NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a
Minor Source Operating Permit (MSOP)

for Independent Protection Company, Inc. in Elkhart County

MSOP Renewal No.: M039-43886-00612

The Indiana Department of Environmental Management (IDEM) has received an application from
Independent Protection Company, Inc. located at 1607 South Main Street, Goshen, Indiana 46526 (Plant
1) 118 Lafayette Street, Goshen, Indiana 46526 (Plant 2) for a renewal of its MSOP issued on July 19,
2011. If approved by IDEM’s Office of Air Quality (OAQ), this proposed renewal would allow Independent
Protection Company, Inc. to continue to operate its existing source.

This draft permit does not contain any new equipment that would emit air pollutants; however, some
conditions from previously issued permits/approvals have been corrected, changed, or removed. These
corrections, changes, and removals may include Title I changes (e.g., changes that add or modify
synthetic minor emission limits). This notice fulfills the public notice procedures to which those conditions
are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a
draft permit and several supporting documents, which would allow for these changes.

A copy of the permit application and IDEM's preliminary findings have been sent to:

Goshen Public Library
601 S. 5th Street
Goshen, IN 46526

and

IDEM Northern Regional Office
300 North Dr. Martin Luther King Jr. Boulevard, Suite 450
South Bend, IN 46601-1295

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

A copy of the application and preliminary findings is also available via IDEM’s Virtual File Cabinet (VFC).
To access VFC, please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then
have the option to search for permit documents using a variety of criteria.

How can you participate in this process?

The date that this notice is posted on IDEM’s website (https://www.in.gov/idem/5474.htm) marks the
beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when
IDEM offices are closed for business, all comments must be postmarked or delivered in person on the
next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments
concerning the air pollution impact of this draft permit are received, with a request for a public hearing,
IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public
meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM’s mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number M 039-43886-00612 in all correspondence.

Comments should be sent to:

Andrea C. Smith  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for Andrea C. Smith or (317) 234-6543  
Or dial directly: (317) 234-6543  
Fax: (317) 232-6749 attn: Andrea C. Smith  
E-mail: acsmith@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/2358.htm; and the Citizens’ Guide to IDEM on the Internet at: https://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM’s response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM’s decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above and will also be sent to the local library indicated above, the IDEM Regional Office indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Andrea C. Smith of my staff at the above address.

Brian Williams, Section Chief  
Permits Branch  
Office of Air Quality
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.

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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 (Plant 2).

Source Address: 1607 South Main Street (Plant 1) and 118 Lafayette Street (Plant 2), Goshen, Indiana 46526
General Source Phone Number: (574) 831-4340
SIC Code: 3643, 3714 (Current-Carrying Wiring Devices and Motor Vehicle Parts and Accessories)
County Location: Elkhart
Source Location Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit Program

A.2 Source Definition [326 IAC 1-2-73]

This stationary recreational vehicle (RV) manufacturing operation consists of two (2) plants:

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.

A.3 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 capacity of 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, using one (1) dust collection system, identified as GS (described below), as control, and exhausting to 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 capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, using one (1) dust collection system, identified as GS (described below), as control, and exhausting to 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 capacity 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, using no control, and exhausting to 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 capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, controlled by dust collector, identified as DC-1, 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 using a dust collector, identified as DC, exhausting indoors.

3. One (1) Wheelabrator shot blaster, identified as W1, constructed in 2003, with a maximum capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, using a filter that consists of a two stage filter with a single bag and cartridge in series as control, exhausting indoors.

(e) One (1) natural gas-fired plant boiler, identified as B1, constructed prior to 1974, with a maximum capacity of 0.13 MMBtu per hour, using no control, and 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 capacity of 0.1096 MMBtu per hour, using no control and 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, using no control and 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 capacity of 0.02 gallons per day of solvent containing no HAPs.

(i) Unpaved roads and parking lots with public access.
Plant 2

(a) Woodworking operations including the following:

(1) One (1) mill room woodworking operation, identified as WW1, constructed in 2014, including one (1) table saw, and two (2) belt sanders, with a maximum wood throughput of 11.6 pounds per hour, with an integral 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 with a maximum capacity of 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, using no control, and 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 constructed in 2011, with a maximum consumption of 0.288 pounds of rod or wire per station per hour, using no control.

(d) One (1) spray booth/hydrographic operation, identified as SB1, constructed in 2014, with a maximum capacity of 1.13 parts per hour, using two spray guns, and a dip tank, using no control and exhausting outdoors through one (1) stack, identified as SB1.

(e) One (1) polyurea foam operation, identified as PF1, constructed in 2014, with a maximum capacity of 1.644 parts per hour, using one spray gun for polyurea and one for foam, using no control and exhausting outdoors through one (1) stack, identified as PF1.

(f) Unpaved roads and parking lots with public access.
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, M039-43886-00612, 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) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

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

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

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

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

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

The Permittee shall implement the PMPs.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.
B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M039-43886-00612 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.,

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-8590 (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(c).

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

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
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, startups or shutdowns of any emission unit or emission control equipment, that results in violations of applicable air pollution control regulations or applicable emission limitations must be kept and retained for a period of three (3) years and 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 emission unit or emission control equipment occurs that lasts more than one (1) hour, the condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification must be made by telephone or other electronic means, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of the occurrence.

(c) Failure to report a malfunction of any emission unit or emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information on the scope and expected duration of the malfunction must be provided, including the items specified in 326 IAC 1-6-2(c)(3)(A) through (E).

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

Emissions Unit Description:

(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:

<table>
<thead>
<tr>
<th>Emission Unit ID</th>
<th>Process Weight Rate (tons/hr)</th>
<th>Allowable Particulate Emissions (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crucible Furnaces (F1 &amp; F2)</td>
<td>0.108</td>
<td>0.92</td>
</tr>
<tr>
<td>Sand Mold Making (S)</td>
<td>0.608 (sand and metal)</td>
<td>2.94</td>
</tr>
<tr>
<td>Machining Operations (G)</td>
<td>0.108</td>
<td>0.92</td>
</tr>
<tr>
<td>Machining Operations (W1)</td>
<td>0.108</td>
<td>0.92</td>
</tr>
</tbody>
</table>

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:

\[ E = 4.10 P^{0.67} \]

where \( E \) = rate of emission in pounds per hour; and \( P \) = 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 Permitee 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), 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 these facilities 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 [326 IAC 2-6.1-5(a)(2)]

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

D.1.8 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 the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 1.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C- Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps, shall be considered a deviation from this permit.

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

D.1.9 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 collectors 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.1.10  Record Keeping Requirements

(a) To document the compliance status with Condition D.1.5, 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.1.8, 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).

(c) 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, constructed in 2014, including one (1) table saw, and two (2) belt sanders, with a maximum wood throughput of 11.6 pounds per hour, with an integral dust collector for particulate control, exhausting inside the building

(d) One (1) spray booth/hydrographic operation, identified as SB1, constructed in 2014, 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, constructed in 2014, 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 [326 IAC 2-6.1-5(a)(1)]**

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 these facilities 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 [326 IAC 2-6.1-5(a)(2)]

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

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 baghouse 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 C - Response to Excursions or Exceedances).

Bag failure can be indicated by a significant drop in the baghouse'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)]**

<table>
<thead>
<tr>
<th>D.2.6 Record Keeping Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) To document the compliance status with Condition D.2.1(c), the Permittee shall maintain a record of any actions taken if overspray is visibly detected.</td>
</tr>
<tr>
<td>(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.</td>
</tr>
<tr>
<td>(c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.</td>
</tr>
</tbody>
</table>
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).

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>Independent Protection Company, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Address:</td>
<td>1607 South Main Street (Plant 1) and 118 Lafayette Street (Plant 2)</td>
</tr>
<tr>
<td>City:</td>
<td>Goshen, Indiana  46526</td>
</tr>
<tr>
<td>Phone #:</td>
<td>(574) 831-4340</td>
</tr>
<tr>
<td>MSOP #:</td>
<td>M039-43886-00612</td>
</tr>
</tbody>
</table>

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

I hereby certify that Independent Protection Company, Inc. is:  
☐ in compliance with the requirements of MSOP M039-43886-00612.  
☐ not in compliance with the requirements of MSOP M039-43886-00612.

| 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: | |
| | |
| | |
| | |
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 hydrofluoric acid? , 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? .

