



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

Date: November 21, 2014

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

Source Name: Independent Protection Company, Inc.

Permit Level: MSOP

Permit Number: 039-34706-00612

Source Location: 1607 S Main St and 118 Lafayette St. Goshen, Indiana 46526

Type of Action Taken: Modification at an existing source
Revisions to permit requirements

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 matter referenced above.

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>
To view the document, select Search option 3, then enter permit 34706.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

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.

(continues on next page)

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.



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Michael R. Pence
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Mr. Thomas Craig
Independent Protection Company, Inc.
67819 State Road 15
New Paris, Indiana 46553

November 21, 2014

Re: 039-34706-00612
Minor Revision to
M039-30245-00612

Dear Mr. Craig:

Independent Protection Company, Inc. was issued a Minor Source Operating Permit (MSOP) Renewal No. M039-30245-00612 on July 19, 2011 for a stationary foundry to manufacture small aluminum, bronze and copper parts used in the installation of lightning rod systems (Plant 1) and a plant for stranding copper cable for lightning rod systems and customizing the interior of specialty vehicles (Plant 2) located at 1607 South Main Street, Goshen, Indiana and 118 Lafayette Street, Goshen, Indiana. On July 11, 2014, the Office of Air Quality (OAQ) received an application from the source requesting the permit be updated to reflect the following:

- (a) The removal of the operation for the assembly of specialty vehicles, identified as MPV;
- (b) The addition of one (1) spray booth/hydrographics unit, identified as SB1;
- (c) The replacement of the mill room woodworking operation, identified as WW1;
- (d) The removal of woodworking operation WW2;
- (e) The addition of one (1) polyurea production parts manufacturing operation, identified as PF1; and
- (f) The updating of emission unit descriptions and calculations.

The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-6.1-6, these changes to the permit are required to be reviewed in accordance with the Minor Permit Revision (MPR) procedures of 326 IAC 2-6.1-6(h). Pursuant to the provisions of 326 IAC 2-6.1-6, a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.



A State that Works

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-6.1-6, this permit shall be revised by incorporating the minor permit revision into the permit.

All other conditions of the permit shall remain unchanged and in effect. Please find attached the entire MSOP as revised.

A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Charles Sullivan of my staff at 317-232-8422 or 1-800-451-6027, and ask for extension 2-8422.

Sincerely,



Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

JRK/cbs

cc: File - Elkhart County
Elkhart County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch



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Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

**Independent Protection Company, Inc.
1607 South Main Street (Plant 1) and
118 Lafayette Street (Plant 2)
Goshen, Indiana 46526**

(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.

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

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

Operation Permit No.: M039-30245-00612	
Issued by: <i>Original signed by:</i> Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 19, 2011 Expiration Date: July 19, 2021

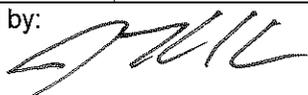
Minor Permit Revision No.: 039-34706-00612	
Issued by:  Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 21, 2014 Expiration Date: July 19, 2021

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SECTION A

SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary foundry to manufacture small aluminum, bronze and copper parts used in the installation of lightning rod systems (Plant 1) and a plant for stranding copper cable for lightning rod systems and the manufacture of customized automotive parts (Plant2).

Source Address:	1607 South Main Street, Goshen, Indiana 46526 (Plant 1) 118 Lafayette Street, Goshen, Indiana 46526 (Plant 2)
General Source Phone Number:	574-831-4340
SIC Code:	3643, 3714
County Location:	Elkhart
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act One of 28 Listed Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

Plant 1

- (a) Two (2) natural gas-fired crucible furnaces, identified as F1 and F2, constructed prior to 1974, with a maximum combined capacity to melt 216 pounds per hour of bronze, 76 pounds per hour of clean charge aluminum, or 216 pounds per hour of copper, each with a maximum heat input capacity of 0.65 million British thermal units (MMBtu) per hour, with particulate emissions controlled by one (1) dust collection system, identified as GS (described below), which exhausts through one (1) stack, identified as S1. There is no flux being used in the furnaces.
- (b) One (1) pouring/casting operation, identified as C, constructed prior to 1974, with a maximum throughput capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, with particulate emissions controlled by one (1) dust collection system, identified as GS (described below), which exhausts through one (1) stack, identified as S1.

One (1) dust collection system, identified as GS, which includes a bag-type dust collector, fume capture hoods for the two (2) crucible furnaces, and a mobile hood with a high temperature flex hose allowing the hood to travel with the operator as the molten metal is poured into the molds, exhausting through one (1) stack, identified as S1.

- (c) One (1) sand mold making operation, identified as S, constructed prior to 1974, including a shakeout operation, handling a maximum of 0.5 tons of sand per hour, with a maximum resin coated sand usage rate of 0.9 pounds per hour, and a maximum bentonite usage rate of 0.5 pounds per hour, producing a maximum of 16 molds per hour, exhausting through one (1) stack, identified as S2.

- (d) One (1) machining operation consisting of:
- (1) one (1) grinding station with three (3) hand grinders, identified as G, constructed prior to 1974, with a maximum throughput capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, with two grinders controlled by dust collector, identified as DC-1, exhausting indoors, and the remaining grinder is controlled by dust collector, identified as DC-3, exhausting indoors.
 - (2) one (1) cut-off saw, identified as S, constructed prior to 2011, with a maximum throughput capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper controlled by a dust collector, identified as DC-2, containing one two-stage cartridge filter, exhausting indoors.
 - (3) one (1) Wheelabrator shot blaster, identified as W1, constructed in 2003, with a maximum throughput capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, controlled by a filter that consists of a two stage filter with a single bag and cartridge in series for control, exhausting indoors.
- (e) One (1) natural gas-fired plant boiler, identified as B1, constructed prior to 1974, with a maximum heat input capacity of 0.13 MMBtu per hour, exhausting through one (1) stack, identified as S5.
- (f) One (1) natural gas-fired office boiler, identified as B2, constructed prior to 1974, with a maximum heat input capacity of 0.1096 MMBtu per hour, exhausting through one (1) stack, identified as S6.
- (g) One (1) lead coating line, identified as L, constructed prior to 1974, using a maximum of 0.721 pounds of lead/solder ingot per hour, a maximum of 0.09 pounds of HCl per hour, and a maximum of 0.1 pounds of zinc flux per hour to coat a maximum of 19 pounds of copper wire per hour, exhausting through one (1) stack, identified as S4.
- (h) One (1) Safety-Kleen cold cleaner degreaser, identified as MPC, constructed prior to 1974, using a maximum of 0.02 gallons per day of solvent containing no HAPs.

Plant 2

- (a) Woodworking operations including the following:
- (1) One (1) mill room woodworking operation, identified as WW1, approved in 2014 for construction, including one (1) table saw, and two (2) belt sanders, with a maximum wood throughput of 11.6 pounds per hour, with a dust collector for particulate control, exhausting inside the building
- (b) Fifteen (15) natural gas-fired space heaters, identified as H1 through H15, with H1 through H14 all constructed prior to 1974, and H15 installed in 2006, with H1 and H2 each rated at 0.075 MMBtu per hour, H3 rated at 0.08 MMBtu per hour, H4 rated at 0.036 MMBtu per hour, H5 through H8 each rated at 0.10 MMBtu per hour, H9 rated at 0.06 MMBtu per hour, H10 through H13 each rated at 0.04 MMBtu per hour, H14 rated at 0.20 MMBtu per hour, and H15 rated at 0.10 MMBtu per hour, each exhausting through one (1) building vent, identified as V1 through V15, respectively.
- (c) Two (2) portable metal inert gas (MIG) welders, identified as W1 and W2, installed in 2010 and approved for construction in 2011, with a maximum consumption of 0.288 pounds of rod or wire per station per hour, with no control.

- (d) One (1) spray booth/hydrographic operation, identified as SB1, approved in 2014 for construction, with a maximum throughput rate of 1.13 parts per hour, using two spray guns, and a dip tank , exhausting outdoors through one (1) stack, identified as SB1.
- (e) One (1) polyurea foam operation, identified as PF1, approved in 2014 for construction, with a maximum throughput rate of 1.644 parts per hour, using one spray gun for polyurea and one for foam, exhausting outdoors through one (1) stack, identified as PF1.

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, M039-30245-00612, is issued for a fixed term of ten (10) 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

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

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

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

B.7 Duty to Provide Information

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
 - (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.The Permittee shall implement the PMPs.
- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, 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 Permittee shall implement the PMPs.

- (c) 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.
- (d) 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.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M039-30245-00612 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.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

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

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and

- (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

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

B.15 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

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

B.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.18 Credible Evidence [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

The Permittee shall not operate an incinerator 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.6 Fugitive Dust Emissions [326 IAC 6-4]

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

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.

