tobey Drive, Indianapolis, Indiana 46219**
Permit Number: **F097-33334-00524**
Reviewer: **Adam Wheat**

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) =	7920	lb/hr (per nozzle)
w = fraction of time of wet blasting =	0	%
N = number of nozzles =	1	
EF = PM emission factor for actual abrasive from Table 1 =	0.004	lb PM/ lb abrasive
PM10 emission factor ratio for actual abrasive from Table 1 =	0.86	lb PM10 / lb PM

	PM	PM10	
Potential to Emit (before control) =	**31.7**	**27.2**	**lb/hr**
=	**760.3**	**653.9**	**lb/day**
=	**138.8**	**119.3**	**ton/yr**

Potential to Emit After Control	PM	PM10	
Emission Control Device Efficiency =	**99.0%**	**99.0%**	
Potential to Emit (after control) =	**0.32**	**0.27**	**lb/hr**
=	**7.60**	**6.54**	**lb/day**
=	**1.39**	**1.19**	**ton/yr**

Limited Potential to Emit	PM	PM10	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**1.27**	**1.09**	**lb/hr**
=	**30.41**	**26.15**	**lb/day**
=	**5.55**	**4.77**	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB4

Company Name: **IDS Blast Finishing**
Source Address: **2717 Tobey Drive, Indianapolis, Indiana 46219**
Permit Number: **F097-33334-00524**
Reviewer: **Adam Wheat**

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Potential to Emit Before Control			
FR = Flow rate of actual abrasive (lb/hr) =	3234	lb/hr (per nozzle)	
w = fraction of time of wet blasting =	0	%	
N = number of nozzles =	1		
EF = PM emission factor for actual abrasive from Table 1 =	0.004	lb PM/ lb abrasive	
PM10 emission factor ratio for actual abrasive from Table 1 =	0.86	lb PM10 / lb PM	
	PM	**PM10**	
Potential to Emit (before control) =	**12.9**	**11.1**	**lb/hr**
=	**310.5**	**267.0**	**lb/day**
=	**56.7**	**48.7**	**ton/yr**

Potential to Emit After Control	**PM**	**PM10**	
Emission Control Device Efficiency =	**99.0%**	**99.0%**	
Potential to Emit (after control) =	**0.13**	**0.11**	**lb/hr**
=	**3.10**	**2.67**	**lb/day**
=	**0.57**	**0.49**	**ton/yr**

Limited Potential to Emit	**PM**	**PM10**	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**0.52**	**0.44**	**lb/hr**
=	**12.42**	**10.68**	**lb/day**
=	**2.27**	**1.95**	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB5 and SB6

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Potential to Emit Before Control			
FR = Flow rate of actual abrasive (lb/hr) =	1294	lb/hr (per nozzle)	
w = fraction of time of wet blasting =	0	%	
N = number of nozzles =	1		
EF = PM emission factor for actual abrasive from Table 1 =	0.004	lb PM/ lb abrasive	
PM10 emission factor ratio for actual abrasive from Table 1 =	0.86	lb PM10 / lb PM	
	PM	**PM10**	
Individual Potential to Emit (before control) =	**5.2**	**4.5**	**lb/hr**
=	**124.3**	**106.9**	**lb/day**
=	**22.7**	**19.5**	**ton/yr**
Total PTE (SB5 & SB6)	**45.4**	**39.0**	

Potential to Emit After Control	**PM**	**PM10**	
Emission Control Device Efficiency =	**99.0%**	**99.0%**	
Individual Potential to Emit (after control) =	**0.05**	**0.04**	**lb/hr**
=	**1.24**	**1.07**	**lb/day**
=	**0.23**	**0.20**	**ton/yr**
Total PTE (SB5 & SB6)	**0.45**	**0.39**	

Limited Potential to Emit	**PM**	**PM10**	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**0.21**	**0.18**	**lb/hr**
=	**4.97**	**4.27**	**lb/day**
=	**0.91**	**0.78**	**ton/yr**
Total PTE (SB5 & SB6)	**1.81**	**1.56**	

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB7, SB8, SB12, SB13

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	125
Sand	99
Steel	487
Soda	61
Soft Shot	225
Glass Bead	100
Star Blast	143

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate (FR1) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID1)

		Nozzle Pressure (psig)							
Nozzle Type (diameter)	Internal diameter, in	30	40	50	60	70	80	90	100
No. 2 (1/8 inch)	0.125	28	35	42	49	55	63	70	77
No. 3 (3/16 inch)	0.1875	65	80	94	107	122	135	149	165
No. 4 (1/4 inch)	0.25	109	138	168	195	221	255	280	309
No. 5 (5/16 inch)	0.3125	205	247	292	354	377	420	462	507
No. 6 (3/8 inch)	0.375	285	355	417	477	540	600	657	720
No. 7 (7/16 inch)	0.4375	385	472	560	645	755	820	905	940
No. 8 (1/2 inch)	0.5	503	615	725	835	945	1050	1160	1265
No. 10 (5/8 inch)	0.625	820	990	1170	1336	1510	1680	1850	2030
No. 12 (3/4 inch)	0.75	1140	1420	1670	1915	2160	2400	2630	2880
No. 16 (1 inch)	1	2030	2460	2900	3340	3780	4200	4640	5060