This malfunction is or will be longer than the one (1) hour reporting requirement? .

Company: __________________________________________________________ Phone No. ( )

Location: (City and County) ____________________________________________

Permit No. ____________________ AFS Plant ID: ____________________ AFS Point ID: ____________________ Inspect: __________

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:

________________________________________________________________________

________________________________________________________________________
On March 16, 2021, Independent Protection Company, Inc. submitted an application to the Office of Air Quality (OAQ) requesting to renew its operating permit. OAQ has reviewed the operating permit renewal application from Independent Protection Company, Inc. relating to the operation of 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 (Plant 2). Independent Protection Company, Inc. was issued its first MSOP Renewal (M 039-30245-00612) on July 19, 2011.

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 initially made under MSOP No. M039-20230-00612, issued on June 22, 2006.

The source was issued MSOP Renewal No. M039-30245-00612 on July 19, 2011. The source has since received the following approval:

MSOP Minor Permit Revision No. M039-34706-00612 on November 24, 2014.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.
Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

Plant 1

(a) Two (2) natural gas-fired crucible furnaces, identified as F1 and F2, constructed prior to 1974, with a maximum capacity of 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), as control, and exhausting to 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 capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, using one (1) dust collection system, identified as GS (described below), as control, and exhausting to 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 capacity 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, using no control, and exhausting to 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 capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, with two grinders, using a dust collector, identified as DC-1 as control, 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 using a dust collector, identified as DC-2 as control, containing one two-stage cartridge filter, exhausting indoors.

(3) One (1) Wheelabrator shot blaster, identified as W1, constructed in 2003, with a maximum capacity of 216 pounds per hour of bronze, 76 pounds per hour of aluminum, or 216 pounds per hour of copper, using a filter that consists of a two stage filter with a single bag and cartridge in series as control, exhausting indoors.

(e) One (1) natural gas-fired plant boiler, identified as B1, constructed prior to 1974, with a maximum capacity of 0.13 MMBtu per hour, using no control, and 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 capacity of 0.1096 MMBtu per hour, using no control and 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, using no control and 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 capacity 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, constructed in 2014, including one (1) table saw, and two (2) belt sanders, with a maximum wood throughput of 11.6 pounds per hour, with an integral 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 with a maximum capacity of 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, using no control, and 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 constructed in 2011, with a maximum consumption of 0.288 pounds of rod or wire per station per hour, using no control.

(d) One (1) spray booth/hydrographic operation, identified as SB1, constructed in 2014, with a maximum capacity of 1.13 parts per hour, using two spray guns, and a dip tank, using no control and exhausting outdoors through one (1) stack, identified as SB1.

(e) One (1) polyurea foam operation, identified as PF1, constructed in 2014, with a maximum capacity of 1.644 parts per hour, using one spray gun for polyurea and one for foam, using no control and exhausting outdoors through one (1) stack, identified as PF1.

(f) Unpaved roads and parking lots with public access.

---

**Emission Units and Pollution Control Equipment Removed From the Source**

The source has removed the following emission units:

(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.
“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, the potential to emit particulate matter from the woodworking operations was calculated after control for purposes of determining permitting level and applicability of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

County Attainment Status

The source is located in Elkhart County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td>Better than national standards.</td>
</tr>
<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
</tr>
<tr>
<td>O₃</td>
<td>Unclassifiable or attainment effective August 3, 2018, for the 2015 8-hour ozone standard.</td>
</tr>
<tr>
<td>PM₂₅</td>
<td>Unclassifiable or attainment effective April 15, 2015, for the 2012 annual PM₂₅ standard.</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td>NO₂</td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO₂ standard.</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

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

(b) PM₂₅
Elkhart County has been classified as attainment for PM₂₅. Therefore, direct PM₂₅, SO₂, and NOₓ 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 the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
Fugitive Emissions

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

The fugitive emissions of regulated air pollutants and hazardous air pollutants (HAP) are counted toward the determination of MSOP (326 IAC 2-6.1) applicability and source status under Section 112 of the Clean Air Act (CAA).

Greenhouse Gas (GHG) Emissions

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.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

<table>
<thead>
<tr>
<th>Unrestricted Potential Emissions (ton/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>------------------------------------------------</td>
</tr>
<tr>
<td><strong>Total PTE of Entire Source Including Fugitives</strong></td>
</tr>
<tr>
<td><strong>Title V Major Source Thresholds</strong></td>
</tr>
<tr>
<td><strong>MSOP Thresholds</strong></td>
</tr>
</tbody>
</table>

<sup>1</sup>Under the Part 70 Permit program (40 CFR 70), PM<sub>10</sub> and PM<sub>2.5</sub>, not particulate matter (PM), are each considered as a "regulated air pollutant."

<sup>2</sup>PM<sub>2.5</sub> listed is direct PM<sub>2.5</sub>. 

<sup>3</sup>Single highest source-wide HAP.

*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of all regulated air pollutants is less than 100 tons per year. However, PM is equal to or greater than twenty-five (25) tons per year. The source is not subject to the provisions of 326 IAC 2-7. The source will be issued an MSOP Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under
Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7. The source will be issued an MSOP Renewal.

Potential to Emit After Issuance

The table below summarizes the uncontrolled/unlimited potential to emit of the entire source. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<table>
<thead>
<tr>
<th>Potential To Emit of the Entire Source After Issuance of Renewal (tons/year) (Uncontrolled/Unlimited)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM^1</td>
</tr>
<tr>
<td>Total PTE of Entire Source Including Fugitives*</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
</tr>
</tbody>
</table>

^1 Under the Part 70 Permit program (40 CFR 70), PM_{10} and PM_{2.5}, not particulate matter (PM), are each considered as a "regulated air pollutant."

^2 PM_{2.5} listed is direct PM_{2.5}.

^3 Single highest source-wide HAP

*Fugitive HAP emissions are always included in the source-wide emissions.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of one hundred (100) tons per year or more and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are 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. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability

Federal rule applicability for this source has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) The requirements of the New Source Performance Standard for Polymeric Coating of Supporting Substrates Facilities, 40 CFR 60, Subpart VVV and 326 IAC 12, are not included in the permit for the surface coating operations do not perform polymeric coating of supporting substrates, because 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 in the permit.
National Emission Standards for Hazardous Air Pollutants (NESHAP):

(a) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Flexible Polyurethane Foam Production, 40 CFR 63, Subpart III and 326 IAC 20-22 are not included in the permit for this source, since the operation is not a major source of HAPs.

(b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Automobiles and Light-Duty Trucks, 40 CFR 63, Subpart III and 326 IAC 20-85 are not included in the permit for this source, since it is not located at a major source, and is not part of a major source of emissions of HAP.

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

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Products, 40 CFR 63, Subpart PPPPP and 326 IAC 20-81 are not included in the permit for this source, since they 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.

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

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Flexible Polyurethane Foam Fabrication Operations, 40 CFR 63, Subpart MMMMMM and 326 20-66 are not included in the permit for this source, since it 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).

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources), 40 CFR 63, Subpart HHHHHHH is not included in the permit for this source, since it 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.

(h) 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 OOOOO is not included in the permit for this source, since it 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 in 40 CFR 63.11419. This source performs the spray application of polyurethane foam to metal parts and products.

(i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Secondary Aluminum Production 40 CFR 63, Subpart RRR and 326 IAC 20-70 are not included in the permit for the crucible furnaces F1 and F2, since they only melt clean charge, customer returns, or internal scrap.

(j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Source Standards for Aluminum, Copper and Other Nonferrous Foundries, 40 CFR 63, Subpart ZZZZZZZZ is not included in the permit for this source, since the source does not have an
annual melt production of at least 600 tons per year of aluminum, copper and other nonferrous metals, including all associated alloys.

(k) There are no National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included in the permit.

Compliance Assurance Monitoring (CAM):

(a) 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.

<table>
<thead>
<tr>
<th>State Rule Applicability - Entire Source</th>
</tr>
</thead>
</table>

State rule applicability for this source has been reviewed as follows:

326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Potential to Emit After Issuance section of this document.