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

- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

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

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

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

no later than thirty-five (35) days prior to the intended test date.
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

C.12 Response to Excursions or Exceedances

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

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system);
or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

C.14 Malfunctions Report [326 IAC 1-6-2]

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

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

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

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

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

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

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Plant 1

- (a) Two (2) natural gas-fired crucible furnaces, identified as F1 and F2, constructed prior to 1974, with a maximum combined capacity to melt 216 pounds per hour of bronze, 76 pounds per hour of clean charge aluminum, or 216 pounds per hour of copper, each with a maximum heat input capacity of 0.65 million British thermal units (MMBtu) per hour, with particulate emissions controlled by one (1) dust collection system, identified as GS (described below), which exhausts through one (1) stack, identified as S1. There is no flux being used in the furnaces;
- (b) One (1) pouring/casting operation, identified as C, constructed prior to 1974, with a maximum throughput capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, with particulate emissions controlled by one (1) dust collection system, identified as GS (described below), which exhausts through one (1) stack, identified as S1;
- One (1) dust collection system, identified as GS, which includes a bag-type dust collector, fume capture hoods for the two (2) crucible furnaces, and a mobile hood with a high temperature flex hose allowing the hood to travel with the operator as the molten metal is poured into the molds, exhausting through one (1) stack, identified as S1.
- (c) One (1) sand mold making operation, identified as S, constructed prior to 1974, including a shakeout operation, handling a maximum of 0.5 tons of sand per hour, with a maximum resin coated sand usage rate of 0.9 pounds per hour, and a maximum bentonite usage rate of 0.5 pounds per hour, producing a maximum of 16 molds per hour, exhausting through one (1) stack, identified as S2.
- (d) One (1) machining operation consisting of:
- (1) one (1) grinding station with three (3) hand grinders, identified as G, constructed prior to 1974, with a maximum throughput capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, with two grinders controlled by dust collector, identified as DC-1, exhausting indoors, and the remaining grinder is controlled by dust collector, identified as DC-3, exhausting indoors.
 - (2) one (1) cut-off saw, identified as S, constructed prior to 2011, with a maximum throughput capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper controlled by a dust collector, identified as DC-2, containing one two-stage cartridge filter, exhausting indoors.
 - (3) one (1) Wheelabrator shot blaster, identified as W1, constructed in 2003, with a maximum throughput capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, controlled by a filter that consists of a two stage filter with a single bag and cartridge in series for control, exhausting indoors.
- (e) One (1) natural gas-fired plant boiler, identified as B1, constructed prior to 1974, with a maximum heat input capacity of 0.13 MMBtu per hour, exhausting through one (1) stack, identified as S5;
- (f) One (1) natural gas-fired office boiler, identified as B2, constructed prior to 1974, with a maximum heat input capacity of 0.1096 MMBtu per hour, exhausting through one (1) stack, identified as S6;

- (g) One (1) lead coating line, identified as L, constructed prior to 1974, using a maximum of 0.721 pounds of lead/solder ingot per hour, a maximum of 0.09 pounds of HCl per hour, and a maximum of 0.1 pounds of zinc flux per hour to coat a maximum of 19 pounds of copper wire per hour, exhausting through one (1) stack, identified as S4;
 - (h) One (1) Safety-Kleen cold cleaner degreaser, identified as MPC, constructed prior to 1974, using a maximum of 0.02 gallons per day of solvent containing no HAPs.
- (The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

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

D.1.1 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate from the facilities listed below shall be limited as follows:

Emission Unit ID	Process Weight Rate (tons/hr)	Allowable Particulate Emissions (lb/hr)
Crucible Furnaces (F1 & F2)	0.108	0.92
Sand Mold Making (S) (includes sand handling and shakeout)	0.608 (sand and metal)	2.94
Machining Operations (G)	0.108	0.92
Machining Operations (W1)	0.108	0.92

The pounds per hour limitations were calculated using the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.2 Particulate Emission Limitations [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (e) (Particulate Emission Limitations for Sources of Indirect Heating: emission limitations for facilities specified in 326 IAC 6-2-1 (b)), particulate emissions from all facilities used for indirect heating purposes which began operation after June 8, 1972, shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input. Therefore, particulate emissions from each of the two (2) boilers B1 and B2 shall not exceed 0.6 pounds of particulate matter per million British thermal unit heat input.

D.1.3 Secondary Aluminum NESHAP [40 CFR 63, Subpart RRR]

The crucible furnaces F1 and F2 shall only melt clean charge, customer returns, or internal scrap as defined under 40 CFR 63.1503. Therefore, the requirements of 40 CFR 63, Subpart RRR do not apply.

D.1.4 Cold Cleaner Degreaser Control and Operating Requirements [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control and Equipment Operating Requirements), the Permittee shall:

- (a) Ensure the following control equipment and operating requirements are met:
 - (1) Equip the degreaser with a cover.
 - (2) Equip the degreaser with a device for draining cleaned parts.

- (3) Close the degreaser cover whenever parts are not being handled in the degreaser.
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.
 - (5) Provide a permanent, conspicuous label that lists the operating requirements in (3), (4), (6), and (7) of this condition.
 - (6) Store waste solvent only in closed containers.
 - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.
- (b) Ensure the following additional control equipment and operating requirements are met:
- (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent used is insoluble in, and heavier than, water.
 - (C) A refrigerated chiller.
 - (D) Carbon adsorption.
 - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
 - (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
 - (3) If used, solvent spray:
 - (A) must be a solid, fluid stream; and
 - (B) shall be applied at a pressure that does not cause excessive splashing.

D.1.5 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), on and after January 1, 2015, the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

D.1.6 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for the crucible furnaces, machining operation and any associated 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.1.7 Particulate Control

- (a) In order to comply with condition D.1.1, the dust collection system, identified as GS, shall be in operation and control emissions from the crucible furnaces (F1 and F2) at all times that one or both of the crucible furnaces are in operation.

- (b) In order to comply with condition D.1.1, the dust collectors for particulate control shall be in operation and control emissions from the machining operation at all times that the respective grinders, saw and shotblaster are in operation.
- (c) 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

D.1.8 Visible Emissions Notations

- (a) Visible emission notations of the stack exhaust of the dust collection system, identified as GS, shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.9 Parametric Monitoring

The Permittee shall record the pressure drop across the bag-type dust collector used in conjunction with the crucible furnaces and the pouring/casting operation, at least once per day when the process is in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take a reasonable response. Section C- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps, shall be considered a deviation from this permit.

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

D.1.10 Broken or Failed Cartridge Detection

- (a) For a single compartment bag-type 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 B- Emergency Provisions).

- (b) For a single compartment bag-type 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 emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B- Emergency Provisions).

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

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

D.1.11 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.5, on and after January 1, 2015, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.
 - (a) The name and address of the solvent supplier.
 - (b) The date of purchase.
 - (c) The type of solvent purchased.
 - (d) The total volume of the solvent purchased.
 - (e) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (b) To document the compliance status with Condition D.1.7, the Permittee shall maintain daily records of visible emission notations of the stack exhaust of the dust collection system, identified as GS. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).
- (c) To document the compliance status with Condition D.1.8, the Permittee shall maintain records of the pressure drop once per day during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (i.e. the process did not operate that day).
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Plant 2

- (a) Woodworking operations including the following:
 - (1) One (1) mill room woodworking operation, identified as WW1, approved in 2014 for construction, including one (1) table saw, and two (2) belt sanders, with a maximum wood throughput of 11.6 pounds per hour, with a dust collector for particulate control, exhausting inside the building
- (b) Fifteen (15) natural gas-fired space heaters, identified as H1 through H15, with H1 through H14 all constructed prior to 1974, and H15 installed in 2006, with H1 and H2 each rated at 0.075 MMBtu per hour, H3 rated at 0.08 MMBtu per hour, H4 rated at 0.036 MMBtu per hour, H5 through H8 each rated at 0.10 MMBtu per hour, H9 rated at 0.06 MMBtu per hour, H10 through H13 each rated at 0.04 MMBtu per hour, H14 rated at 0.20 MMBtu per hour, and H15 rated at 0.10 MMBtu per hour, each exhausting through one (1) building vent, identified as V1 through V15, respectively.
- (c) Two (2) portable metal inert gas (MIG) welders, identified as W1 and W2, installed in 2010 permitted in 2011, with a maximum consumption of 0.288 pounds of rod or wire per station per hour, with no control.
- (d) One (1) spray booth/hydrographic operation, identified as SB1, approved in 2014 for construction, with a maximum throughput rate of 1.13 parts per hour, using two spray guns, and a dip tank , exhausting outdoors through one (1) stack, identified as SB1.
- (e) One (1) polyurea foam operation, identified as PF1, approved in 2014 for construction, with a maximum throughput rate of 1.644 parts per hour, using one spray gun for polyurea and one for foam, exhausting outdoors through one (1) stack, identified as PF1.

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

Emission Limitations and Standards

D.2.1 Particulate Emission Limitations [326 IAC 6-3-2(d)]

- (a) Particulate from the surface coating operations (SB1 & PF1) shall each be controlled by a dry particulate filter, waterwash, or an equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.
- (b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:
 - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
 - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (c) If overspray is visibly detected, the Permittee 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 detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for the woodworking operation and surface coating operations (SB1 & PF1) and their associated control devices. Section B- Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.

Compliance Determination Requirements

D.2.3 Particulate Control

- (a) In order to ensure the requirements of 326 IAC 6-3-2 are not applicable to the woodworking operations, the dust collectors for particulate control shall be in operation and control emissions from the woodworking operations, at all times that the woodworking operations are in operation.
- (b) In the event that bag failure is observed in the bag dust collector system, 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 notifications 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

D.2.4 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the woodworking center operation. For sources capable of redirecting vents, a baghouse inspection shall be performed no later than three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.2.5 Broken or Failed Cartridge Detection

- (a) For a single compartment bag-type 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 B- Emergency Provisions).
- (b) For a single compartment bag-type 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 emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B- Emergency Provisions).

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

D.2.6 Record Keeping Requirements

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

- (b) To document the compliance status with Condition D.2.4, the Permittee shall maintain records of the results of the inspections required under Condition D.2.4 and the dates the vents are redirected.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

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

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

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

Company Name:	Independent Protection Company, Inc.
Address:	1607 South Main Street (Plant 1) and 118 Lafayette Street (Plant 2)
City:	Goshen, Indiana 46526
Phone #:	574-831-4340
MSOP #:	M039-30245-00612

I hereby certify that Independent Protection Company, Inc. still in operation.
 no longer in operation.

I hereby certify that Independent Protection Company, Inc. in compliance with the requirements of MSOP M039-30245-00612.
:
 not in compliance with the requirements of MSOP M039-30245-00612.