CALCULATIONS

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters
Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 =	99	lb/ft3
ID1 = Internal diameter of nozzle for sand blasting from Table 3 =	0.3125	inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 =	420	lb/hr
D = Density of actual abrasive =	100	lb/ft3
ID = internal diameter of actual nozzle =	0.3125	inch
FR = Flow rate of actual abrasive (lb/hr) =	424.2	lb/hr (per nozzle)

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) =	424	lb/hr (per nozzle)	
w = fraction of time of wet blasting =	0	%	
N = number of nozzles =	1		
EF = PM emission factor for actual abrasive from Table 1 =	0.010	lb PM/ lb abrasive	
PM10 emission factor ratio for actual abrasive from Table 1 =	1.00	lb PM10 / lb PM	
	PM	**PM10**	
Individual Potential to Emit (before control) =	**4.242**	**4.242**	**lb/hr**
=	**101.82**	**101.82**	**lb/day**
=	**18.58**	**18.58**	**ton/yr**
Total (SB7, SB8, SB12, SB13) =	**74.33**	**74.33**	**ton/yr**

Potential to Emit After Control	**PM**	**PM10**	
Emission Control Device Efficiency =	**99.9%**	**99.9%**	
Potential to Emit (after control) =	**4.2E-03**	**4.2E-03**	**lb/hr**
=	**0.102**	**0.102**	**lb/day**
=	**0.019**	**0.019**	**ton/yr**
Total (SB7, SB8, SB12, SB13) =	**0.074**	**0.074**	

Limited Potential to Emit	**PM**	**PM10**	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**1.7E-01**	**1.7E-01**	**lb/hr**
=	**4.073**	**4.073**	**lb/day**
=	**0.743**	**0.743**	**ton/yr**
Total (SB7, SB8, SB12, SB13) =	**2.973**	**2.973**	

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB10

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	125
Sand	99
Steel	487
Soda	61
Soft Shot	225
Glass Bead	100
Star Blast	143

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate (FR1) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID1)

		Nozzle Pressure (psig)							
Nozzle Type (diameter)	Internal diameter, in	30	40	50	60	70	80	90	100
No. 2 (1/8 inch)	0.125	28	35	42	49	55	63	70	77
No. 3 (3/16 inch)	0.1875	65	80	94	107	122	135	149	165
No. 4 (1/4 inch)	0.25	109	138	168	195	221	255	280	309
No. 5 (5/16 inch)	0.3125	205	247	292	354	377	420	462	507
No. 6 (3/8 inch)	0.375	285	355	417	477	540	600	657	720
No. 7 (7/16 inch)	0.4375	385	472	560	645	755	820	905	940
No. 8 (1/2 inch)	0.5	503	615	725	835	945	1050	1160	1265
No. 10 (5/8 inch)	0.625	820	990	1170	1336	1510	1680	1850	2030
No. 12 (3/4 inch)	0.75	1140	1420	1670	1915	2160	2400	2630	2880
No. 16 (1 inch)	1	2030	2460	2900	3340	3780	4200	4640	5060

CALCULATIONS

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters
Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 =	99	lb/ft3
ID1 = Internal diameter of nozzle for sand blasting from Table 3 =	0.25	inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 =	255	lb/hr
D = Density of actual abrasive =	100	lb/ft3
ID = internal diameter of actual nozzle =	0.25	inch
FR = Flow rate of actual abrasive (lb/hr) =	257.6	lb/hr (per nozzle)

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) =	257.6		lb/hr (per nozzle)
w = fraction of time of wet blasting =	0		%
N = number of nozzles =	4		
EF = PM emission factor for actual abrasive from Table 1 =	0.010		lb PM/ lb abrasive
PM10 emission factor ratio for actual abrasive from Table 1 =	1.00		lb PM10 / lb PM
	PM	**PM10**	
Potential to Emit (before control) =	**10.303**	**10.303**	**lb/hr**
=	**247.27**	**247.27**	**lb/day**
=	**45.13**	**45.13**	**ton/yr**

Potential to Emit After Control

	PM	PM10	
Emission Control Device Efficiency =	**99.9%**	**99.9%**	
Potential to Emit (after control) =	**1.0E-02**	**1.0E-02**	**lb/hr**
=	**0.247**	**0.247**	**lb/day**
=	**0.045**	**0.045**	**ton/yr**

Limited Potential to Emit

	PM	PM10	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**4.1E-01**	**4.1E-01**	**lb/hr**
=	**9.891**	**9.891**	**lb/day**
=	**1.805**	**1.805**	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB11