326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)
PSD and Emission Offset applicability is discussed under the Potential to Emit After Issuance section of this document.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The provisions of 326 IAC 2-4.1 apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997, unless the major source has been specifically regulated under or exempted from regulation under a NESHAP that was issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act (CAA) and incorporated under 40 CFR 63. On and after June 29, 1998, 326 IAC 2-4.1 is intended to implement the requirements of Section 112(g)(2)(B) of the Clean Air Act (CAA).

The operation of this source will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, Clark, or Floyd County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1)

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.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source is not subject to the requirements of 326 IAC 6-5, because the source has potential fugitive particulate emissions of less than twenty-five (25) tons per year.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a), this source (located in Elkhart County) is not subject to the requirements of 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.
326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-1(a), this source (located in Elkhart County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.

326 IAC 6.8 (Lake County: Fugitive Particulate Matter)
Pursuant to 326 IAC 6.8-10-1, this source (located in Elkhart County) is not subject to the requirements of 326 IAC 6.8-10 because it is not located in Lake County.

326 IAC 20 (Hazardous Air Pollutants)
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.

**State Rule Applicability – Individual Facilities**

State rule applicability has been reviewed as follows:

*Crucible Furnaces (F1 & F2), Sand Mold Making (S) (includes sand handling and shakeout), Machining Operations (G), and Machining Operations (W1)*

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

\[ E = 4.10 P^{0.67} \]

where

- \( E \) = rate of emission in pounds per hour and
- \( P \) = process weight rate in tons per hour

**Summary of Process Weight Rate Limits**

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>( P ) (ton/hr)</th>
<th>( E ) (lb/hr)</th>
<th>Equation Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crucible Furnaces (F1 &amp; F2)</td>
<td>0.108</td>
<td>0.92</td>
<td>( E = 4.10 P^{0.67} )</td>
</tr>
<tr>
<td>Sand Mold Making (S) (includes sand handling and shakeout)</td>
<td>0.608 (sand and metal)</td>
<td>2.94</td>
<td>( E = 4.10 P^{0.67} )</td>
</tr>
<tr>
<td>Machining Operations (G)</td>
<td>0.108</td>
<td>0.92</td>
<td>( E = 4.10 P^{0.67} )</td>
</tr>
<tr>
<td>Machining Operations (W1)</td>
<td>0.108</td>
<td>0.92</td>
<td>( E = 4.10 P^{0.67} )</td>
</tr>
</tbody>
</table>

The dust collection system, GS, dust collector, DC-1, and a two-stage filter with a single bag and cartridge in series shall be in operation at all times the Crucible Furnaces (F1 & F2), Machining Operations (G), and Machining Operations (W1), respectively are in operation, in order to comply with this limit.

Based on calculations, the control equipment for the Sand Mold Making (S) (includes sand handling and shakeout) is not needed to comply with this limit.

**Crucible Furnaces (F1 & F2)**

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
This emission unit is not subject to 326 IAC 326 IAC 7-1.1 because it has a potential to emit (or limited potential to emit) sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The Crucible Furnaces (F1 & F2) are not subject to the requirements of 326 IAC 8-1-6 because it was constructed before January 1, 1980.
The requirements of 326 IAC 9-1 do not apply to the Crucible Furnaces (F1 & F2), because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

The requirements of 326 IAC 10-3 do not apply to the Crucible Furnaces (F1 & F2), since this unit is not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

Pouring/Casting (C)

Pursuant to 326 IAC 6-3-1(b)(14), the Pouring/Casting (C) is not subject to the requirements of 326 IAC 6-3, since it is a manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Sulfur Dioxide Emission Limitations

This emission unit is not subject to 326 IAC 326 IAC 7-1.1 because it has a potential to emit (or limited potential to emit) sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour.

VOC Rules: General Reduction Requirements for New Facilities

The Pouring/Casting (C) is not subject to the requirements of 326 IAC 8-1-6 because it was constructed before January 1, 1980.

Carbon Monoxide Emission Limits

The requirements of 326 IAC 9-1 do not apply to the Pouring/Casting (C), because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

Nitrogen Oxide Reduction Program for Specific Source Categories

The requirements of 326 IAC 10-3 do not apply to the Pouring/Casting (C), since this unit is not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

Shakeout

Pursuant to 326 IAC 6-3-1(b)(14), the Shakeout is not subject to the requirements of 326 IAC 6-3, since it is a manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

VOC Rules: General Reduction Requirements for New Facilities

The Shakeout is not subject to the requirements of 326 IAC 8-1-6 because it was constructed before January 1, 1980.

Natural Gas Combustion Units (B1,B2, & H1-H15)

Pursuant to 326 IAC 6-2-1, the natural gas combustion units (H1-H15) are not subject to the provision of 326 IAC 6-2-4, since the natural gas combustion units (H1-H15) are directly heated.

Pursuant to 326 IAC 6-2-1(c), for indirect heating facilities existing and in operation, or received permit to construct, prior to September 21, 1983 and not located in Lake, Porter, Marion, Boone, Hamilton, Hendricks, Johnson, Morgan, Shelby, or Hancock Counties are subject to the requirements of 326 IAC 6-2-3.

The particulate matter emissions (Pt) shall be limited by the following equation:
\[ P_t = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}} \]

Where:

- \( P_t \) = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).
- \( Q \) = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility’s permit application, except when some lower capacity is contained in the facility’s operation permit; in which case, the capacity specified in the operation permit shall be used.
- \( C \) = Maximum ground level concentration with respect to distance from the point source at the “critical” wind speed for level terrain. This shall equal fifty (50) micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.
- \( a \) = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value sixty-seven tenths (0.67) shall be used for \( Q \) less than or equal to one thousand (1,000) million British thermal units per hour heat input.
- \( N \) = Number of stacks in fuel burning operation.
- \( h \) = Stack height in feet. If a number of stacks of different heights exist, the average stack height to represent stacks shall be calculated by weighing each stack height with its particulate matter emission rate as follows:

\[ h = \frac{\sum_{i=1}^{N} H_i \times p_{ai} \times Q}{\sum_{i=1}^{N} p_{ai} \times Q} \]

Where:

- \( H_i \) = height of facility i stack, ft.
- \( p_{ai} \) = actual controlled emission rate of facility i, (lb/MMBtu), using an emission factor from AP-42 or stack test data. Stacks constructed after January 1, 1971, shall be credited with GEP stack height only. GEP stack height shall be calculated as specified in 326 IAC 1-7.
- \( Q \) = Heat input capacity of facility i, MMBtu/hr

<table>
<thead>
<tr>
<th>Facility Ct.</th>
<th>Construction</th>
<th>Operating</th>
<th>Q</th>
<th>Calculated Pt</th>
<th>Particulate Limitation, Pt (lb/MMBtu)</th>
<th>PM PTE based on AP-42 (lb/MMBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas-fired plant boiler (B1)</td>
<td>1974</td>
<td>0.13</td>
<td>0.26</td>
<td>15.36</td>
<td>0.6</td>
<td>0.002</td>
</tr>
<tr>
<td>Natural gas-fired plant boiler (B2)</td>
<td>1974</td>
<td>0.13</td>
<td>0.26</td>
<td>15.36</td>
<td>0.6</td>
<td>0.002</td>
</tr>
</tbody>
</table>
Indirect Heating Units Which Began Operation After June 8, 1972 and Before September 21, 1983

<table>
<thead>
<tr>
<th>Facility</th>
<th>Construction Date (Removal Date)</th>
<th>Operating Capacity (MMBtu/hr)</th>
<th>Q (MMBtu/hr)</th>
<th>Calculated Pt (lb/MMBtu)</th>
<th>Particulate Limitation, Pt (lb/MMBtu)</th>
<th>PM PTE based on AP-42 (lb/MMBtu)</th>
</tr>
</thead>
</table>

The calculated values for Pt are based on the permit renewal, M039-30245-00612.

Where: 

\[ Q = \text{Sum of the maximum operating capacity rating (MMBtu/hr) of the new unit(s) and all units located at the source on the date the new unit(s) was constructed.} \]

Note: Emission units shown in strikethrough were subsequently removed from the source. The effect of removing these units on "Q" is shown in the year the boiler was removed.