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

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

Noncompliance:

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865**

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

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

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

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

Technical Support Document (TSD) for a Minor Permit Revision to a
Minor Source Operating Permit (MSOP) Renewal

Source Description and Location

Source Name:	Independent Protection Company, Inc.
Source Location:	1607 South Main Street, Goshen, IN 46526 (Plant 1) 118 Lafayette Street, Goshen, IN 46526 (Plant 2)
County:	Elkhart
SIC Code:	3643 (Current-Carrying Wiring Devices); and 3714 (Motor Vehicle Parts and Accessories)
Operation Permit No.:	M039-30245-00612
Operation Permit Issuance Date:	July 19, 2011
Minor Permit Revision No.:	039-34706-00612
Permit Reviewer:	C. Sullivan

On July 11, 2014, the Office of Air Quality (OAQ) received an application from Independent Protection Company, Inc. related to a modification to an existing stationary foundry to manufacture small aluminum, bronze and copper parts used in the installation of lightning rod systems (Plant 1) and a plant for stranding copper cable for lightning rod systems and the manufacture of customized automotive parts (Plant 2).

Source Definition

This source consists of two (2) plants:

- (a) Plant 1 is located at 1607 South Main Street, Goshen, Indiana; and
- (b) Plant 2 is located at 118 Lafayette Street, Goshen, Indiana.

Since the two (2) plants are located on adjacent properties, have the same SIC codes and are owned by one (1) company, they will be considered one (1) source. The plant ID for the combined source is 039-00612.

This determination was made in the initial Minor Source Operating Permit No. M039-20230-00612, issued on June 22, 2006.

Existing Approvals

The source was issued MSOP Renewal No. M039-30245-00612 on July 19, 2011. There have been no subsequent approvals issued.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Unclassifiable or attainment effective April 5, 2005, for the annual PM _{2.5} standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM _{2.5} standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
¹ Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005.	

- (a) **Ozone Standards**
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
 Elkhart 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}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**
 Elkhart County has been classified as attainment or unclassifiable in Indiana for all other criteria regulated pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

- (a) The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.
- (b) Since this source is classified as a secondary metal production plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

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

This PTE table is based on the permitted capacities of the emission units permitted in MSOP No. M039-30245-00612, issued on July 19, 2011.

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM10*	PM2.5**	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Crucible Furnaces (F1 & F2)	9.94	5.91	5.91	0.24	0.56	0.03	0.47	0.51	0.50 Lead
Pouring/Casting (S)	1.99	0.97	0.97	0.01	negl.	0.07	2.84	0.10	0.10 Lead
Mold Sand Handling (S)	7.88	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00
Shakeout	1.51	1.06	1.06	0.00	0.00	0.57	0.00	0.00	0.00
Machining Operations (G & W-1)	16.08	1.61	1.61	0.00	0.00	0.00	0.00	0.79	0.79 Lead
Lead Coating Line (L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0024 Lead
Natural Gas Combustion Units	0.01	0.03	0.03	negl.	0.40	0.02	0.34	0.01	0.007 Hexane
MPV Surface Coating	0.99	0.99	0.99	0.00	0.00	2.57	0.00	1.42	0.7 Hexane
Woodworking (WW1 & WW2) ¹	0.98	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00
Unpaved Roads	0.94	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.00
MIG Welding (W1 & W2)	0.01	0.01	0.01	0.00	0.00	0.00	0.00	negl.	negl.
Total PTE of Entire Source	40.23	12.96	12.96	0.25	0.96	3.26	3.64	2.85	1.39 Lead
Title V Major Source Thresholds	-	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	-	-
negl. = negligible ¹ PTE after integral control. * 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". **PM _{2.5} listed is direct PM _{2.5} .									

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Independent Protection Company, Inc. on July 11, 2014, requesting the permit be updated to reflect the following:

- (a) The removal of the operation for the assembly of specialty vehicles, identified as MPV;
- (b) The addition of one (1) spray booth/hydrographics unit, identified as SB1;
- (c) The replacement of the mill room woodworking operation, identified as WW1;
- (d) The removal of woodworking operation, identified as WW2;
- (e) The addition of one (1) polyurea and foam production parts manufacturing operation,

identified as PF1; and

- (f) The updating of emission unit descriptions and calculations.

The following is a list of the new/modified emission units and pollution control devices:

- (a) One (1) woodworking operation, identified as WW1, approved in 2014 for construction, including one (1) band saw, one (1) table saw, and two (2) belt sanders, with a maximum wood throughput of 11.6 pounds per hour, with a dust collector for particulate control, exhausting inside the building.
- (b) One (1) spray booth/hydrographic operation, identified as SB1, approved in 2014 for construction, with a maximum throughput rate of 1.13 parts per hour, using two spray guns, and a dip tank , exhausting outdoors through one (1) stack, identified as SB1.
- (c) One (1) polyurea foam operation, identified as PF1, approved in 2014 for construction, with a maximum throughput rate of 1.644 parts per hour, using one spray gun for polyurea and one for foam, exhausting outdoors through one (1) stack, identified as PF1.

The following is a list of the removed emission units and pollution control devices:

- (a) One (1) operation for the assembly of specialty vehicles, identified as MPV, constructed prior to 1974, processing a maximum of 0.046 vehicles per hour, using an air atomization spray coating application method to apply adhesives, and aerosol cans and brushing, wiping or dabbing to apply other coatings and cleaners, with hand held baffles to control particulate matter overspray emissions from the air atomization spray coating and aerosol cans, exhausting inside the building.
- (b) Woodworking operations including the following:
 - (1) One (1) mill room woodworking operation, identified as WW1, constructed prior to 1974, including one (1) band saw, one (1) table saw, one (1) chop saw, and one (1) belt sander, with a maximum wood throughput of 11.16 pounds per hour, with a dust collector for particulate control, exhausting inside the building
 - (2) One (1) cabinet shop woodworking operation, identified as WW2, constructed prior to 1974, including one (1) table saw, one (1) chop saw, one (1) belt sander, one (1) routing table, one (1) pocket machine, and one (1) hinge table, with a maximum wood throughput of 3.17 pounds per hour, with a dust collector for particulate control, exhausting inside the building.

“Integral Part of the Process” Determination

In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge (“ALJ”) Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls. Based on this ruling, potential emissions for particulate matter were calculated after consideration of the controls for determining operating permit level purposes.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – MSOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-6.1-6. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of Proposed Revision (tons/year)								
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Spray Booth (SB1)	7.17	7.17	7.17	0.00	0.00	12.67	0.00	10.75	3.66 (diethylene glycol monobutyl ether acetate)
Polyurea/Foam Operations (PF1)	4.04	4.04	4.04	0.00	0.00	12.01	0.00	3.57	3.57 (Diphenylmethane Diisocyanate)
Woodworking (WW1)	5.82	5.82	5.82	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Revision	17.03	17.03	17.03	0.00	0.00	24.68	0.00	14.32	3.66 (diethylene glycol monobutyl ether acetate)

Pursuant to 326 IAC 2-6.1-6(g)(3), this MSOP is revised through Minor Permit Revision because the proposed revision involves the construction of new emission units with potential to emit within the following:

- (A) Less than twenty-five (25) tons per year and equal to or greater than five (5) tons per year of PM, PM10, and direct PM2.5.
- (B) Less than twenty-five (25) tons per year and equal to or greater than ten (10) tons per year of VOC.

PTE of the Entire Source After Issuance of the MSOP Revision

The table below summarizes the potential to emit of the entire source, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)								
	PM	PM10*	PM2.5**	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Crucible Furnaces (F1 & F2)	9.94	5.91	5.91	0.24	0.56	0.03	0.47	0.51	0.50 Lead
Pouring/Casting (S)	1.99	0.97	0.97	0.01	negl.	0.07	2.84	0.10	0.10 Lead
Mold Sand Handling (S)	7.88	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00
Shakeout	1.51	1.06	1.06	0.00	0.00	0.57	0.00	0.00	0.00
Machining Operations (G & W-1)	16.08	1.16	1.16	0.00	0.00	0.00	0.00	0.80	0.80 Lead
Lead Coating Line (L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0024 Lead
Natural Gas Combustion Units (B1, B2, & H1-15)	0.01	0.03	0.03	negl.	0.40	0.02	0.34	0.01	0.007 Hexane
Spray Booth (SB1)	7.17	7.17	7.17	0.00	0.00	12.67	0.00	11.49	3.66 (diethylene glycol monobutyl ether acetate)
Polyurea/Foam Operations (PF1)	4.04	4.04	4.04	0.00	0.00	12.01	0.00	3.57	3.57 (Diphenylmethane Diisocyanate)
MPV Surface Coating	0.25	0.25	0.25	0.00	0.00	2.57	0.00	1.42	0.7 Hexane
Woodworking (WW1 & WW2) ¹	0.98 0.58	0.98 0.58	0.98 0.58	0.00	0.00	0.00	0.00	0.00	0.00
Unpaved Roads	0.94 0.06	0.20 0.01	0.20 0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIG Welding (W1 & W2)	0.01	0.01	0.01	0.00	0.00	0.00	0.00	negl.	0.00
Total PTE of Entire Source	54.52 49.28	27.82 22.58	27.80 22.57	0.25	0.96	3.26 25.37	3.64	2.85 15.73	4.39 Lead 3.66 (diethylene glycol monobutyl ether acetate)
Title V Major Source Thresholds	-	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	-	-
negl. = negligible ¹ PTE after integral control. *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". ** PM _{2.5} listed is direct PM _{2.5} .									