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	125
Sand	99
Steel	487
Soda	61
Soft Shot	225
Glass Bead	100
Star Blast	143

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate (FR1) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID1)

		Nozzle Pressure (psig)							
Nozzle Type (diameter)	Internal diameter, in	30	40	50	60	70	80	90	100
No. 2 (1/8 inch)	0.125	28	35	42	49	55	63	70	77
No. 3 (3/16 inch)	0.1875	65	80	94	107	122	135	149	165
No. 4 (1/4 inch)	0.25	109	138	168	195	221	255	280	309
No. 5 (5/16 inch)	0.3125	205	247	292	354	377	420	462	507
No. 6 (3/8 inch)	0.375	285	355	417	477	540	600	657	720
No. 7 (7/16 inch)	0.4375	385	472	560	645	755	820	905	940
No. 8 (1/2 inch)	0.5	503	615	725	835	945	1050	1160	1265
No. 10 (5/8 inch)	0.625	820	990	1170	1336	1510	1680	1850	2030
No. 12 (3/4 inch)	0.75	1140	1420	1670	1915	2160	2400	2630	2880
No. 16 (1 inch)	1	2030	2460	2900	3340	3780	4200	4640	5060

CALCULATIONS

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters
Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 =	99	lb/ft3
ID1 = Internal diameter of nozzle for sand blasting from Table 3 =	0.3125	inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 =	420	lb/hr
D = Density of actual abrasive =	125	lb/ft3
ID = internal diameter of actual nozzle =	0.3125	inch
FR = Flow rate of actual abrasive (lb/hr) =	530.3	lb/hr (per nozzle)

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) =	530	lb/hr (per nozzle)
w = fraction of time of wet blasting =	0	%
N = number of nozzles =	1	
EF = PM emission factor for actual abrasive from Table 1 =	0.010	lb PM/ lb abrasive
PM10 emission factor ratio for actual abrasive from Table 1 =	1.00	lb PM10 / lb PM

	PM	PM10	
Potential to Emit (before control) =	**5.303**	**5.303**	**lb/hr**
=	**127.27**	**127.27**	**lb/day**
=	**23.23**	**23.23**	**ton/yr**

Potential to Emit After Control	PM	PM10	
Emission Control Device Efficiency =	**99.9%**	**99.9%**	
Potential to Emit (after control) =	**5.3E-03**	**5.3E-03**	**lb/hr**
=	**0.127**	**0.127**	**lb/day**
=	**0.023**	**0.023**	**ton/yr**

Limited Potential to Emit	PM	PM10	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**2.1E-01**	**2.1E-01**	**lb/hr**
=	**5.091**	**5.091**	**lb/day**
=	**0.929**	**0.929**	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB14

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	125
Sand	99
Steel	487
Soda	61
Soft Shot	225
Glass Bead	100
Star Blast	143

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate (FR1) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID1)

		Nozzle Pressure (psig)							
Nozzle Type (diameter)	Internal diameter, in	30	40	50	60	70	80	90	100
No. 2 (1/8 inch)	0.125	28	35	42	49	55	63	70	77
No. 3 (3/16 inch)	0.1875	65	80	94	107	122	135	149	165
No. 4 (1/4 inch)	0.25	109	138	168	195	221	255	280	309
No. 5 (5/16 inch)	0.3125	205	247	292	354	377	420	462	507
No. 6 (3/8 inch)	0.375	285	355	417	477	540	600	657	720
No. 7 (7/16 inch)	0.4375	385	472	560	645	755	820	905	940
No. 8 (1/2 inch)	0.5	503	615	725	835	945	1050	1160	1265
No. 10 (5/8 inch)	0.625	820	990	1170	1336	1510	1680	1850	2030
No. 12 (3/4 inch)	0.75	1140	1420	1670	1915	2160	2400	2630	2880
No. 16 (1 inch)	1	2030	2460	2900	3340	3780	4200	4640	5060

CALCULATIONS

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters
Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 =	99	lb/ft3
ID1 = Internal diameter of nozzle for sand blasting from Table 3 =	0.3125	inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 =	420	lb/hr
D = Density of actual abrasive =	125	lb/ft3
ID = internal diameter of actual nozzle =	0.3125	inch
FR = Flow rate of actual abrasive (lb/hr) =	530.3	lb/hr (per nozzle)

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) =	530.3		lb/hr (per nozzle)
w = fraction of time of wet blasting =	0		%
N = number of nozzles =	1		
EF = PM emission factor for actual abrasive from Table 1 =	0.010		lb PM/ lb abrasive
PM10 emission factor ratio for actual abrasive from Table 1 =	1.00		lb PM10 / lb PM
	PM	**PM10**	
Potential to Emit (before control) =	**5.303**	**5.303**	**lb/hr**
=	**127.27**	**127.27**	**lb/day**
=	**23.23**	**23.23**	**ton/yr**