Spray Booth (SB1) and Polyurea/Foam Operations (PF1)

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(a), the requirements of 326 IAC 6-3-2 are applicable to the Spray Booth (SB1) and Polyurea/Foam Operations (PF1), since it is a manufacturing process not exempted from this rule under 326 IAC 6-3-1(b) and is not subject to a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule as specified in 326 IAC 6-3-1(c).

(a) Particulate from the Spray Booth (SB1) and Polyurea/Foam Operations (PF1) shall be controlled by a dry particulate filter 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.

Woodworking (WW1)

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(b)(14), the Woodworking (WW1) is not subject to 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 WW1 must operate integral controls to render the requirements of 326 IAC 6-3-2 inapplicable.

MIG Welding (W1 & W2)

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(b)(14), the MIG Welding (W1 & W2) are not subject to the requirements of 326 IAC 6-3, since they have has potential particulate emissions of less than 0.551 pound per hour.
326 IAC 8-3-2 (Cold Cleaner Operations)
Pursuant to 326 IAC 8-3-1(a)(1), the safety-kleen cold cleaner degreasing operation is subject to the requirements of 326 IAC 8-3-2, since it is located in Elkhart County, performs organic solvent degreasing, and does not have a remote solvent reservoir.

Pursuant to 326 IAC 8-3-2(a) (Cold Cleaner Degreaser Control Equipment and Operating Requirements), for the safety-kleen cold cleaner degreasing operation, the Permittee shall:

(1) Equip the degreaser with a cover;
(2) Equip the degreaser with a facility 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 operation requirements in subdivisions (3), (4), (6), and (7);
(6) Store waste solvent only in closed containers; and
(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) can evaporate into the atmosphere.

Pursuant to 326 IAC 8-3-2(b), for the safety-kleen cold cleaner degreasing operation, the Permittee shall 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.

326 IAC 8-3-8 (VOC Rules: Material Requirements for Cold Cleaner)
Pursuant to 326 IAC 8-3-1(c)(3), the requirements of 326 8-3-8 are applicable to Safety-Kleen Cold Degreaser because the unit is a cold cleaner degreaser with a VOC content greater than 1% by weight.

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), no person shall 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).
Compliance Determination and Monitoring Requirements

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source’s failure to take the appropriate corrective actions within a specific time period.

(a) The Compliance Monitoring Requirements applicable to this source are as follows:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Type of Parametric Monitoring</th>
<th>Frequency</th>
<th>Range or Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Crucible Furnaces (F1 &amp; F2)</td>
<td>Pressure Drop</td>
<td>Daily</td>
<td>1.0 - 6.0</td>
</tr>
<tr>
<td>Woodworking in the Mill Room (WW1) and the Cabinet Shop (WW2)</td>
<td>Baghouse Inspections</td>
<td>Quarterly</td>
<td>Verify that it is operated and maintained per manufacturer's specifications</td>
</tr>
</tbody>
</table>

These monitoring conditions are necessary because the GS Bag Dust Collector, Dust Collectors, and the Dry Filters for the F1 & F2, WW1 and WW2 must operate properly to assure compliance with 326 IAC 6-3-2.

There are no testing requirements applicable to this source.

Proposed Changes

As part of this permit approval, the permit may contain new or different permit conditions and some conditions from previously issued permits/approvals may have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes.

The following changes were made to conditions contained previously issued permits/approvals (these changes may include Title I changes):

1. Omission of some verbiage in A.2 (d)(1)&(d)2
2. Renewal of enclosed MSOP permit

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 March, 16, 2021.

The construction of this proposed revision shall be subject to the conditions of the attached proposed MSOP Renewal No. 039-43886-00612.

The staff recommends to the Commissioner that the MSOP Renewal be approved.
(a) If you have any questions regarding this permit, please contact Andrea C. Smith, 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) 234-6543 or (800) 451-6027, and ask for Andrea C. Smith or (317) 234-6543.

(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 Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/2358.htm; and the Citizens’ Guide to IDEM on the Internet at: https://www.in.gov/idem/6900.htm.
### Emission Calculations

#### Units PM PM10 PM2.5 PM SO2 NOx VOC CO Total HAPs Single Hap

**Potential Emissions before Integral controls (tons/year)**

<table>
<thead>
<tr>
<th>Units</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Single Hap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crucible Furnaces (F1 &amp; F2)</td>
<td>9.94</td>
<td>5.91</td>
<td>5.91</td>
<td>0.24</td>
<td>0.56</td>
<td>0.03</td>
<td>0.47</td>
<td>0.51</td>
<td>0.50</td>
</tr>
<tr>
<td>Melt Sand Handling (S)</td>
<td>1.78</td>
<td>1.18</td>
<td>1.18</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.30</td>
<td>(lead)</td>
</tr>
<tr>
<td>Shaking</td>
<td>1.51</td>
<td>1.06</td>
<td>1.06</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>(lead)</td>
</tr>
<tr>
<td>Maching Operations (G &amp; W-1)</td>
<td>1.61</td>
<td>0.16</td>
<td>0.16</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.08</td>
<td>(lead)</td>
</tr>
<tr>
<td>Lead Coating Line (L)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>(lead)</td>
</tr>
<tr>
<td>Natural Gas Combustion Units (B1,B2, &amp; H1-H15)</td>
<td>0.01</td>
<td>0.03</td>
<td>0.03</td>
<td>2.40E-03</td>
<td>0.40</td>
<td>0.02</td>
<td>0.34</td>
<td>0.01</td>
<td>(lead)</td>
</tr>
<tr>
<td>Spray Booth (SB1)</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.00</td>
<td>0.00</td>
<td>12.67</td>
<td>0.00</td>
<td>10.75</td>
<td>(diethylene glycol monobutyl ether acetate)</td>
</tr>
<tr>
<td>Blowcoating (WW1)</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>0.00</td>
<td>0.00</td>
<td>12.01</td>
<td>0.00</td>
<td>3.57</td>
<td>(Diphenylmethane Diisocyanate)</td>
</tr>
<tr>
<td>Unpaved Roads</td>
<td>0.04</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>74.65</td>
<td>27.82</td>
<td>27.80</td>
<td>0.26</td>
<td>0.96</td>
<td>25.37</td>
<td>3.64</td>
<td>15.73</td>
<td>(diethylene glycol monobutyl ether acetate)</td>
</tr>
</tbody>
</table>

**Potential to Emit after Issuance (tons/year)**

| Units                              | PM  | PM10 | PM2.5 | PM SO2 NOx VOC CO  Total HAPs | Single Hap |
|------------------------------------|-----|------|-------|-----|-----|-----|-----|------------|------------|
| Crucible Furnaces (F1 & F2)        | 9.94| 5.91 | 5.91  | 0.24| 0.56| 0.03| 0.47| 0.51       | 0.50       |
| Melt Sand Handling (S)             | 1.78| 1.18 | 1.18  | 0.00| 0.00| 0.00| 0.00| 0.30       | (lead)     |
| Shaking                            | 1.51| 1.06 | 1.06  | 0.00| 0.00| 0.00| 0.00| 0.00       | (lead)     |
| Maching Operations (G & W-1)       | 1.61| 0.16 | 0.16  | 0.00| 0.00| 0.00| 0.00| 0.08       | (lead)     |
| Lead Coating Line (L)              | 0.00| 0.00 | 0.00  | 0.00| 0.00| 0.00| 0.00| 0.00       | (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       | (lead)     |
| Spray Booth (SB1)                  | 0.17| 0.17 | 0.17  | 0.00| 0.00| 12.67| 0.00| 10.75       | (diethylene glycol monobutyl ether acetate) |
| Blowcoating (WW1)                  | 0.08| 0.08 | 0.08  | 0.00| 0.00| 12.01| 0.00| 3.57        | (Diphenylmethane Diisocyanate) |
| Spray Booth (SB1)                  | 0.04| 0.01 | 0.00  | 0.00| 0.00| 0.00| 0.00| 0.00       |            |
| Total                              | 74.28| 27.82| 27.80 | 0.25| 0.96| 25.37| 3.64| 15.73       | (diethylene glycol monobutyl ether acetate) |