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)								
	PM	PM10*	PM2.5**	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Crucible Furnaces (F1 & F2)	9.94	5.91	5.91	0.24	0.56	0.03	0.47	0.51	0.50 Lead
Pouring/Casting (S)	1.99	0.97	0.97	0.01	negl.	0.07	2.84	0.10	0.10 Lead
Mold Sand Handling (S)	7.88	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00
Shakeout	1.51	1.06	1.06	0.00	0.00	0.57	0.00	0.00	0.00
Machining Operations (G & W-1)	16.08	1.16	1.16	0.00	0.00	0.00	0.00	0.80	0.80 Lead
Lead Coating Line (L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0024 Lead
Natural Gas Combustion Units (B1, B2, & H1-15)	0.01	0.03	0.03	negl.	0.40	0.02	0.34	0.01	0.007 Hexane
Spray Booth (SB1)	7.17	7.17	7.17	0.00	0.00	12.67	0.00	11.49	3.66 (diethylene glycol monobutyl ether acetate)
Polyurea/Foam Operations (PF1)	4.04	4.04	4.04	0.00	0.00	12.01	0.00	3.57	3.57 (Diphenylmethane Diisocyanate)
Woodworking (WW1) ¹	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00
Unpaved Roads	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIG Welding (W1 & W2)	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Source	49.28	22.58	22.57	0.25	0.96	25.37	3.64	15.73	3.66 (diethylene glycol monobutyl ether acetate)
Title V Major Source Thresholds	-	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	-	-
negl. = negligible ¹ PTE after integral control. *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". ** PM _{2.5} listed is direct PM _{2.5} .									

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

MSOP Status

- (a) This revision to an existing Title V minor stationary source will not change the minor status, because the uncontrolled/unlimited potential to emit criteria pollutants from the entire source will still be less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-6.1 (MSOP).
- (b) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standards (NSPS) for Polymeric Coating of Supporting Substrates Facilities, 40 CFR 60, Subpart VVV, are not included in this permit since the surface coating operations do not perform polymeric coating of supporting substrates. The foam spray is applied to the backing of solid metal parts not web coatings, such as fabric, paper, plastic film, metallic film, metal coil, cord, and yarn, that are flexible enough to be unrolled from a large roll; and coated as a continuous substrate by methods including, but not limited to, knife coating, roll coating, dip coating, impregnation, rotogravure, and extrusion.
- (b) There are no New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Flexible Polyurethane Foam Production, 40 CFR 63, Subpart III (326 IAC 20-22), are not included in this permit since the operation is not a major source of HAPs.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Automobiles and Light-Duty Trucks, 40 CFR Part 63, Subpart IIII (326 IAC 20-85), are not included in the permit, because this source is not a major source, is not located at a major source, and is not part of a major source of emissions of HAP.
- (f) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR Part 63, Subpart MMMM (326 IAC 20-80) are not included in the permit, because this source is not a major source, is not located at a major source, and is not part of a major source of emissions of HAP.
- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Products, 40 CFR 63, Subpart PPPP (63.4480 through 63.4581) (326 IAC 20-81), are not included in the permit for the painting operation, because this source is not a major source of HAPs and does not perform surface coating of plastic parts or plastic products. This source performs surface coating of metal parts with foam.

- (h) The requirements of National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Metal Coil, 40 CFR Part 63, Subpart SSSS (326 IAC 20-80) are not included in the permit, because this source is not a major source of HAPs.
- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP): Flexible Polyurethane Foam Fabrication Operations, 40 CFR 63, Subpart MMMMM (326 IAC 20-66), are not included in this permit since the facility does not operate a flame lamination affected source as defined in 40 CFR 63.8784(b)(2), does not operate a loop slitter affected source, as defined in 40 CFR 63.8784(b)(1), and is not located at and is not part of a major emission source of hazardous air pollutants (HAP).
- (j) The requirements of 40 CFR Part 63, Subpart HHHHHH (National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources), are not included in this permit because this source does not perform paint stripping using chemical strippers that contain methylene chloride in the removal of dried paint, does not perform spray application of coatings to motor vehicles or mobile equipment, and does not perform spray application of coating that contains chromium, lead, manganese, nickel, or cadmium to a plastic and/or metal substrates.
- (k) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Flexible Polyurethane Foam Production and Fabrication Area Sources, 40 CFR 63, Subpart OOOOOO, are not included in the permit because the source does not produce polyurethane foam or rebond foam as defined in 40 CFR 63.1292 of 40 CFR 63, Subpart III or a flexible polyurethane foam fabrication facility, as defined in 40 CFR 63.11419. This source performs the spray application of polyurethane foam to metal parts and products.
- (l) There are no National Emission Standards for Hazardous Air Pollutants (40 CFR Part 63), 326 IAC 14 and 326 IAC 20 included for this proposed revision.

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because:
 - (1) The potential to emit of all PSD regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels.
Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Revision Section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new/modified unit(s) 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.

- (d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

Woodworking Operation (WW1)

- (g) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the mill room woodworking operation, identified as WW1, is exempt from the requirements of 326 IAC 6-3, since it has potential particulate emissions of less than 0.551 pound per hour, after consideration of integral controls.

The dust collector controlling emissions from WW1 shall be in operation and control emissions from WW1, at all times WW1 is in operation, in order to ensure the unit is exempt from the requirements of 326 IAC 6-3.

Surface Coating (SB1 & PF1)

- (h) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The surface coating operations (SB1 & PF1) is subject to the requirements of 326 IAC 6-3, since it has the potential to use equal to or greater than five (5) gallons per day of surface coatings. Pursuant to 326 IAC 6-3-2(d), the surface coating operations (SB1 and PF1) shall use dry filters for particulate control at all times the surface coating operations are in operation. The control device shall be operated in accordance with manufacturer's specifications.

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

- (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee 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 detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

- (i) The proposed revision is not subject to the requirements of 326 IAC 8-1-6, since the unlimited potential VOC emissions from each new unit (SB1 & PF1) are less than twenty-five (25) tons per year.
- (j) There are no other 326 IAC 8 Rules that are applicable to the facility.

Compliance Determination, Monitoring and Testing Requirements

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

Surface Coating (SB1 & PF1) / Dry Filter	Filter Inspection	Once per day
	Overspray Observations	Weekly
	Overspray Inspections	Monthly

The source shall continue to comply with the other applicable existing compliance requirements and permit conditions as contained in MSOP Renewal No: M039-30245-00612, issued on July 19, 2011.

Proposed Changes

The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

...

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

The Permittee owns and operates a stationary foundry to manufacture small aluminum, bronze and copper parts used in the installation of lightning rod systems (Plant 1) and a plant for stranding copper cable for lightning rod systems and ~~customizing the interior of specialty vehicles (Plant 2)~~ **the manufacture of customized automotive parts** (Plant 2).

Source Address: 1607 South Main Street, Goshen, Indiana 46526 (Plant 1)
118 Lafayette Street, Goshen, Indiana 46526 (Plant 2)

General Source Phone Number: 574-831-4340

SIC Code: 3643, 37134

...

A.2 Emission Units and Pollution Control Equipment Summary

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

...

Plant 2

- (a) ~~One (1) operation for the assembly of specialty vehicles, identified as MPV, constructed prior to 1974, processing a maximum of 0.046 vehicles per hour, using an air atomization spray coating application method to apply adhesives, and aerosol cans and brushing, wiping or dabbing to apply other coatings and cleaners, with hand held baffles to control particulate matter overspray emissions from the air atomization spray coating and aerosol cans, exhausting inside the building.~~
- (ba) Woodworking operations including the following:
- (1) One (1) mill room woodworking operation, identified as WW1, **approved in 2014 for construction** ~~constructed prior to 1974~~, including one (1) ~~band saw, one (1) table saw, one (1) chop saw,~~ and one (1) **two (2)** belt sanders, with a maximum wood throughput of ~~44.16~~ **11.6** pounds per hour, with a dust collector for particulate control, exhausting inside the building.
- (2) ~~One (1) cabinet shop woodworking operation, identified as WW2, constructed prior to 1974, including one (1) table saw, one (1) chop saw, one (1) belt sander, one (1) routing table, one (1) pocket machine, and one (1) hinge table, with a maximum wood throughput of 3.17 pounds per hour, with a dust collector for particulate control, exhausting inside the building.~~
- (eb) Fifteen (15) natural gas-fired space heaters, identified as H1 through H15, with H1 through H14 all constructed prior to 1974, and H15 installed in 2006, with H1 and H2 each rated at 0.075 MMBtu per hour, H3 rated at 0.08 MMBtu per hour, H4 rated at 0.036 MMBtu per hour, H5 through H8 each rated at 0.10 MMBtu per hour, H9 rated at 0.06 MMBtu per hour, H10 through H13 each rated at 0.04 MMBtu per hour, H14 rated at 0.20 MMBtu per hour, and H15 rated at 0.10 MMBtu per hour, each exhausting through one (1) building vent, identified as V1 through V15, respectively.
- (dc) Two (2) portable metal inert gas (MIG) welders, identified as W1 and W2, installed in 2010 and approved for construction in 2011, with a maximum consumption of 0.288 pounds of rod or wire per station per hour, with no control.
- (d) **One (1) spray booth/hydrographic operation, identified as SB1, approved in 2014 for construction, with a maximum throughput rate of 1.13 parts per hour, using two spray guns, and a dip tank, exhausting outdoors through one (1) stack, identified as SB1.**

- (e) **One (1) polyurea foam operation, identified as PF1, approved in 2014 for construction, with a maximum throughput rate of 1.644 parts per hour, using one spray gun for polyurea and one for foam, exhausting outdoors through one (1) stack, identified as PF1.**

...