Potential to Emit After Control

	PM	**PM10**	
Emission Control Device Efficiency =	**99.9%**	**99.9%**	
Potential to Emit (after control) =	**5.3E-03**	**5.3E-03**	**lb/hr**
=	**0.127**	**0.127**	**lb/day**
=	**0.023**	**0.023**	**ton/yr**

Limited Potential to Emit

	PM	**PM10**	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**2.1E-01**	**2.1E-01**	**lb/hr**
=	**5.091**	**5.091**	**lb/day**
=	**0.929**	**0.929**	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB15

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	125
Sand	99
Steel	487
Soda	61
Soft Shot	225
Glass Bead	100
Star Blast	143

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate (FR1) of sand through a blasting nozzle as a function of nozzle pressure and internal diameter (ID1)

		Nozzle Pressure (psig)							
Nozzle Type (diameter)	Internal diameter, in	30	40	50	60	70	80	90	100
No. 2 (1/8 inch)	0.125	28	35	42	49	55	63	70	77
No. 3 (3/16 inch)	0.1875	65	80	94	107	122	135	149	165
No. 4 (1/4 inch)	0.25	109	138	168	195	221	255	280	309
No. 5 (5/16 inch)	0.3125	205	247	292	354	377	420	462	507
No. 6 (3/8 inch)	0.375	285	355	417	477	540	600	657	720
No. 7 (7/16 inch)	0.4375	385	472	560	645	755	820	905	940
No. 8 (1/2 inch)	0.5	503	615	725	835	945	1050	1160	1265
No. 10 (5/8 inch)	0.625	820	990	1170	1336	1510	1680	1850	2030
No. 12 (3/4 inch)	0.75	1140	1420	1670	1915	2160	2400	2630	2880
No. 16 (1 inch)	1	2030	2460	2900	3340	3780	4200	4640	5060

CALCULATIONS

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters
Flow Rate (FR) = Abrasive flow rate (lb/hr) of abrasive at nozzle pressure and internal nozzle diameter (ID)

D1 = Density of sand from Table 2 =	99	lb/ft3
ID1 = Internal diameter of nozzle for sand blasting from Table 3 =	0.3125	inch
FR1 = Sand flow rate at nozzle pressure and internal diameter (ID1) from Table 3 =	420	lb/hr
D = Density of actual abrasive =	61	lb/ft3
ID = internal diameter of actual nozzle =	0.3125	inch
FR = Flow rate of actual abrasive (lb/hr) =	258.8	lb/hr (per nozzle)

Potential to Emit Before Control

FR = Flow rate of actual abrasive (lb/hr) =	259		lb/hr (per nozzle)
w = fraction of time of wet blasting =	0		%
N = number of nozzles =	1		
EF = PM emission factor for actual abrasive from Table 1 =	0.010		lb PM/ lb abrasive
PM10 emission factor ratio for actual abrasive from Table 1 =	1.00		lb PM10 / lb PM
	PM	**PM10**	
Potential to Emit (before control) =	**2.588**	**2.588**	**lb/hr**
=	**62.11**	**62.11**	**lb/day**
=	**11.33**	**11.33**	**ton/yr**

Potential to Emit After Control

	PM	**PM10**	
Emission Control Device Efficiency =	**99.9%**	**99.9%**	
Potential to Emit (after control) =	**2.6E-03**	**2.6E-03**	**lb/hr**
=	**0.062**	**0.062**	**lb/day**
=	**0.011**	**0.011**	**ton/yr**

Limited Potential to Emit

	PM	**PM10**	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**1.0E-01**	**1.0E-01**	**lb/hr**
=	**2.484**	**2.484**	**lb/day**
=	**0.453**	**0.453**	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Flow rate of actual abrasive (FR) (lb/hr) = FR1 x (ID/ID1)^2 x (D/D1)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Abrasive Blasting - Confined
SB16

Company Name: **IDS Blast Finishing**
Source Address: **2717 Tobey Drive, Indianapolis, Indiana 46219**
Permit Number: **F097-33334-00524**
Reviewer: **Adam Wheat**

Table 1 - Emission Factors for Abrasives

	Emission Factor (EF)	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	1.00

Potential to Emit Before Control			
FR = Flow rate of actual abrasive (lb/hr) =	31769	lb/hr (per nozzle)	
w = fraction of time of wet blasting =	0	%	
N = number of nozzles =	1		
EF = PM emission factor for actual abrasive from Table 1 =	0.004	lb PM/ lb abrasive	
PM10 emission factor ratio for actual abrasive from Table 1 =	0.86	lb PM10 / lb PM	
	PM	**PM10**	
Potential to Emit (before control) =	**127.1**	**109.3**	**lb/hr**
=	**3049.8**	**2622.8**	**lb/day**
=	**556.6**	**478.7**	**ton/yr**