### Potential Emissions Summary

- **Company Name:** Independent Protection Company, Inc.
- **Address:** 1607 South Main Street, Goshen, Indiana 46526
- **MSOP Renewal No.:** 033-43886-00612
- **Reviewer:** Andrea C. Smith

The table above summarizes the potential emissions before and after the issuance of integral controls. The emissions are categorized by various operations such as Crucible Furnaces, Melt Sand Handling, Shaking, Maching Operations, Lead Coating Line, Natural Gas Combustion Units, etc. Each category lists the potential emissions in tons/year for PM, PM10, PM2.5, SO2, NOx, VOC, CO, and the total HAPs. The table also includes single hap emissions for lead, diethylene glycol monobutyl ether acetate, and Diphenylmethane Diisocyanate.
# Appendix A: Emission Calculations

## Units F1 & F2

**Company Name:** Independent Protection Company, Inc.  
**Address:** 1657 South Main Street, Goshen, Indiana 46526  
118 Lafayette Street, Goshen, Indiana 46528  
**MSOP Renewal No.:** 039-43386-00512  
**Reviewer:** Andrea C. Smith

### Crucible Furnaces Process Emissions

<table>
<thead>
<tr>
<th>Maximum Throughput</th>
<th>LBS/HR</th>
<th>TON/HR</th>
<th>Control Device: Dust Collector</th>
<th>Dual Collector</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE OF MATERIAL</td>
<td></td>
<td></td>
<td>Control Efficiency: 98.99%</td>
<td></td>
</tr>
<tr>
<td>Aluminum, Bronze or Copper</td>
<td>216</td>
<td>0.108</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### PM

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMCF)</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>1.9</td>
<td>0.01</td>
</tr>
<tr>
<td>PM10</td>
<td>1.9</td>
<td>0.04</td>
</tr>
<tr>
<td>SO2</td>
<td>1.9</td>
<td>0.04</td>
</tr>
<tr>
<td>NOx</td>
<td>1.9</td>
<td>3.35E-03</td>
</tr>
<tr>
<td>VOC</td>
<td>1.9</td>
<td>0.56</td>
</tr>
<tr>
<td>CO</td>
<td>1.9</td>
<td>0.03</td>
</tr>
<tr>
<td>Lead</td>
<td>1.9</td>
<td>0.47</td>
</tr>
</tbody>
</table>

**Note:** 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 Burner/Fuel gas recirculation = 32

### Crucible Furnaces Natural Gas Combustion Emissions

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>mmBtu/hr</th>
<th>Potential Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11.16</td>
</tr>
</tbody>
</table>

#### Pollutant

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMCF)</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>1.9</td>
<td>0.01</td>
</tr>
<tr>
<td>PM10*</td>
<td>1.9</td>
<td>0.04</td>
</tr>
<tr>
<td>SO2*</td>
<td>1.9</td>
<td>0.04</td>
</tr>
<tr>
<td>NOx</td>
<td>1.9</td>
<td>3.35E-03</td>
</tr>
<tr>
<td>VOC</td>
<td>1.9</td>
<td>0.56</td>
</tr>
<tr>
<td>CO</td>
<td>1.9</td>
<td>0.03</td>
</tr>
<tr>
<td>Lead</td>
<td>1.9</td>
<td>0.47</td>
</tr>
</tbody>
</table>

**Note:** 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 Burner/Fuel gas recirculation = 32

### HAPs Calculations

#### HAPs - Organics

<table>
<thead>
<tr>
<th>Emission Factor (lb/MMCF)</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
<td>1.2E-03</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.5E-02</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
</tr>
<tr>
<td>Total Emission in tons/yr</td>
<td>1.05E-02</td>
</tr>
</tbody>
</table>

#### HAPs - Metals

<table>
<thead>
<tr>
<th>Emission Factor (lb/MMCF)</th>
<th>Total - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>5.6E-04</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.1E-03</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
</tr>
<tr>
<td>Manganese</td>
<td>3.8E-04</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Total Emission in tons/yr</td>
<td>3.05E-05</td>
</tr>
</tbody>
</table>

**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, 1-01-066-02, 1-03-066-02, and 1-03-066-03  
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  

**Worst HAP:** 0.01

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: 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 Renewal No.:** 039-43886-00612  
**Reviewer:** Andrea C. Smith

<table>
<thead>
<tr>
<th>TYPE OF MATERIAL</th>
<th>PM TON/HR</th>
<th>PM10 TON/HR</th>
<th>SOx TON/HR</th>
<th>NOx TON/HR</th>
<th>VOC TON/HR</th>
<th>CO TON/HR</th>
<th>Lead TON/HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum, Bronze or Copper</td>
<td>216</td>
<td>0.108</td>
<td>4.2</td>
<td>0.02</td>
<td>0.14</td>
<td>6.00</td>
<td>0.21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>lbs/ton metal charged</th>
<th>lbs/ton metal charged</th>
<th>lbs/ton metal charged</th>
<th>lbs/ton metal charged</th>
<th>lbs/ton metal charged</th>
<th>lbs/ton metal charged</th>
<th>lbs/ton metal charged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Uncontrolled Emissions lbs/hr</td>
<td>0.45</td>
<td>0.22</td>
<td>0.002</td>
<td>0.0011</td>
<td>0.02</td>
<td>0.6</td>
<td>0.02</td>
</tr>
<tr>
<td>Potential Uncontrolled Emissions tons/year</td>
<td>1.93</td>
<td>0.97</td>
<td>0.0095</td>
<td>0.0047</td>
<td>0.07</td>
<td>2.84</td>
<td>0.10</td>
</tr>
<tr>
<td>Potential Controlled Emissions lbs/hr</td>
<td>0.05</td>
<td>0.02</td>
<td>0.0022</td>
<td>0.0011</td>
<td>0.02</td>
<td>0.6</td>
<td>0.02</td>
</tr>
<tr>
<td>Potential Controlled Emissions tons/year</td>
<td>0.20</td>
<td>0.10</td>
<td>0.0095</td>
<td>0.0047</td>
<td>0.07</td>
<td>2.84</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**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 (9%).

**Methodology**  
Potential Uncontrolled Emissions kg/hr = Maximum Throughput t/hr x Emission Factor kg/t  
Potential Uncontrolled Emissions kg/yr = (Potential Uncontrolled Emissions kg/hr x 8760 h/yr) / (2,000 lb/ton)  
Potential Controlled Emissions kg/hr = Maximum Throughput t/hr x Emission Factor kg/t x (1 - Control Efficiency %)  
Potential Controlled Emissions kg/yr = Potential Controlled Emissions kg/hr x 8760 h/yr / 2,000 lb/ton
## Appendix A: Emission Calculations

### Unit S

**Company Name:** Independent Protection Company, Inc.

**Address:** 1607 South Main Street, Goshen, Indiana 46526

**MSOP Renewal No.:** 039-43886-00612

**Reviewer:** Andrea C. Smith

---

**Mold Sand Handling**

<table>
<thead>
<tr>
<th>TYPE OF MATERIAL</th>
<th>Maximum Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LBS/HR TON/HR</td>
</tr>
<tr>
<td>Sand</td>
<td>1000 0.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PM</th>
<th>PM10</th>
<th>SOx</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs/ton sand</td>
<td>lbs/ton sand</td>
<td>lbs/ton sand</td>
<td>lbs/ton sand</td>
<td>lbs/ton sand</td>
<td>lbs/ton sand</td>
</tr>
<tr>
<td>3.6</td>
<td>0.54</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Potential Uncontrolled Emissions lbs/hr**

- PM: 1.90 lbs/ton sand
- PM10: 0.27 lbs/ton sand
- SOx: 0.00 lbs/ton sand
- NOx: 0.00 lbs/ton sand
- VOC: 0.00 lbs/ton sand
- CO: 0.00 lbs/ton sand

**Potential Uncontrolled Emissions tons/year**

- PM: 7.88 lbs/ton sand
- PM10: 1.18 lbs/ton sand
- SOx: 0.00 lbs/ton sand
- NOx: 0.00 lbs/ton sand
- VOC: 0.00 lbs/ton sand
- CO: 0.00 lbs/ton sand