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Plant 2

- (a) ~~One (1) operation for the assembly of specialty vehicles, identified as MPV, constructed prior to 1974, processing a maximum of 0.046 vehicles per hour, using an air atomization spray coating application method to apply adhesives, and aerosol cans and brushing, wiping or dabbing to apply other coatings and cleaners, with hand held baffles to control particulate matter overspray emissions from the air atomization spray coating and aerosol cans, exhausting inside the building.~~
- (ba) Woodworking operations including the following:
 - (1) **One (1) mill room woodworking operation, identified as WW1, approved in 2014 for construction constructed prior to 1974, including one (1) band saw, one (1) table saw, one (1) chop saw, and one (1) two (2) belt sanders, with a maximum wood throughput of 44.16 11.66 pounds per hour, with a dust collector for particulate control, exhausting inside the building.**
 - ~~(2) One (1) cabinet shop woodworking operation, identified as WW2, constructed prior to 1974, including one (1) table saw, one (1) chop saw, one (1) belt sander, one (1) routing table, one (1) pocket machine, and one (1) hinge table, with a maximum wood throughput of 3.17 pounds per hour, with a dust collector for particulate control, exhausting inside the building.~~
- (eb) Fifteen (15) natural gas-fired space heaters, identified as H1 through H15, with H1 through H14 all constructed prior to 1974, and H15 installed in 2006, with H1 and H2 each rated at 0.075 MMBtu per hour, H3 rated at 0.08 MMBtu per hour, H4 rated at 0.036 MMBtu per hour, H5 through H8 each rated at 0.10 MMBtu per hour, H9 rated at 0.06 MMBtu per hour, H10 through H13 each rated at 0.04 MMBtu per hour, H14 rated at 0.20 MMBtu per hour, and H15 rated at 0.10 MMBtu per hour, each exhausting through one (1) building vent, identified as V1 through V15, respectively.
- (dc) Two (2) portable metal inert gas (MIG) welders, identified as W1 and W2, installed in 2010 ~~and approved for construction~~ **permitted** in 2011, with a maximum consumption of 0.288 pounds of rod or wire per station per hour, with no control.
- (d) **One (1) spray booth/hydrographic operation, identified as SB1, approved in 2014 for construction, with a maximum throughput rate of 1.13 parts per hour, using two spray guns, and a dip tank, exhausting outdoors through one (1) stack, identified as SB1.**
- (e) **One (1) polyurea foam operation, identified as PF1, approved in 2014 for construction, with a maximum throughput rate of 1.644 parts per hour, using one spray gun for polyurea and one for foam, exhausting outdoors through one (1) stack, identified as PF1.**

(The information describing the process contained in this facility description box is descriptive

information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.2.1 Particulate **Emission Limitations** [326 IAC 6-3-2](e)(2)(d)]

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

~~Woodworking operations including the following:~~

- ~~(1) One (1) mill room woodworking operation, identified as WW1, **approved in 2014 for construction** constructed prior to 1974, including one (1) band saw, one (1) table saw, one (1) chop saw, and one (1) **two (2)** belt sanders, with a maximum wood throughput of 11.16 ~~11.6~~ pounds per hour, with a dust collector for particulate control, exhausting inside the building.~~
- ~~(2) One (1) cabinet shop woodworking operation, identified as WW2, constructed prior to 1974, including one (1) table saw, one (1) chop saw, one (1) belt sander, one (1) routing table, one (1) pocket machine, and one (1) hinge table, with a maximum wood throughput of 3.17 pounds per hour, with a dust collector for particulate control, exhausting inside the building.~~
- (a) Particulate from the surface coating operations (SB1 & PF1) shall each be controlled by a dry particulate filter, waterwash, or an equivalent control device, and the Permittee shall operate the control device in accordance with manufacturer's specifications.**
- (b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:**
 - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.**
 - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.**
- (c) If overspray is visibly detected, the Permittee 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 detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.**

....

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the woodworking operation and surface coating operations (SB1 & PF1) and its **their associated** control devices. Section B- Preventative Maintenance Plan contains the Permittee's obligation with regard to the preventative maintenance plan required by this condition.~~

....

D.2.3 Particulate Control

- (a) In order to ~~comply with Condition D.2.1 and to render 326 IAC 2-2 (PSD)~~ **ensure the requirements of 326 IAC 6-3-2 are not applicable to the woodworking operations**, the dust collectors for particulate control shall be in operation and control emissions from the woodworking operations, at all times that the woodworking operations are in operation.

...

D.2.6 Record Keeping Requirements

- (a) **To document the compliance status with Condition D.2.1(b), the Permittee shall maintain a record of any actions taken if overspray is visibly detected.**
- (ab) To document the compliance status with Condition D.2.4, the Permittee shall maintain records of the results of the inspections required under Condition D.2.4 and the dates the vents are redirected.
- (bc) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

...

Additional Changes

IDEM, OAQ made additional revisions to the permit as described below in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions.

1. IDEM clarified Condition C.11 - Instrument Specifications to indicate that the analog instrument must be capable of measuring the parameters outside the normal range.
2. 326 IAC 8-3-5 is no longer a valid rule. On January 30, 2013, amendments to 326 IAC 8-3 (Organic Solvent Degreasing Operations) were published, effective March 1, 2013. 326 IAC 8-3-2 was revised and the Permittee is now subject to 326 IAC 8-3-8 on and after January 1, 2015.
3. IDEM, OAQ has decided to clarify Condition D.1.6 - Preventive Maintenance Plan.
4. IDEM, OAQ has decided to clarify Condition D.1.8 – Visible Emissions Notations.
5. IDEM, OAQ has corrected additional typographical errors.

...

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

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

...

D.1.1 Particulate **Emission Limitations** [326 IAC 6-3-2]

...

D.1.2 Particulate **Emission Limitations** [326 IAC 6-2-3]

...

D.2.3 Particulate Control

- (a) In order to comply with ~~condition~~ **Condition D.2.1** and to render 326 IAC 2-2 (PSD) not applicable, the dust collectors for particulate control shall be in operation and control emissions from the woodworking operations at all times that the woodworking operations are in operation.

...

D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs existing as of July 1, 1990, located in Clark, Elkhart, Floyd, Lake, Marion, Porter or St. Joseph Counties, the Permittee shall ensure that the following requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^oC) (one hundred twenty degrees Fahrenheit (120^oF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the

~~U.S. EPA as a SIP revision.~~

- ~~(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:~~
- ~~(1) Close the cover whenever articles are not being handled in the degreaser.~~
 - ~~(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.~~
 - ~~(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.~~

...

D.1.4 Cold Cleaner Degreaser Control and Operating Requirements [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control and Equipment Operating Requirements), the Permittee shall:

- (a) Ensure the following control equipment and operating requirements are met:**
 - (1) Equip the degreaser with a cover.**
 - (2) Equip the degreaser with a device for draining cleaned parts.**
 - (3) Close the degreaser cover whenever parts are not being handled in the degreaser.**
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.**
 - (5) Provide a permanent, conspicuous label that lists the operating requirements in (3), (4), (6), and (7) of this condition.**
 - (6) Store waste solvent only in closed containers.**
 - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.**

- (b) Ensure the following additional control equipment and operating requirements are met:**
 - (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):**
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.**
 - (B) A water cover when solvent used is insoluble in, and heavier than, water.**
 - (C) A refrigerated chiller.**
 - (D) Carbon adsorption.**
 - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the**

department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

- (2) **Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.**
- (3) **If used, solvent spray:**
 - (A) **must be a solid, fluid stream; and**
 - (B) **shall be applied at a pressure that does not cause excessive splashing.**

D.1.5 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), on and after January 1, 2015, the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

...

D.1.56 Preventive Maintenance Plan [326 IAC 1-6-3]

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the crucible furnaces and the machining operation and any control devices.~~

A Preventive Maintenance Plan is required for the crucible furnaces, machining operation and any associated control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

...

D.1.67 Particulate Control

...

D.1.78 Visible Emissions Notations

...
(a) Visible emission notations of the stack exhaust of the dust collection system, identified as GS, shall be performed ~~daily~~ **once per day** during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

...
(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. ~~in accordance with Section C- Response to Excursions or Exceedances~~ **contains the Permittee's obligation with regard to reasonable response steps required by this condition.** Failure to take response steps ~~in accordance with Section C - Response to Excursions or Exceedances~~ shall be considered a deviation from this permit.

...

D.1.89 Parametric Monitoring

...
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.1.910 Broken or Failed Cartridge Detection

...

D.1.4011 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.5, on and after January 1, 2015, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.**
- (a) The name and address of the solvent supplier.**
 - (b) The date of purchase.**
 - (c) The type of solvent purchased.**
 - (d) The total volume of the solvent purchased.**
 - (e) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).**
- (ab)** To document the compliance status with Condition D.1.7, the Permittee shall maintain daily records of visible emission notations of the stack exhaust of the dust collection system, identified as GS. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).
- ...
- (bc)**
- ...
- (cd)**
- ...

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 July 11, 2014 additional information was received on September 18, 2014 and October 14, 2014.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed MSOP Minor Permit Revision No. 039-34706-00612. The staff recommends to the Commissioner that this MSOP Minor Permit Revision be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Charles Sullivan 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) 232-8422 or toll free at 1-800-451-6027 extension 2-8422.
- (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 Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**Appendix A: Emission Calculations
Emissions Summary**

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014

Units	Potential Emissions before Integral controls (tons/year)								Single Hap	
	PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Total HAPs		
Crucible Furnaces (F1 & F2)	9.94	5.91	5.91	0.24	0.56	0.03	0.47	0.51	0.50	(lead)
Pouring/Casting (C)	1.99	0.97	0.97	0.01	4.73E-03	0.07	2.84	0.10	0.10	(lead)
Mold Sand Handling (S)	7.88	1.18	1.18	0.00	0.00	0.00	0.00	0.00		
Shakeout	1.51	1.06	1.06	0.00	0.00	0.57	0.00	0.00		
Machining Operations (G & W-1)	16.08	1.61	1.61	0.00	0.00	0.00	0.00	0.79	0.79	(lead)
Lead Coating Line (L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0024	0.0024	(lead)
Natural Gas Combustion Units (B1,B2, & H1-H15)	0.01	0.03	0.03	2.40E-03	0.40	0.02	0.34	0.01	0.007	(Hexane)
Spray Booth (SB1)	7.17	7.17	7.17	0.00	0.00	12.67	0.00	10.75	3.66	(diethylene glycol monobutyl ether acetate)
Polyurea/Foam Operations (PF1)	4.04	4.04	4.04	0.00	0.00	12.01	0.00	3.57	3.57	(Diphenylmethane Diisocyanate)
Woodworking (WW1)	5.82	5.82	5.82	0.00	0.00	0.00	0.00	0.00		
Unpaved Roads	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00		
MIG Welding (W1 & W2)	0.01	0.01	0.01	0.00	0.00	0.00	0.00	8.10E-04	8.02E-04	(Mn)
Total	54.52	27.82	27.80	0.26	0.96	25.37	3.64	15.73		