Potential to Emit After Control	**PM**	**PM10**	
Emission Control Device Efficiency =	**99.0%**	**99.0%**	
Potential to Emit (after control) =	**2.54**	**2.19**	**lb/hr**
=	**121.99**	**104.91**	**lb/day**
=	**11.13**	**9.57**	**ton/yr**

Limited Potential to Emit	**PM**	**PM10**	
Limited Emission Control Device Efficiency =	**96.0%**	**96.0%**	
Limited Potential to Emit =	**10.17**	**8.74**	**lb/hr**
=	**487.97**	**419.66**	**lb/day**
=	**44.53**	**38.29**	**ton/yr**

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Potential to Emit (before control) = EF x FR x (1 - w/200) x N (where w should be entered in as a whole number (if w is 50%, enter 50))
Potential to Emit (after control) = [Potential to Emit (before control)] * [1 - control efficiency]
Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations
Surface Coating

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Finishing Systems Booth (SC2)

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Durathane DTM	11.6	30.14%	0.0%	30.1%	0.0%	69.86%	1.50000	0.333	3.50	3.50	1.75	41.91	7.65	2.66	5.00	85%
Durathane DTM curing agent	9.8	0.00%	0.0%	0.0%	0.0%	100.00%	1.50000	0.333	0.00	0.00	0.00	0.00	0.00	3.20	0.00	85%
Recoatable Epoxy Primer	14.6	35.00%	0.0%	35.0%	0.0%	65.00%	1.50000	0.333	5.11	5.11	2.55	61.22	11.17	3.11	7.86	85%
Recoatable Epoxy Primer Hardner	12.7	31.00%	0.0%	31.0%	0.0%	69.00%	1.50000	0.333	3.94	3.94	1.97	47.20	8.61	2.88	5.71	85%
Macropoxy 646 Fast Cure	12.2	29.00%	0.0%	29.0%	0.0%	71.00%	1.50000	0.333	3.54	3.54	1.77	42.38	7.73	2.84	4.98	85%
Macropoxy 646 Fast Cure Part B	13.5	24.00%	0.0%	24.0%	0.0%	76.00%	1.50000	0.333	3.23	3.23	1.61	38.73	7.07	3.36	4.25	85%
Amerilock 2 cure	11.7	30.00%	0.0%	30.0%	0.0%	70.00%	1.50000	0.333	3.50	3.50	1.75	42.01	7.67	2.68	5.01	85%
Amerilock 2 VOC Buff Brown resin	11.9	10.00%	0.0%	10.0%	0.0%	90.00%	1.50000	0.333	1.19	1.19	0.60	14.30	2.61	3.52	1.33	85%
DIMETCOTE 9VOC ZINC LIQUID	9.9	57.36%	0.0%	57.4%	0.0%	42.64%	1.50000	0.333	5.65	5.65	2.82	67.73	12.36	1.38	13.25	85%
DIMETCOTE 9VOC/D9H GRAY POWDER	59.5	0.00%	0.0%	0.0%	0.0%	100.00%	1.50000	0.333	0.00	0.00	0.00	0.00	0.00	19.53	0.00	85%
PPG AQUAPON 35 POLYAMIDE GLOSS EPOXY ALFA LAVAL BLUE CATALYST	10.7	30.90%	0.0%	30.9%	0.0%	69.10%	1.50000	0.333	3.31	3.31	1.65	39.64	7.23	2.43	4.78	85%
PPG AQUAPON 35 POLYAMIDE GLOSS EPOXY ALFA LAVAL BLUE	9.3	29.88%	0.0%	29.9%	0.0%	70.12%	1.50000	0.333	2.77	2.77	1.38	33.17	6.05	2.13	3.95	85%
PPG AQUAPON 35 POLYAMIDE GLOSS EPOXY CATALYST	9.4	35.04%	0.0%	35.0%	0.0%	64.96%	1.50000	0.333	3.28	3.28	1.64	39.28	7.17	1.99	5.04	85%
PPG AQUAPON 35 POLYAMIDE GLOSS EPOXY SAFETY ORANGE	8.6	40.09%	0.0%	40.1%	0.0%	59.91%	1.50000	0.333	3.45	3.45	1.72	41.33	7.54	1.69	5.75	85%
CHEM-O-PON QUICK DRY EPOXY PRIMER CATALYST	11.4	40.69%	0.0%	40.7%	0.0%	59.31%	1.50000	0.333	4.63	4.63	2.31	55.46	10.12	2.21	7.80	85%
CHEM-O-PON QUICK DRY EPOXY PRIMER GREY	12.2	24.25%	0.0%	24.3%	0.0%	75.75%	1.50000	0.333	2.96	2.96	1.48	35.47	6.47	3.03	3.91	85%
PPG PITTHANE ULTRA GLOSS URETHANE ENAMEL BLACK	11.6	17.30%	0.0%	17.3%	0.0%	82.70%	1.50000	0.333	2.01	2.01	1.00	24.06	4.39	3.15	2.43	85%
PPG PITTHANE ULTRA GLOSS URETHANE YELLOW	12.4	37.00%	0.0%	37.0%	0.0%	79.60%	1.50000	0.333	4.57	4.57	2.28	54.78	10.00	2.55	5.74	85%
PPG PITTHANE ULTRA GLOSS URETHANE ENAMEL NEUTRAL BASE MAROON BAR MATCH	8.7	33.30%	0.0%	33.3%	0.0%	66.70%	1.50000	0.333	2.89	2.89	1.44	34.65	6.32	1.90	4.33	85%
PPG PITTHANE ULTRA GLOSS URETHANE ACTIVATOR	9.8	0.00%	0.0%	0.0%	0.0%	100.00%	1.50000	0.333	0.00	0.00	0.00	0.00	0.00	3.20	0.00	85%
Acrolon 218HS	11.3	35.00%	0.0%	35.0%	0.0%	65.00%	1.50000	0.333	3.97	3.97	1.98	47.58	8.68	2.42	6.11	85%
Acrolon 218HS Hardener	9.4	0.00%	0.0%	0.0%	0.0%	0.00%	1.50000	0.300	0.00	0.00	0.00	0.00	0.00	2.78	0.00	85%
PPG FAST DRY 35 GLOSS ALKYD ENAMEL BLACK	9.9	41.89%	0.0%	41.9%	0.0%	58.11%	1.50000	0.333	4.16	4.16	2.08	49.87	9.10	1.89	7.16	85%
PPG FAST DRY 35 GLOSS ALKYD ENAMEL PORCELAIN WHITE	11.4	36.41%	0.0%	36.4%	0.0%	63.59%	1.50000	0.333	4.13	4.13	2.06	49.54	9.04	2.37	6.50	85%
PPG FAST DRY 35 GLOSS ALKYD ENAMEL WHITE BASE SUPERIOR GRAY MM228/ MM234	11.7	35.05%	0.0%	35.1%	0.0%	64.95%	1.50000	0.333	4.09	4.09	2.04	49.08	8.96	2.49	6.30	85%
PPG FAST DRY 35 GLOSS ALKYD ENAMEL NEUTRAL BASE PANTONE TEEL	10.0	35.75%	0.0%	35.8%	0.0%	64.25%	1.50000	0.333	3.58	3.58	1.79	42.90	7.83	2.11	5.57	85%
OMNITHANE Grayish-Green	21.1	13.48%	0.0%	13.5%	0.0%	86.52%	1.50000	0.333	2.85	2.85	1.42	34.13	6.23	6.00	3.29	85%
									Worst case coating:		**2.82**	**67.73**	**12.36**	**19.53**	**13.25**	