**Potential Controlled Emissions lbs/hr**

- PM: 1.90 lbs/ton sand
- PM10: 0.27 lbs/ton sand
- SOx: 0.00 lbs/ton sand
- NOx: 0.00 lbs/ton sand
- VOC: 0.00 lbs/ton sand
- CO: 0.00 lbs/ton sand

**Potential Controlled Emissions tons/year**

- PM: 7.88 lbs/ton sand
- PM10: 1.18 lbs/ton sand
- SOx: 0.00 lbs/ton sand
- NOx: 0.00 lbs/ton sand
- VOC: 0.00 lbs/ton sand
- CO: 0.00 lbs/ton sand

**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**

<table>
<thead>
<tr>
<th>TYPE OF MATERIAL</th>
<th>Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LBS/HR TON/HR</td>
</tr>
<tr>
<td>Metal</td>
<td>216 0.108</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PM</th>
<th>PM10</th>
<th>SOx</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs/ton metal</td>
<td>lbs/ton metal</td>
<td>lbs/ton metal</td>
<td>lbs/ton metal</td>
<td>lbs/ton metal</td>
<td>lbs/ton metal</td>
</tr>
<tr>
<td>3.2</td>
<td>2.24</td>
<td>0.00</td>
<td>0.00</td>
<td>1.20</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Potential Uncontrolled Emissions lbs/hr**

- PM: 0.35 lbs/ton metal
- PM10: 0.24 lbs/ton metal
- SOx: 0.00 lbs/ton metal
- NOx: 0.00 lbs/ton metal
- VOC: 1.20 lbs/ton metal
- CO: 0.00 lbs/ton metal

**Potential Uncontrolled Emissions tons/year**

- PM: 1.51 lbs/ton metal
- PM10: 1.06 lbs/ton metal
- SOx: 0.00 lbs/ton metal
- NOx: 0.00 lbs/ton metal
- VOC: 5.71 lbs/ton metal
- CO: 0.00 lbs/ton metal

**Potential Controlled Emissions lbs/hr**

- PM: 0.35 lbs/ton metal
- PM10: 0.24 lbs/ton metal
- SOx: 0.00 lbs/ton metal
- NOx: 0.00 lbs/ton metal
- VOC: 1.20 lbs/ton metal
- CO: 0.00 lbs/ton metal

**Potential Controlled Emissions tons/year**

- PM: 1.51 lbs/ton metal
- PM10: 1.06 lbs/ton metal
- SOx: 0.00 lbs/ton metal
- NOx: 0.00 lbs/ton metal
- VOC: 5.71 lbs/ton metal
- CO: 0.00 lbs/ton metal

**Note:** Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.24 for similar operation at gray iron foundry (SCC# 3-04-003-21).

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 lbr/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 (lbr/yr) / 2,000 (lbs/ton)
<table>
<thead>
<tr>
<th>Material</th>
<th>PM</th>
<th>PM10/PM2.5</th>
<th>SOX</th>
<th>NOX</th>
<th>VOC</th>
<th>CO</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal</td>
<td>17</td>
<td>1.7</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.85</td>
</tr>
</tbody>
</table>

Potential Uncontrolled Emissions lbs/hr: 1.84
Potential Uncontrolled Emissions lbs/ton: 0.18
Potential Uncontrolled Emissions tons/yr: 8.04

Potential Controlled Emissions lbs/hr: 0.18
Potential Controlled Emissions lbs/ton: 0.02
Potential Controlled Emissions tons/yr: 0.80

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 lbs/ton = (Potential Uncontrolled Emissions lbs/hr x 2000 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) / 2000 (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 Renewal No.:** 039-43886-00612

**Reviewer:** Andrea C. Smith

#### Lead Coating Line

<table>
<thead>
<tr>
<th>Maximum Throughput</th>
<th>LBS/HR</th>
<th>TON/HR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LBS/HR</strong></td>
<td>0.721</td>
<td></td>
</tr>
<tr>
<td><strong>TON/HR</strong></td>
<td>3.5E-04</td>
<td></td>
</tr>
</tbody>
</table>

**TYPE OF MATERIAL**

<table>
<thead>
<tr>
<th>Metal</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lead</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Lead</strong></th>
<th>PM/PM10</th>
<th>SOx</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs/ton metal processed</td>
<td>1.5</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>lbs/ton metal charged</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>lbs/ton metal charged</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

| Potential Uncontrolled Emissions lbs/hr | 5.4E-04 |
| Potential Uncontrolled Emissions tons/yr | 2.4E-03 |
| Potential Controlled Emissions lbs/hr | 5.4E-04 |
| Potential Controlled Emissions tons/yr | 2.4E-03 |

**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.

**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 hrs/yr) / (2,000 lbs/ton)

Potential Controlled Emissions tons/yr = Potential Controlled Emissions (lbs/hr) x 8760 (hrs/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 Renewal No.:** 039-43086-00612  
**Reviewer:** Andrea C. Smith

**Heat Input Capacity**

<table>
<thead>
<tr>
<th>Plant Boiler, Office Boiler</th>
<th>H1, H2</th>
<th>H3</th>
<th>H4</th>
<th>H5, H6, H7, H8</th>
<th>H9</th>
<th>H10, H11, H12, H13</th>
<th>H14</th>
<th>H15</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMBtu/hr</td>
<td>0.240</td>
<td>0.075</td>
<td>0.080</td>
<td>0.036</td>
<td>0.100</td>
<td>0.040</td>
<td>0.200</td>
<td>0.100</td>
<td>0.931</td>
</tr>
</tbody>
</table>

**HHV**

<table>
<thead>
<tr>
<th>MMBtu/hr</th>
<th>mmBtu</th>
<th>MMCF/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.93</td>
<td>1020</td>
<td>7.992</td>
</tr>
</tbody>
</table>

#### Pollutant

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.9</td>
<td>7.6</td>
<td>7.6</td>
<td>0.6</td>
<td>100</td>
<td>5.5</td>
<td>84</td>
</tr>
</tbody>
</table>

**Potential Emission in tons/yr**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>direct PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>0.01</td>
<td>0.03</td>
<td>0.03</td>
<td>0.00</td>
<td>0.40</td>
<td>0.02</td>
<td>0.34</td>
</tr>
</tbody>
</table>

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Natural Gas

**Emission Factors**

- 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

**HAPS Calculations**

#### HAPS - Organics

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.1E-03</td>
<td>1.2E-03</td>
<td>7.5E-02</td>
<td>1.8E+00</td>
<td>3.4E-03</td>
<td>7.519E-03</td>
</tr>
</tbody>
</table>

**Potential Emission in tons/yr**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>8.392E-06</td>
<td>4.795E-06</td>
<td>2.997E-04</td>
<td>7.193E-03</td>
<td>1.359E-05</td>
<td>7.519E-03</td>
</tr>
</tbody>
</table>

#### HAPS - Metals

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total - Metals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.0E-04</td>
<td>1.1E-03</td>
<td>1.4E-03</td>
<td>3.8E-04</td>
<td>2.1E-03</td>
<td></td>
</tr>
</tbody>
</table>

**Potential Emission in tons/yr**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total HAPs</th>
<th>Worst HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>1.998E-06</td>
<td>4.398E-06</td>
<td>5.595E-06</td>
<td>1.519E-06</td>
<td>8.392E-06</td>
<td>7.541E-03</td>
<td>7.193E-03</td>
</tr>
</tbody>
</table>

**Methodology**

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: 1807 South Main Street, Goshen, Indiana 46528
118 Lafayette Street, Goshen, Indiana 46528
MSOP Renewal No.: 039-43886-00012
Reviewer: Andrea C. Smith

Material | Density (Lb/Gal) | Weight % Volatile (H20 & Organics) | Weight % Water Exempt | Weight % Organics | Volume % Water | Volume % Non-Volatiles (solids) | Gal of Met (gallons)* | 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 (tons/yr) | VOC/gal solids | Transfer Efficiency |
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
3-3502 as Activator
Paint Booth: Base Coat | 9.96 | 57.7% | 0.0% | 42.3% | 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: Clear Coat | 10.84 | 75.0% | 0.0% | 25.0% | 0.0% | 25.00% | 0.20 | 1.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 69%