Units	Potential to Emit after Controls (tons/year)								Single Hap	
	PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Total HAPs		
Crucible Furnaces (F1 & F2)	0.11	0.10	0.10	0.24	0.56	0.03	0.47	0.02	0.01	(lead)
Pouring/Casting (S)	0.20	0.10	0.14	0.01	4.73E-03	0.07	2.84	0.01	0.01	(lead)
Mold Sand Handling (S)	7.88	1.18	1.18	0.00	0.00	0.00	0.00	0.00		
Shakeout	1.51	1.06	1.06	0.00	0.00	0.57	0.00	0.00		
Machining Operations (G & W-1)	1.61	0.16	0.16	0.00	0.00	0.00	0.00	0.08	0.08	(lead)
Lead Coating Line (L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0024	0.0024	(lead)
Natural Gas Combustion Units (B1,B2, & H1-H15)	0.01	0.03	0.03	2.40E-03	0.40	0.02	0.34	0.01	0.007	(Hexane)
Spray Booth (SB1)	7.17	7.17	7.17	0.00	0.00	12.67	0.00	10.75	3.66	(diethylene glycol monobutyl ether acetate)
Polyurea/Foam Operations (PF1)	4.04	4.04	4.04	0.00	0.00	12.01	0.00	3.57	3.57	(Diphenylmethane Diisocyanate)
Woodworking (WW1)	5.82	5.82	5.82	0.00	0.00	0.00	0.00	0.00		
Unpaved Roads	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00		
MIG Welding (W1 & W2)	0.01	0.01	0.01	0.00	0.00	0.00	0.00	8.10E-04	8.02E-04	(Mn)
Total	23.18	14.45	14.48	0.25	0.96	25.37	3.64	14.44		

Units	Potential to Emit After Issuance (tons/year)								Single Hap	
	PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Total HAPs		
Crucible Furnaces (F1 & F2)	9.94	5.91	5.91	0.24	0.56	0.03	0.47	0.51	0.50	(lead)
Pouring/Casting (C)	1.99	0.97	0.97	0.01	4.73E-03	0.07	2.84	0.10	0.10	(lead)
Mold Sand Handling (S)	7.88	1.18	1.18	0.00	0.00	0.00	0.00	0.00		
Shakeout	1.51	1.06	1.06	0.00	0.00	0.57	0.00	0.00		
Machining Operations (G & W-1)	16.08	1.61	1.61	0.00	0.00	0.00	0.00	0.79	0.79	(lead)
Lead Coating Line (L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0024	0.0024	(lead)
Natural Gas Combustion Units (B1,B2, & H1-H15)	0.01	0.03	0.03	2.40E-03	0.40	0.02	0.34	0.01	0.01	(Hexane)
Spray Booth (SB1)	7.17	7.17	7.17	0.00	0.00	12.67	0.00	10.75	3.66	(diethylene glycol monobutyl ether acetate)
Polyurea/Foam Operations (PF1)	4.04	4.04	4.04	0.00	0.00	12.01	0.00	3.57	3.57	(Diphenylmethane Diisocyanate)
Woodworking (WW1)	5.82	5.82	5.82	0.00	0.00	0.00	0.00	0.00		
Unpaved Roads	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00		
MIG Welding (W1 & W2)	0.01	0.01	0.01	0.00	0.00	0.00	0.00	8.10E-04	8.02E-04	(Mn)
Total	49.28	22.58	22.57	0.25	0.96	25.37	3.64	15.73		

**Appendix A: Emission Calculations
Revision Summary**

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: 10/22/2014

Units	Uncontrolled Potential emissions (tons/year)								Single Hap
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	
Spray Booth (SB1)	7.17	7.17	7.17	0.00	0.00	12.67	0.00	10.75	3.66 (diethylene glycol monobutyl ether acetate)
Polyurea/Foam Operations (PF1)	4.04	4.04	4.04	0.00	0.00	12.01	0.00	3.57	3.57 (Diphenylmethane Diisocyanate)
Woodworking (WW1)	5.82	5.82	5.82	0.00	0.00	0.00	0.00	0.00	
Total	17.03	17.03	17.03	0.00	0.00	24.68	0.00	14.32	3.66 (diethylene glycol monobutyl ether acetate)

Appendix A: Emission Calculations
Units F1 & F2

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014

Crucible Furnaces Process Emissions		Maximum Throughput					
TYPE OF MATERIAL		LBS/HR	TON/HR	Control Device:		Dust Collector	
Aluminum, Bronze or Copper		Metal	216	0.108	Control Efficiency:		98.99%
	PM	PM10	SOx	NOx	VOC	CO	Lead
	lbs/ton metal charged						
	21	12.4	0.50	0.00	0.00	0.00	1.05
Potential Uncontrolled Emissions lbs/hr	2.27	1.34	0.05	0.00	0.00	0.0	0.11
Potential Uncontrolled Emissions tons/year	9.93	5.87	0.24	0.00	0.00	0.00	0.50
Potential Controlled Emissions lbs/hr	0.02	0.01	0.05	0.00	0.00	0.00	0.00
Potential Controlled Emissions tons/year	0.10	0.06	0.24	0.00	0.00	0.00	0.01

Note: Emission factors are from USEPA's FIRE version 6.24 for Charging a crucible furnace with Brass/Bronze, SCC#3-04-002-19. These represent the worst case emission factors for melting of the three metals listed.

PM10=PM2.5

Methodology

Potential Uncontrolled Emissions lbs/hr = Maximum Throughput tons/hr x Emission Factor lbs/ton
 Potential Uncontrolled Emissions tons/yr = (Potential Uncontrolled Emissions lbs/hr x 8760 hr/yr) / (2,000 lbs/ton)
 Potential Controlled Emissions lbs/hr = Maximum Throughput (tons/hr) x Emission Factor (lbs/ton) x (1 - Control Efficiency %)
 Potential Controlled Emissions tons/yr = Potential Controlled Emissions (lbs/hr) x 8760 (hr/yr) / 2,000 (lbs/ton)

Crucible Furnaces Natural Gas Combustion Emissions

Heat Input Capacity	HHV	Potential Throughput
MMBtu/hr	mmBtu	MMCF/yr
	mmscf	
1.30	1020	11.165

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emission in tons/yr	0.01	0.04	0.04	3.35E-03	0.56	0.03	0.47

*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

Emission Factor in lb/MMcf	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Total - Organics
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.172E-05	6.699E-06	4.187E-04	1.005E-02	1.898E-05	1.050E-02

Emission Factor in lb/MMcf	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	Total - Metals
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.791E-06	6.141E-06	7.815E-06	2.121E-06	1.172E-05	3.059E-05

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.

Worst HAP	0.01
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Appendix A: Emission Calculations
Pouring and Casting

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014

Pouring/Casting		Maximum Throughput					
TYPE OF MATERIAL		LBS/HR	TON/HR	Control Device:		Dust Collector	
Aluminum, Bronze or Copper		216	0.108	Control Efficiency:		89.99%	
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged	Lead lbs/ton metal charged
	4.2	2.06	0.02	0.01	0.14	6.00	0.21
Potential Uncontrolled Emissions lbs/hr	0.45	0.22	0.0022	0.0011	0.02	0.6	0.02
Potential Uncontrolled Emissions tons/year	1.99	0.97	0.0095	0.0047	0.07	2.84	0.10
Potential Controlled Emissions lbs/hr	0.05	0.02	0.0022	0.0011	0.02	0.6	0.00
Potential Controlled Emissions tons/year	0.20	0.10	0.0095	0.0047	0.07	2.84	0.01

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24.

The PM and PM10 emission factors are for pouring at a gray iron foundry since there is limited information on PM and PM10 emissions when pouring into sand molds at other types of foundry operations.

The CO default emission factor specified for the foundry sector based on the Self-Disclosure Agreement dated August 11, 2006, is used since no testing has been performed.

The Lead emission factor is estimated by multiplying the PM factor by the % content of lead in bronze (5%).

Methodology

Potential Uncontrolled Emissions lbs/hr = Maximum Throughput tons/hr x Emission Factor lbs/ton

Potential Uncontrolled Emissions tons/yr = (Potential Uncontrolled Emissions lbs/hr x 8760 hr/yr) / (2,000 lbs/ton)

Potential Controlled Emissions lbs/hr = Maximum Throughput (tons/hr) x Emission Factor (lbs/ton) x (1 - Control Efficiency %)

Potential Controlled Emissions tons/yr = Potential Controlled Emissions (lbs/hr) x 8760 (hr/yr) / 2,000 (lbs/ton)

Appendix A: Emission Calculations
Unit S

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014

Mold Sand Handling						
Maximum Throughput						
LBS/HR TON/HR						
TYPE OF MATERIAL	1000		0.5			
Sand						
	PM lbs/ton sand 3.6	PM10 lbs/ton sand 0.54	SOx lbs/ton sand 0.00	NOx lbs/ton sand 0.00	VOC lbs/ton sand 0.00	CO lbs/ton sand 0.00
Potential Uncontrolled Emissions lbs/hr	1.80	0.27	0.0	0.0	0.00	0.0
Potential Uncontrolled Emissions tons/year	7.88	1.18	0.00	0.00	0.00	0.00
Potential Controlled Emissions lbs/hr	1.80	0.27	0.0	0.0	0.00	0.0
Potential Controlled Emissions tons/year	7.88	1.18	0.0	0.0	0.00	0.0

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24 for similar operation at gray iron foundry (SCC# 3-04-003-50).