Methodology

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

Dry Filter PM Control Efficiency:	95.0%
Potential Particulate (after control) (tons/yr)	0.98

Appendix A: Emission Calculations
Surface Coating

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Powder Coating Booth (SC3)

Material	Maximum Coating Usage (lbs/hour)	Transfer Efficiency (%)	Uncontrolled Particulate (lbs/hr)	Uncontrolled Particulate (tons/yr)	Control Efficiency (%)	Potential Particulate (lbs/hr)	Potential Particulate (tons/yr)*
Tiger Drylac Powder Coating	200.00	50.00%	100.00	438.00	98.0%	2.0	8.76
Total				**438.00**			**8.76**

Methodology
Uncontrolled Particulate (lbs/hr) = Maximum Usage (lbs/hr) * Transfer Efficiency (%)
Uncontrolled Particulate (tons/yr) = Maximum Usage (lbs/hr) * Transfer Efficiency (%) * 8760 (hrs/yr) * 1/2000 (ton/lbs)
Potential Particualte (lbs/hr) = Uncontrolled Particulate (lbs/hr) * (1- % Control Efficiency)
Potential Particualte (lbs/hr) = Uncontrolled Particulate (lbs/hr) * (1- % Control Efficiency) * 8760 (hrs/yr) * 1/2000 (ton/lbs)

Dip Tank (SC4) and Roll Coating (SC5)

Material	Density (Lb/Gal)	Weight % Organics	Gal of Mat. (gal/hr)	Gal of Mat. (gal/yr)	Pounds VOC per gallon of coating	Potential VOC pounds per day	Potential VOC pounds per year	Potential VOC tons per year	Transfer Efficiency
Dip Tank (SC4)									
YUMAX PSW-50	7.68	67.00%	0.11	1,001	5.14	14.11	5,150	**2.57**	100%
Roll Coating (SC5)									
Fuchs Anticorit SL 6941	6.95	43.20%	1.15	10,038	3.00	82.59	30,144	**15.07**	100%