ACT-NJM2010SPC as Activator
Paint Booth: Base Coat | 9.96 | 57.7% | 0.0% | 42.3% | 0.0% | 25.81% | 0.20 | 1.13 | 5.53 | 5.53 | 1.25 | 30.00 | 5.48 | 1.92 | 21.43 | 65%
Paint Booth: Clear Coat | 10.84 | 75.0% | 0.0% | 25.0% | 0.0% | 25.00% | 0.20 | 1.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 65%

Total | 2.89 | 69.43 | 12.67 | 2.56 |

Potential to Emit 2.89 | 69.43 | 12.67 | 2.56 |

METHODOLOGY
* Source provided
Pounds of VOC per Gal of Coating less Water = (Density (Lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gal of Coating = (Density (Lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gal of Coating (Lb/gal) * Gal of Material (gallons) * Maximum (units/hour)
Potential VOC Pounds per Day = Pounds of VOC per Gal of Coating (Lb/gal) * Gal of Material (gallons) * Maximum (units/hour) * (24 hours/day)
Particulate Potential Tons per Year = (Maximum (units/hour)) * (gal/unit) * (lbs/gal) * (1-Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) / (1 ton/2000 lbs)
Pounds VOC per Gal of Solids = (Density (Lb/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

115 Lafayette Street, Goshen, Indiana 46526

**MSOP Renewal No.:** 039-43886-00612

**Reviewer:** Andrea C. Smith

| Material                 | Density (Lb/Gal) | Weight % Volatile (H2O & Organics) | Weight % Water | Weight % Organics | Volume % Non-Volatiles (solids) | Gal of Mat. (gallons/hr)* | Maximum (units/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 pounds per year | Potential Particulate (ton/yr) | lbs VOC per gallon solids | Transfer Efficiency |
|--------------------------|------------------|-----------------------------------|----------------|------------------|-------------------------------|---------------------------|------------------------|--------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|-------------------------|-----------------------|
| Foam Part A (2019 test)  | 10.01            | 100.0%                            | 0.0%           | 100.0%           | 0.0%                          | 0.0%                      | 1.647                   | 10.13                    | 10.01                     | 1.63                      | 29.15                      | 7.14                        | 0.00                    | 38.78                 | 80%                   |
| Foam Part B (2030 Polyol)| 10.06            | 68.0%                             | 0.0%           | 68.0%            | 0.0%                          | 7.05%                     | 0.099                   | 1.644                    | 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                        | 1.91                      | 0.00                    | 80%                   |
| Polyurea Part B (FSS DM B)| 8.42             | 0.0%                              | 0.0%           | 0.0%             | 0.0%                          | 0.00%                     | 0.00                    | 1.644                    | 0.00                      | 0.00                      | 0.00                       | 0.00                        | 1.97                      | 0.00                    | 80%                   |

**Total Potentional 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 (gallons) * Maximum (units/hr)
- Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gallons) * Maximum (units/hr) * (24 hours)
- Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gallons) * Maximum (units/hr) * (8760 hrs/yr) * (1 ton/2000 lbs)
- Particulate Potential Tons per Year = (units/hour) * (gallons) * (lbs/unit) / (1- Weight % Volatiles) * (1-Transfer efficiency) * (18760 hrs/yr) * (1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lb/gal) * Weight % organics) / (volume solids)

* surcoat.xls 9/95
### Appendices A: Emission Calculations

#### HAP Emission Calculations

\[
\text{HAPS emission rate (tons/yr)} = \text{Density (lb/gal)} \times \text{Gal of Material (gal/unit)} \times \text{Maximum (unit/hr)} \times \text{Weight % HAP} \times 8760 \text{ hrs/yr} \times \frac{1 \text{ ton}}{2000 \text{ lbs}}
\]

<table>
<thead>
<tr>
<th>Material</th>
<th>Density</th>
<th>Gal of Material</th>
<th>Maximum</th>
<th>Weight %</th>
<th>HAP</th>
<th>HAPS Emission Rate (tons/yr)</th>
<th>Emissions (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethyl Acetate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>2-Butoxyethanol</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td>2-Ethoxyethyl Acetate</td>
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<td>Aromatic Hydrocarbons</td>
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<tr>
<td>Dibutyl Phthalate</td>
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<td></td>
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<td>Dimethyl Gluterate</td>
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<td></td>
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<tr>
<td>n-Butyl Acetate</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Potential Emissions**

8.69 tons/yr
### Material Density

<table>
<thead>
<tr>
<th>Material</th>
<th>Gallons of Material</th>
<th>Maximum Weight</th>
<th>% Weight</th>
<th>Paint Booth: Base Coat</th>
<th>Paint Booth: Clear Coat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene glycol monobutyl ether acetate</td>
<td>9.60</td>
<td>0.200</td>
<td>1.130</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Petroleum distillate (naphtha)</td>
<td>7.40</td>
<td>0.200</td>
<td>1.130</td>
<td>50.00%</td>
<td>30.00%</td>
</tr>
<tr>
<td>Xylenes (isomers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m-xylene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o-xylene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>p-xylene</td>
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<td></td>
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<tr>
<td>Plasticizer</td>
<td></td>
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<tr>
<td>Toluene</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Benzene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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

### Total Potential Emissions

<table>
<thead>
<tr>
<th>Material</th>
<th>Density (lb/gal)</th>
<th>Gal of Material (gal/unit)</th>
<th>Maximum (unit/hr)</th>
<th>Weight %</th>
<th>Total ( tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene glycol monobutyl ether acetate</td>
<td>122</td>
<td>7.40</td>
<td>0.200</td>
<td>1.130</td>
<td>0.48</td>
</tr>
<tr>
<td>Petroleum distillate (naphtha)</td>
<td>162</td>
<td>7.40</td>
<td>0.200</td>
<td>1.130</td>
<td>3.66</td>
</tr>
<tr>
<td>Xylenes (isomers)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m-xylene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o-xylene</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Ethylbenzene</td>
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</tr>
<tr>
<td>p-xylene</td>
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<tr>
<td>Plasticizer</td>
<td></td>
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</tr>
<tr>
<td>Toluene</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Benzene</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix A: Emission Calculations

HAP Emission Calculations

---

**Note:** The table shows the calculation of potential emissions for different materials used in the paint booths. The formula used is the product of density, gallons of material, maximum usage rate, weight percentage, and time conversion factors.
**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 Renewal No.:** 039-43886-00612

**Reviewer:** Andrea C. Smith

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

* 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: 1807 South Main Street, Goshen, Indiana 46526

Unmitigated Emission Factor, \( E_{\text{PM}} = k \times \left( \frac{s}{12} \right)^{a} \times \left( \frac{W}{3} \right)^{b} \) (Equation 1a from AP-42 Ch 13.2.2)

where
- \( k = 4.9 \) for PM, 1.5 for PM\(_{10}\), and 0.15 for PM\(_{2.5}\) (particle size multiplier, AP-42 Table 13.2.2-2 for Industrial Roads)
- \( s = 4.6 \) for PM, 4.8 for PM\(_{10}\), and 4.8 for PM\(_{2.5}\) (mean % silt content of unpaved roads, AP-42 Table 13.2.2-1 for Sand/Gravel Processing Plant)
- \( a = 0.7 \) for PM, 0.9 for PM\(_{10}\), and 0.9 for PM\(_{2.5}\) (constant, AP-42 Table 13.2.2-2 for Industrial Roads)
- \( W = 4.0 \) tons (average vehicle weight, provided by source)
- \( b = 0.45 \) for PM, 0.45 for PM\(_{10}\), and 0.45 for PM\(_{2.5}\) (constant, AP-42 Table 13.2.2-2 for Industrial Roads)

Mitigated Emission Factor, \( E_{\text{ext}} = E \times \left( \frac{365 - P}{365} \right) \) (Equation 2 from AP-42 Ch 13.2.2)

where \( P = 125 \) days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

Unmitigated PTE of PM (tons/yr) = \( \text{Maximum one-way miles (miles/yr)} \times \text{Unmitigated Emission Factor (lb/mile)} \times \text{ton/2000 lbs} \)

Mitigated PTE of PM (tons/yr) = \( \text{Maximum one-way miles (miles/yr)} \times \text{Mitigated Emission Factor (lb/mile)} \times \text{ton/2000 lbs} \)