Shakeout						
Throughput						
LBS/HR TON/HR						
TYPE OF MATERIAL	216		0.108			
Metal						
	PM lbs/ton metal 3.2	PM10 lbs/ton metal 2.24	SOx lbs/ton metal 0.0	NOx lbs/ton metal 0.0	VOC lbs/ton metal 1.20	CO lbs/ton metal 0.0
Potential Uncontrolled Emissions lbs/hr	0.35	0.24	0.0	0.0	0.1	0.0
Potential Uncontrolled Emissions tons/year	1.51	1.06	0.00	0.00	0.57	0.00
Potential Controlled Emissions lbs/hr	0.35	0.24	0.0	0.0	0.1	0.0
Potential Controlled Emissions tons/year	1.51	1.06	0.00	0.00	0.57	0.00

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24 for similar operation at gray iron foundry (SCC# 3-04-003-31).
The CO default emission factor used in the pouring/casting calculations includes the shakeout process.

Methodology

Potential Uncontrolled Emissions lbs/hr = (Maximum Throughput tons/hr x Emission Factor lbs/ton)
 Potential Uncontrolled Emissions tons/yr = (Potential Uncontrolled Emissions lbs/hr x 8760 hr/yr) / (2,000 lbs/ton)
 Potential Controlled Emissions lbs/hr = Maximum Throughput (tons/hr) x Emission Factor (lbs/ton) x (1- Control Efficiency %)
 Potential Controlled Emissions tons/yr = Potential Controlled Emissions (lbs/hr) x 8760 (hr/yr) / 2,000 (lbs/ton)

Appendix A: Emission Calculations
G and W-1

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014

		Maximum Throughput					
		LBS/HR	TON/HR	Control Device:		Cyclone	
Machining Operations (grinding)		216	0.108	Control Efficiency:		90.00%	
TYPE OF MATERIAL							
Metal							
	PM lbs/ton metal	PM10/PM2.5 lbs/ton metal	SOx lbs/ton metal	NOx lbs/ton metal	VOC lbs/ton metal	CO lbs/ton metal	Lead lbs/ton metal charged
	17	1.7	0.0	0.0	0.00	0.0	0.85
Potential Uncontrolled Emissions lbs/hr	1.84	0.18	0.0	0.0	0.0	0.0	0.09
Potential Uncontrolled Emissions tons/year	8.04	0.80	0.00	0.00	0.00	0.00	0.39
Potential Controlled Emissions lbs/hr	0.18	0.02	0.0	0.0	0.0	0.0	0.01
Potential Controlled Emissions tons/year	0.80	0.08	0.00	0.00	0.00	0.00	0.04

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24 for similar operation at gray iron foundry (SCC# 3-04-003-40).

		Maximum Throughput					
		LBS/HR	TON/HR	Control Device:		Cyclone	
Machining Operations (abrasive blasting)		216	0.108	Control Efficiency:		90.00%	
TYPE OF MATERIAL							
Metal							
	PM lbs/ton metal	PM10/PM2.5 lbs/ton metal	SOx lbs/ton metal	NOx lbs/ton metal	VOC lbs/ton metal	CO lbs/ton metal	Lead lbs/ton metal charged
	17	1.7	0.0	0.0	0.00	0.0	0.85
Potential Uncontrolled Emissions lbs/hr	1.84	0.18	0.0	0.0	0.0	0.0	0.09
Potential Uncontrolled Emissions tons/year	8.04	0.80	0.00	0.00	0.00	0.00	0.39
Potential Controlled Emissions lbs/hr	0.18	0.02	0.0	0.0	0.0	0.0	0.01
Potential Controlled Emissions tons/year	0.80	0.08	0.00	0.00	0.00	0.00	0.04
Uncontrolled Total	16.08	1.61					0.79
Controlled Total	1.61	0.16					0.08

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24 for similar operation at gray iron foundry (SCC# 3-04-003-40).

Methodology

Potential Uncontrolled Emissions lbs/hr = (Maximum Throughput tons/hr x Emission Factor lbs/ton)
 Potential Uncontrolled Emissions tons/yr = (Potential Uncontrolled Emissions lbs/hr x 8760 hr/yr) / (2,000 lbs/ton)
 Potential Controlled Emissions lbs/hr = Maximum Throughput (tons/hr) x Emission Factor (lbs/ton) x (1 - Control Efficiency %)
 Potential Controlled Emissions tons/yr = Potential Controlled Emissions (lbs/hr) x 8760 (hr/yr) / 2,000 (lbs/ton)

Appendix A: Emission Calculations

Unit L

Company Name: Independent Protection Company, Inc.
 Address: 1607 South Main Street, Goshen, Indiana 46526
 118 Lafayette Street, Goshen, Indiana 46526

MSOP MPR No.: 039-34706-00612

Reviewer: Charles Sullivan

Date: October 22, 2014

Lead Coating Line	Maximum Throughput							
	LBS/HR	TON/HR						
TYPE OF MATERIAL	Metal							
Lead	0.721	3.6E-04	Lead lbs/ton metal processed	PM/PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged
			1.5	0	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions lbs/hr			5.4E-04	0.00	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions tons/year			2.4E-03	0.00	0.00	0.00	0.00	0.00
Potential Controlled Emissions lbs/hr			5.4E-04	0.00	0.00	0.00	0.00	0.00
Potential Controlled Emissions tons/year			2.4E-03	0.00	0.00	0.00	0.00	0.00

Note: Emission factors are from USEPA's FIRE version 6.24 for Metallic lead products, SCC#3-04-051-03.

Potential HCl emissions estimated using Esco Engineering program for estimating emissions from open HCl pickling tanks. Estimated emissions assuming 12.5% HCl, 0.5% Fe, 70 degrees F temp., 158 cfm/sq. ft and 1 in. of free board.

Potential HCl emissions = 4.1E-04 lb/hr = 1.8E-03 ton/yr.

Methodology

Potential Uncontrolled Emissions lbs/hr = (Maximum Throughput tons/hr x Emission Factor lbs/ton)

Potential Uncontrolled Emissions tons/yr = (Potential Uncontrolled Emissions lbs/hr x 8760 hr/yr) / (2,000 lbs/ton)

Potential Controlled Emissions lbs/hr = Maximum Throughput (tons/hr) x Emission Factor (lbs/ton) x (1- Control Efficiency %)

Potential Controlled Emissions tons/yr = Potential Controlled Emissions (lbs/hr) x 8760 (hr/yr) / 2,000 (lbs/ton)

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
(B1, B2, & H1 - H15)

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014

Space Heater Number	Plant Boiler, Office Boiler	Heat Input Capacity MMBtu/hr
	H1, H2	0.240
	H3	0.075
	H4	0.080
	H4	0.036
	H5, H6, H7, H8	0.100
	H9	0.060
	H10, H11, H12, H13	0.040
	H14	0.200
	H15	0.100
	Total	0.931

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
0.93	1020	7.992

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tc	0.01	0.03	0.03	0.00	0.40	0.02	0.34

*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 (

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

Emission Factor in lb/M	HAPs - Organics					Total - Organics
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tc	8.392E-06	4.795E-06	2.997E-04	7.193E-03	1.359E-05	7.519E-03

Emission Factor in lb/M	HAPs - Metals					Total - Metals
	Lead	Cadmium	Chromium	Manganese	Nickel	
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tc	1.998E-06	4.396E-06	5.595E-06	1.519E-06	8.392E-06	2.190E-05
	Total HAPs					7.541E-03
	Worst HAP					7.193E-03

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.

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Paint Booth (3-3502 as Activator)**

**Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014**

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water/ Exempt	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)*	Maximum (unit/hour)*	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	
3-3502 as Activator																	
Paint Booth: Base Coat	9.58	57.73%	0.0%	57.7%	0.0%	25.81%	0.20	1.13	5.53	5.53	1.25	30.00	5.48	1.40	21.43	65%	
Paint Booth: 3-3502 Activator	7.90	92.00%	0.0%	92.0%	0.0%	7.00%	0.20	1.13	7.27	7.27	1.64	39.43	7.20	0.22	103.83	65%	
Paint Booth: Clear Coat	10.84	75.00%	75.0%	0.0%	0.0%	25.00%	0.20	1.13	0.00	0.00	0.00	0.00	0.00	0.94	0.00	65%	
Total											2.89	69.43	12.67	2.56			
ACT-NJM2010SPC as Activator																	
Paint Booth: Base Coat	9.58	57.73%	0.0%	57.7%	0.0%	25.81%	0.20	1.13	5.53	5.53	1.25	30.00	5.48	1.92	21.43	65%	
ACT-NJM2010SPC	7.42	95.12%	0.0%	95.1%	0.0%	3.47%	0.20	1.13	7.06	7.06	1.60	38.29	6.99	2.44	203.40	65%	
Paint Booth: Clear Coat	10.84	75.00%	75.0%	0.0%	0.0%	25.00%	0.20	1.13	0.00	0.00	0.00	0.00	0.00	2.82	0.00	65%	
Total											2.85	68.29	12.46	7.17			

Total Potential to Emit 2.89 69.43 12.67 7.17

METHODOLOGY

* Source provided
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 hrs/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1-Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating Used

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
PolyUrea Foam PF1

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)*	Maximum (unit/hour)*	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Foam Part A (3019 Iso)	10.01	100.0%	0.0%	100.0%	0.0%	25.81%	0.099	1,644	10.01	10.01	1.63	39.10	7.14	0.00	38.78	80%
Foam Part B (2030 Polyol)	10.06	68.0%	0.0%	68.0%	0.0%	7.00%	0.099	1,644	6.84	6.84	1.11	26.72	4.88	0.46	97.73	80%
Polyurea Part A (FSS DM A)	9.59	0.0%	0.0%	0.0%	0.0%	28.00%	0.138	1,644	0.00	0.00	0.00	0.00	0.00	1.91	0.00	80%
Polyurea Part B (FSS DM B)	8.42	0.0%	0.0%	0.0%	0.0%	0.00%	0.138	1,644	0.00	0.00	0.00	0.00	0.00	1.67	0.00	80%