Dip Tank Gal. of Material (gal/hr) = 20 (gal/yr) / 175 (hr/yr)
Roll Coating Gal. of Material (gal/hr) = 55 (gal/yr) / 48 (hr/yr)
All water based paints. Source can paint only one color at a time in each booth
All coatings used contain no Hazardous Air Pollutants (HAPs)

METHODOLOGY
Gal. of Material (gal/yr) = Gallon of Material (gal/hr) * 8760 (hrs/yr)
Potential VOC pounds per year = Gallon of Material(gal/yr) * Safety Factor * Pounds VOC per gallon of coating (lbs/gal)
Potential VOC tons per year = Potential VOC pounds per year (lbs/yr) / (2000 lbs/ton)

	VOC	PM
Total Uncontrolled PTE for Surface Coating (tons/year)	30.0	457.5
Total Controlled PTE for Surface Coating (tons/year)		9.74

Appendix A: Emission Calculations
Surface Coating HAPs

Company Name: IDS Blast Finishing
Source Address: 2717 Tobey Drive, Indianapolis, Indiana 46219
Permit Number: F097-33334-00524
Reviewer: Adam Wheat

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Ethylbenzene	Weight % Methyl Isobutyl Ketone	Weight % p-xylene	Weight % 2-Propoxyethanol	Weight % Naphthalene	Weight % Cumene	Weight % tert-butyl-acetate	Weight % hexamethylene-di-isocyanate	Diphenylmethane Diisocyanate (MDI)	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Methyl Isobutyl Ketone (tons/yr)	p-xylene (ton/yr)	2-Propoxyethanol (ton/yr)	Naphthalene (ton/yr)	Cumene (tons/yr)	tert-butyl-acetate (ton/yr)	hexamethylene-di-isocyanate (ton/yr)	Diphenylmethane Diisocyanate (MDI) (tons/yr)	Total HAPs (tons/yr)
Durathane DTM White Base Comp. A	11.6	1.50000	0.33	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
Durathane DTM curing agent	9.8	1.50000	0.33	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.21
Recoatable Epoxy Primer	14.6	1.50000	0.33	12.00%	0.00%	2.00%	0.00%	0.00%	3.00%	0.20%	0.00%	0.00%	0.00%	0.00%	3.80	0.00	0.63	0.00	0.00	0.95	0.06	0.00	0.00	0.00	0.00	5.44
Recoatable Epoxy Primer Hardner	12.7	1.50000	0.33	9.00%	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.06
Macropoxy 646 Fast Cure	12.2	1.50000	0.33	15.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.96	0.00	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76
Macropoxy 646 Fast Cure Part B	13.5	1.50000	0.33	2.00%	0.00%	0.30%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.59	0.00	0.09	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63
Amerilock 2 cure	11.7	1.50000	0.33	13.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.29	0.00	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.56
Amerilock 2 VOC Buff Brown resin	11.9	1.50000	0.33	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.83	0.00	0.00	1.83
DIMETCOTE 9VOC ZINC LIQUID	9.9	1.50000	0.33	1.00%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.21	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
DIMETCOTE 9VOC/D9H GRAY POWDER	59.5	1.50000	0.33	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PPG AQUAPON 35 POLYAMIDE GLOSS EPOXY ALFA LAVAL BLUE CATALYST	9.2	1.50000	0.33	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99
PPG AQUAPON 35 POLYAMIDE GLOSS EPOXY ALFA LAVAL BLUE	9.2	1.50000	0.33	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
PPG AQUAPON 35 POLYAMIDE GLOSS EPOXY CATALYST	9.2	1.50000	0.33	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99
PPG AQUAPON 35 POLYAMIDE GLOSS EPOXY SAFETY ORANGE	8.6	1.50000	0.33	7.00%	0.00%	1.50%	0.00%	1.00%	5.00%	0.00%	1.00%	0.00%	0.00%	0.00%	1.32	0.00	0.28	0.00	0.19	0.94	0.00	0.19	0.00	0.00	0.00	2.92
CHEM-O-PON QUICK DRY EPOXY PRIMER CATALYST	11.4	1.50000	0.33	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
CHEM-O-PON QUICK DRY EPOXY PRIMER GREY	12.2	1.50000	0.33	10.00%	0.00%	1.50%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.67	0.00	0.40	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.41
PPG PITTHANE ULTRA GLOSS URETHANE ENAMEL BLACK	8.7	1.50000	0.33	1.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
PPG PITTHANE ULTRA GLOSS URETHANE YELLOW	8.7	1.50000	0.33	1.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
PPG PITTHANE ULTRA GLOSS URETHANE ENAMEL NEUTRAL BASE MAROON BAR MATCH	8.7	1.50000	0.33	1.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
PPG PITTHANE ULTRA GLOSS URETHANE ACTIVATOR	8.7	1.50000	0.33	1.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.19	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
Acrolon 218HS	11.3	1.50000	0.33	3.00%	0.00%	0.60%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.74	0.00	0.15	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.11
Acrolon 218HS Hardener	9.4	1.50000	0.33	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PPG FAST DRY 35 GLOSS ALKYD ENAMEL BLACK	9.9	1.50000	0.33	13.00%	0.00%	5.00%	7.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.83	0.00	1.09	1.52	0.22	0.00	0.00	0.00	0.00	0.00	0.00	5.65
PPG FAST DRY 35 GLOSS ALKYD ENAMEL PORCELAIN WHITE	11.4	1.50000	0.33	10.00%	0.00%	5.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.46	0.00	1.23	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	3.94
PPG FAST DRY 35 GLOSS ALKYD ENAMEL WHITE BASE SUPERIOR GRAY MM228/ MM234	11.3	1.50000	0.33	13.00%	0.00%	5.00%	7.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.22	0.00	1.24	1.73	0.25	0.00	0.00	0.00	0.00	0.00	0.00	6.43
PPG FAST DRY 35 GLOSS ALKYD ENAMEL NEUTRAL BASE PANTONE TEEL	11.3	1.50000	0.33	13.00%	0.00%	5.00%	7.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.18	0.00	1.22	1.71	0.24	0.00	0.00	0.00	0.00	0.00	0.00	6.37
OMNITHANE Grayish-Green	21.1	1.50000	0.33	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	2.31	2.77
													Worst Case Coating PTE (tons/year):		**3.96**	**0.32**	**1.27**	**2.95**	**0.46**	**0.95**	**0.06**	**0.19**	**1.83**	**0.21**	**2.31**	**6.43**