Abbreviations
- PM = Particulate Matter
- PM\(_{10}\) = Particulate Matter (<10 um)
- PM\(_{2.5}\) = Particulate Matter (<2.5 um)
- PTE = Potential to Emit

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)

<table>
<thead>
<tr>
<th>Type</th>
<th>Maximum number of vehicles</th>
<th>Number of one-way trips per day per vehicle</th>
<th>Maximum trips per day (trip/day)</th>
<th>Maximum Weight Loaded (tons/trip)</th>
<th>Total Weight driven per day (ton/day)</th>
<th>Maximum one-way distance (ft/trip)</th>
<th>Maximum one-way distance (mi/trip)</th>
<th>Maximum one-way miles (miles/day)</th>
<th>Maximum one-way miles (miles/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle (entering plant) (one-way trip)</td>
<td>1.0</td>
<td>1.0</td>
<td>4.0</td>
<td>4.0</td>
<td>16.0</td>
<td>105</td>
<td>0.020</td>
<td>0.08</td>
<td>29.09</td>
</tr>
<tr>
<td>Vehicle (leaving plant) (one-way trip)</td>
<td>1.0</td>
<td>1.0</td>
<td>4.0</td>
<td>4.0</td>
<td>16.0</td>
<td>105</td>
<td>0.020</td>
<td>0.08</td>
<td>29.09</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>8.0</strong></td>
<td><strong>32.0</strong></td>
<td><strong>0.16</strong></td>
<td><strong>58.18</strong></td>
<td><strong>1.36</strong></td>
<td><strong>92.1</strong></td>
<td><strong>0.02</strong></td>
<td><strong>0.12</strong></td>
<td><strong>35.8</strong></td>
</tr>
</tbody>
</table>

Average Vehicle Weight Per Trip = \( \frac{4.0 \text{ tons/trip}}{1.0 \text{ trip/day}} \) = 4.0 tons/trip

Average Miles Per Trip = \( \frac{29.09 \text{ miles/day}}{8.0 \text{ trips/day}} \) = 3.64 miles/trip

Unmitigated Emission Factor, \( E_{\text{PM}} = k \times \left( \frac{s}{12} \right)^{a} \times \left( \frac{W}{3} \right)^{b} \) (Equation 1a from AP-42 Ch 13.2.2)

Mitigated Emission Factor, \( E_{\text{ext}} = E \times \left( \frac{365 - P}{365} \right) \) (Equation 2 from AP-42 Ch 13.2.2)
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 Renewal No.: 039-43886-00612
Reviewer: Andrea C. Smith

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

<table>
<thead>
<tr>
<th>Filter Air Volume:</th>
<th>650 scfm</th>
<th>Historical Wood Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Exhaust Loading:</td>
<td>0.00787 gr/scf</td>
<td></td>
</tr>
<tr>
<td>Max. Wood Throughput:</td>
<td>101616.00 pounds</td>
<td></td>
</tr>
<tr>
<td>Dust collected:</td>
<td>10470.03 pounds</td>
<td></td>
</tr>
<tr>
<td>Filter Efficiency:</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>Hours of Operation:</td>
<td>8760 hours</td>
<td></td>
</tr>
<tr>
<td>Dust Collected per Hour:</td>
<td>1.20 lbs/hr</td>
<td></td>
</tr>
</tbody>
</table>

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

Actual

EMISSION BASIS FOR MILL ROOM

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

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.
<table>
<thead>
<tr>
<th>PROCESS</th>
<th>Number of stations</th>
<th>Max. electrode consumption per station (lbs/hr)</th>
<th>EMISSION FACTORS* (lb pollutant/lb electrode)</th>
<th>EMISSIONS</th>
<th>TOTAL HAPs (lbs/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIG WELDING</td>
<td></td>
<td></td>
<td>PM = PM10 Mn Ni Co Cr</td>
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<td></td>
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<tr>
<td>Gas Metal Arc (MIG) (ER70S)</td>
<td>2</td>
<td>0.288</td>
<td>0.23 0.001 0.001 0.001 3.0E-03 1.8E-04 5.8E-07 1.8E-04</td>
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<tr>
<td>Potential Emissions</td>
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<td>0.01</td>
<td>8.0E-04 2.5E-06 2.5E-06 8.1E-04</td>
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</table>

**METHODOLOGY**

- SCC 3.09-05-24 Gas Metal Arc Welding - ER70S electrode type
- Emissions, ton/yr = emissions, lb/hr x 7,860 lb/hr x 2,000 lbs/ton
- Total HAPs = sum of Mn, Ni, Co, and Cr
May 6, 2021

Matthew Gaff
Independent Protection Company, Inc. Plant 1 & 2
67819 State Road 15
New Paris, IN 46553

Re: Public Notice
Independent Protection Company, Inc. Plant 1 & 2
Permit Level: MSOP - Renewal
Permit Number: 039-43886-00612

Dear Mr. Matthew Gaff:

Enclosed is the Notice of 30-Day Period for Public Comment for your draft air permit.

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. The Notice of 30-Day Period for Public Comment has also been sent to the OAQ Permits Branch Interested Parties List and, if applicable, your Consultant/Agent and/or Responsible Official/Authorized Individual.

The preliminary findings, including the draft permit, technical support document, emission calculations, and other supporting documents, are available electronically at:

IDEM's online searchable database: http://www.in.gov/apps/idem/caats/. Choose Search Option by Permit Number, then enter permit 43886

and

IDEM's Virtual File Cabinet (VFC): https://www.IN.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

The Public Notice period will begin the date the Notice is published on the IDEM Official Public Notice website. Publication has been requested and is expected within 2-3 business days. You may check the exact Public Notice begins and ends date here: https://www.in.gov/idem/public-notices/

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.

OAQ has submitted the draft permit package to the Goshen Public Library, 601 South 5th Street in Goshen, IN 46526. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.
Please review the draft permit documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Andrea C. Smith, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 4-6543 or dial (317) 234-6543.

Sincerely,

Kathy Bourquein

Kathy Bourquein
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter access via website 8/10/2020
May 6, 2021

To: Goshen Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: Important Information to Display Regarding a Public Notice for an Air Permit

Applicant Name: Independent Protection Company, Inc. Plant 1 & 2
Permit Number: 039-43886-00612

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

If you have any questions concerning this public review process, please contact Joanne Smiddle-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library updated 4/2019
Notice of Public Comment

May 6, 2021
Independent Protection Company, Inc. Plant 1 & 2
039-43886-00612

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has posted on IDEM’s Public Notice website at [https://www.in.gov/idem/public-notices/](https://www.in.gov/idem/public-notices/).

The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana’s Air Permitting Program.

Please Note: If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at JBRUSH@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.
**Mail Code 61-53**

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<th>KBOURQUE 5/6/2021</th>
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<td>Name and address of Sender</td>
<td>Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204</td>
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<th>Insured Value</th>
<th>Due Send if COD</th>
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<th>S.D. Fee</th>
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<td>Matthew Gaff Independent Protection Company Inc Plant 1 and 2 67819 SR 15 New Paris IN 46553 (Source CAATS)</td>
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<td>69</td>
<td>Rob Cripe Vice President INDEPENDENT PROTECTION CO INC PLANTS 1 &amp; 2 67819 SR 15 New Paris IN 46553 (RO CAATS)</td>
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<td>Elkhart County Health Department 608 Oakland Avenue Elkhart IN 46516 (Health Department)</td>
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<td>Mayors Office 202 South 5th Street Suite 1 Goshen IN 46528 (Local Official)</td>
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<td>Goshen Public Library 601 S 5th St Goshen IN 46526-3994 (Library)</td>
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<td>Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 (Local Official)</td>
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<td>Jen Seely The Mail-Journal PO Box 188 Milford IN 46542 (Affected Party)</td>
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<td>Mr. Roger Schneider The Goshen News 114 S. Main St Goshen IN 46526 (Affected Party)</td>
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**Total number of pieces Listed by Sender**

**Total number of Pieces Received at Post Office**

**Postmaster, Per (Name of Receiving employee)**

The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50,000 per occurrence. The maximum indemnity payable on Express mail merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on insured and COD mail. See International Mail Manual for limitations on coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.