Total Potential to Emit **2.74 65.82 12.01 4.04**

METHODOLOGY

* Source provided
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)

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34796-00012
Reviewer: Charles Sullivan
Date: October 22, 2014

Material	Density (lb/gal)	Gallons of Material (gallons)	Maximum (hr/yr)	HAP's Weight %	HAP's lb/gal	Weight % Xylene	Weight % Ethylbenzene	Weight % 2-(2- Butoxyethoxy) ethyl Acetate%	Weight % 2 Butoxyethanol%	Weight % 2-Ethoxyethyl Acetate	Weight % Aromatic Hydrocarbons	Weight % Dibutyl Phthalate	Weight % Dimethyl Glutarate	Weight % n-Butyl Acetate	Weight % Naphthalene	Xylene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	2-(2- Butoxyethoxy) ethyl Acetate Emissions (ton/yr)	2 Butoxyethanol Emissions (ton/yr)	2-Ethoxyethyl Acetate Emissions (ton/yr)	Aromatic Hydrocarbon Emissions (ton/yr)	Dibutyl Phthalate Emissions (ton/yr)	Dimethyl Glutarate Emissions (ton/yr)	n-Butyl Acetate Emissions (ton/yr)	Naphthalene Emissions (ton/yr)	HAPs Total (ton/yr)
Paint Booth Base Coat	8.98	0.200	1,130	10	0.958	5.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
Paint Booth 3-9502 Activator	7.90	0.200	1,130	10	0.790	0.00%	0.00%	17.00%	5.00%	32.00%	25.00%	7.00%	3.00%	7.00%	3.00%	0.00	0.00	1.33	0.39	2.50	1.96	0.55	0.23	0.55	0.23	7.74
Paint Booth Clear Coat	10.84	0.200	1,130	5	0.000	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
Total Potential Emissions																0.47	0.47	1.33	0.39	2.50	1.96	0.55	0.23	0.55	0.23	8.69

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

Appendix A: Emission Calculations
HAP Emission Calculations
ACTAUM2016SPC

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Gosport, Indiana 46526
118 Lafayette Street, Gosport, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014

Material	Density	Gallons of Material	Maximum	Weight % diethylene glycol monobutyl ether acetate	Weight % petroleum distillate (naphtha)	Weight % xylenes (Summers)	Weight % m-xylene	Weight % o-xylene	Weight % ethylbenzene	Weight % p-xylene	Weight % plasticizer	Weight % toluene	Weight % benzene	Weight % naphthalene	Diethylene glycol monobutyl ether acetate Emissions	Petroleum distillate (naphtha) Emissions	Xylenes (Summers) Emissions	m-xylene Emissions	o-xylene Emissions	Ethylbenzene Emissions	p-xylene Emissions	Plasticizer Emissions	Toluene Emissions	Benzene Emissions	Naphthalene Emissions	HAPs Total	
	(lb/Gal)	(gal/hr)													(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
Paint Booth Base Coat	8.60	0.200	1.130	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
ACTAUM2016SPC	7.40	0.200	1.130	50.00%	50.00%	0.00%	20.00%	10.00%	10.00%	10.00%	10.00%	0.10%	0.10%	0.10%	3.86	2.20	0.00	1.47	0.73	0.73	0.73	0.73	0.01	0.01	0.01	10.23	
Paint Booth Clear Coat	10.84	0.200	1.130	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	0.00
Total Potential Emissions															3.86	2.20	0.48	1.47	0.73	0.73	0.73	0.73	0.01	0.01	0.01	10.73	

Total Potential Emissions
HAPS emission rate (lb/hr) = Density (lb/gal) * Gal of Material (gal/hr) * Maximum (wt%) * Weight % HAP * BTU (hr/yr) * 1 ton/2000 lb

**Appendix A: Emission Calculations
HAP Emission Calculations
PolyUrea Foam**

**Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014**

Material	Density	Gallons of Material*	Maximum*	Weight %*	Diphenylmethane Diisocyanate Emissions
	(Lb/Gal)	(gal/unit)	(unit/hour)	Diphenylmethane Diisocyanate	(ton/yr)
Foam Part A (3019 Iso)	10.01	0.099	1.644	50.00	3.57
Foam Part B (2030 Polyol)	10.06	0.099	1.644	0.00	0.00
Polyurea Part A (FSS DM A)	9.59	0.138	1.644	0.00	0.00
Polyurea Part B (FSS DM B)	8.42	0.138	1.644	0.00	0.00
				Total	3.57

* Source provided

Total Potential Emissions

METHODOLOGY

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

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Independent Protection Company, Inc.
 Address: 1607 South Main Street, Goshen, Indiana 46526
 118 Lafayette Street, Goshen, Indiana 46526
 MSOP MPR No.: 039-34706-00612
 Reviewer: Charles Sullivan
 Date: October 22, 2014

Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	1.0	1.0	4.0	4.0	16.0	105	0.020	0.08	29.09
Vehicle (leaving plant) (one-way trip)	1.0	1.0	4.0	4.0	16.0	105	0.020	0.08	29.09
Totals			8.0		32.0			0.16	58.18

Average Vehicle Weight Per Trip = $\frac{4.0}{1.0}$ tons/trip
 Average Miles Per Trip = $\frac{0.02}{1.0}$ miles/trip

Unmitigated Emission Factor, Ef = $k \cdot [(s/12)^a] \cdot [(W/3)^b]$ (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	4.0	4.0	4.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = $E \cdot [(365 - P)/365]$ (Equation 2 from AP-42 13.2.2)

Mitigated Emission Factor, Eext = $E \cdot [(365 - P)/365]$
 where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	2.94	0.75	0.07	lb/mile
Mitigated Emission Factor, Eext =	1.93	0.49	0.05	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.04	0.01	0.00	0.03	0.01	0.00
Vehicle (leaving plant) (one-way trip)	0.04	0.01	0.00	0.03	0.01	0.00
Totals	0.09	0.02	0.00	0.06	0.01	0.00

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PTE = Potential to Emit

Appendix A: Emission Calculations
Unit WW1

Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014

Potential
Mill Room (WW1) Includes one table saw and two belt sanders.
Emissions are collected by a 650 CFM Porter Cable dust collector

EMISSION BASIS FOR MILL ROOM

Filter Air Volume:	650 scfm	Historical Wood Information	
Filter Exhaust Loading:	0.00787 gr/scf		
Max. Wood Throughput:	101616.00 pounds		
Dust collected:	10470.03 pounds		Ratio of dust to wood
Filter Efficiency:	90 %	23293	0.103035
		2400	
Hours of Operation:	8760 hours		
Dust Collected per Hour:	1.20 lbs/hr		

Potential emissions = (8760 hrs/yr) x (lbs dust collected per hour) / [(%filter efficiency)/100] / (2000 lbs/ton)

Potential uncontrolled PM/PM₁₀ emissions = **5.82 tons/year**

Potential controlled emissions = (Potential uncontrolled emissions) x (100 - % control efficiency)/100

Potential controlled PM/PM₁₀ emissions = **0.58 tons/year**

Based on a 8,760 hrs/yr

Mill Room (WW1) Includes one table saw and two belt sanders.
Emissions are collected by a 650 CFM Porter Cable dust collector

Actual

EMISSION BASIS FOR MILL ROOM

Filter Air Volume:	650 scfm
Filter Exhaust Loading:	0.00787 gr/scf
Max. Wood Throughput:	25334.40 pounds
Dust collected:	2610.34 pounds
Filter Efficiency:	90 %
Hours of Operation:	2184 hours
Dust Collected per Hour:	1.20 lbs/hr

Potential emissions = (8760 hrs/yr) x (lbs dust collected per hour) / [(%filter efficiency)/100] / (2000 lbs/ton)

Actual uncontrolled PM/PM₁₀ emissions = **1.45 tons/year**

Potential controlled emissions = (Potential uncontrolled emissions) x (100 - % control efficiency)/100

Actual controlled PM/PM₁₀ emissions = **0.15 tons/year**

Operations are based on a 42 hour work week.

**Appendix A: Emissions Calculations
Welding and Thermal Cutting
MIG Welding W1 and W2**

**Company Name: Independent Protection Company, Inc.
Address: 1607 South Main Street, Goshen, Indiana 46526
118 Lafayette Street, Goshen, Indiana 46526
MSOP MPR No.: 039-34706-00612
Reviewer: Charles Sullivan
Date: October 22, 2014**

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS					TOTAL HAPS (lbs/hr)	
			PM = PM10	Mn	Ni	Co	Cr	PM = PM10	Mn	Ni	Co	Cr		
MIG WELDING														
Gas Metal Arc (MIG) (ER70S)	2	0.288	5.2	0.318	0.001	0.001	0.001	3.0E-03	1.8E-04	5.8E-07	5.8E-07	5.8E-07	1.8E-04	
Potential Emissions tons/year							0.01	8.0E-04	2.5E-06	2.5E-06	2.5E-06	8.1E-04		

METHODOLOGY

* Emission Factors from AP-42, Chapter 12.19-1 and 2, 1/1995.
 SCC 3-09-05254 Gas Metal Arc Welding - ER70S electrode type
 Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
 Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.
 Total HAPs = sum of Mn, Ni, Co and Cr



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Thomas Craig
Independent Protection Co. Inc. - Plants 1 & 2
67819 SR 15
New Paris, IN 46553

DATE: November 21, 2014

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

SUBJECT: Final Decision
MSOP
039-34706

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:
Rob Cripe Jr VP Independent Protection Co. Inc. - Plants 1 & 2
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 6/13/2013

Mail Code 61-53

IDEM Staff	CDENNY 11/21/2014 Independent Protection Co. Inc. - Plants 1 & 2 039-34706-00612 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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3		Elkhart City Council and Mayors Office 229 South Second Street Elkhart IN 46516 (Local Official)									
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