METHODOLOGY

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

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

Company Name: **IDS Blast Finishing**
Source Address: **2717 Tobey Drive, Indianapolis, Indiana 46219**
Permit Number: **F097-33334-00524**
Reviewer: **Adam Wheat**

Heat Input Capacity MMBtu/hr	**Potential Throughput** MMCF/yr	Emission Units:
0.28	2.45	One (1) furnace @ 0.28 MMBtu/hr (ID: EC1)
0.36	3.15	Three (3) furnaces @ 0.12 MMBtu/hr each (ID: EC2, EC3, EC5)
0.33	2.89	One (1) pressure washer @ 0.33 MMBtu/hr (ID: EC4)
0.15	1.31	One (1) furnace @ 0.15 MMBtu/hr (ID: EC6)
0.64	5.61	Two (2) furnaces @ 0.32 MMBtu/hr each (ID: EC7 and EC13)
3.42	29.96	One (1) make-up air unit @ 3.42 MMBtu/hr (ID: EC9)
2.00	17.52	One (1) curing oven @ 2.0 MMBtu/hr (ID: EC10)
0.85	7.45	One (1) small burnoff oven @ 0.85 MMBtu/hr (ID:EC11)
2.88	25.23	One (1) large burnoff oven @ 2.88 MMBtu/hr (ID:EC12)
10.91	93.70	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.1	0.4	0.4	0.0	4.7	0.3	3.9

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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	9.8E-05	5.6E-05	3.5E-03	0.08	1.6E-04	**0.09**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.3E-05	5.2E-05	6.6E-05	1.8E-05	9.8E-05	**2.6E-04**
					Total HAPs	**0.09**
					Worst HAP	**0.08**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	5,622	0.1	0.1
Summed Potential Emissions in tons/yr	5,622		
CO2e Total in tons/yr	5,656		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

updated 2/13

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Michael Archer
IDS Blast Finishing
2717 Tobey Dr
Indianapolis, IN 46219

DATE: November 15, 2013

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

SUBJECT: Final Decision
New Source FESOP
097 - 33334 - 00524

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:
Operations/Plant Mgr
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.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

November 15, 2013

TO: Indianapolis Public Library Franklin Road Branch

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: IDS Blast Finishing
Permit Number: 097 - 33334 - 00524

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	LPOGOST 11/15/2013 IDS Blast Finishing 097 - 33334 - 00524 final)		
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Michael Archer IDS Blast Finishing 2717 Tobey Dr Indianapolis IN 46219 (Source CAATS) Via confirmed delivery									
2		Operations/Plant Mgr IDS Blast Finishing 2717 Tobey Dr Indianapolis IN 46219 *(RO CAATS)*									
3		Marion County Health Department 3838 N, Rural St Indianapolis IN 46205-2930 *(Health Department)*									
4		Indianapolis City Council and Mayors Office 200 East Washington Street, Room E Indianapolis IN 46204 *(Local Official)*									
5		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 *(Local Official)*									
6		Matt Mosier Office of Sustainability City-County Bldg/200 E Washington St. Rm# 2460 Indianapolis IN 46204 *(Local Official)*									
7		Indianapolis Public Library Franklin Road Branch 5550 S. Franklin Road Indianapolis IN 46239 *(Library)*									
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11											
12											
13											
14											
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