NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding a
Minor Source Operating Permit (MSOP)

for PVS Steel Services in Porter County

MSOP No.: M127-41257-00039

The Indiana Department of Environmental Management (IDEM) has received an application from PVS Steel Services, located at 1111 North State Road 149, for a MSOP. If approved by IDEM’s Office of Air Quality (OAQ), this proposed permit would allow PVS Steel Services to continue to operate its existing source. PVS Steel Services has applied to transition from TV permit to MSOP.

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 are available at:

Westchester Public Library
200 West Indiana Avenue
Chesterton, IN 45304

and

IDEM Northwest Regional Office
330 W. US Highway 30, Suites E & F
Valparaiso, IN 46385

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

A copy of the preliminary findings is also available via IDEM’s Virtual File Cabinet (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,
IDEA 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 127-41257-00039 in all correspondence.

Comments should be sent to:

Tripurari Sinha, Ph. D.
IDEF, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCC 1903
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Tripurari Sinha, Ph. D. or (317) 234-4907
Or dial directly: (317) 234-4907
Fax: (317) 232-6749 att: Tripurari Sinha, Ph. D.
E-mail: tsiha@idep.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: http://www.in.gov/idep/airquality/2356.htm; and the Citizens’ Guide to IDEM on the Internet at: http://www.in.gov/idep/f3910.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, at the local library indicated above, at 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 Tripurari Sinha, Ph. D. of my staff at the above address.

Brian Williams, Section Chief
Permits Branch
Office of Air Quality
Minor Source Operating Permit
OFFICE OF AIR QUALITY

PVS Steel Services, Inc.
1111 North State Road 149
Burns Harbor, Indiana 46304

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

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

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

Operation Permit No.: M127-41257-00039
Master Agency Interest ID: 11549

Issued by:

Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Issuance Date: 
Expiration Date: 
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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 Iron Oxide and HCl Production Operation.

<table>
<thead>
<tr>
<th>Source Address:</th>
<th>1111 North State, Burns Harbor, Indiana 46304</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Source Phone Number:</td>
<td>219-763-1199</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>2819 (Industrial Inorganic Chemicals, Not Elsewhere Classified)</td>
</tr>
<tr>
<td>County Location:</td>
<td>Porter</td>
</tr>
<tr>
<td>Source Location Status:</td>
<td>Nonattainment for 8-hour ozone standard</td>
</tr>
<tr>
<td></td>
<td>Attainment for all other criteria pollutants</td>
</tr>
<tr>
<td>Source Status:</td>
<td>Minor Source Operating Permit Program</td>
</tr>
<tr>
<td></td>
<td>Minor Source, under PSD and Emission Offset Rules</td>
</tr>
<tr>
<td></td>
<td>Minor Source, Section 112 of the Clean Air Act</td>
</tr>
<tr>
<td></td>
<td>Not 1 of 28 Source Categories</td>
</tr>
</tbody>
</table>

A.2  Emission Units and Pollution Control Equipment Summary

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

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

(a)  Two (2) Process Lines, consisting of:

(1)  Roaster A - an iron oxide and hydrochloric acid production system, constructed in 1990 with a maximum processing rate of 12 tons per hour of ferrous chloride solution. This system consists of one (1) natural gas-fired spray roaster, identified as R-1, utilizing tangential firing and four (4) low-NOx burners rated at 7.5 MMBtu/hr each, with a maximum heat input rate of 30 MMBtu/hr total; equipped with one (1) venturi; one (1) separator, replaced in September 2018; one (1) absorber; and two (2) packed towers collector scrubbers operated in series. This system exhausts through the stack identified as S-1. The one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed towers are integral to the process.

(2)  Roaster B - an iron oxide and hydrochloric acid production system, constructed in 1990, with a maximum processing rate of 12 tons per hour of ferrous chloride solution. This system consists of one (1) natural gas-fired spray roaster, identified as R-2, utilizing tangential firing and four (4) low-NOx, burners rated at 7.5 MMBtu/hr each, with a maximum heat input rate of 30 MMBtu/hr total; equipped with one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed tower collector scrubbers operated in series. This system exhausts through the stack identified as S-2. The one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed towers are integral to the process.

(b)  One (1) Iron oxide storage bin, identified as Bin A, constructed in 1990 and modified in 2006 from storage capacity of 100 tons to 50 tons and a process weight rate of 1.8 tons
per hour, controlled by a voluntary baghouse and exhausting through stack S-4.

(c) One (1) iron oxide storage bin, identified as Bin B, constructed in 1990 with a storage capacity of 100 tons and a process weight rate of 1.8 tons per hour, controlled by a voluntary baghouse and exhausting through stack S-5.

(d) One (1) tank farm, identified as T-6, consisting of sixteen (16) storage tanks,

(1) One (1) Tank No. 1, constructed in May 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(2) One (1) Tank No. 2, constructed in 2003, with a maximum capacity of 21,186 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(3) One (1) Tank No. 3, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(4) One (1) Tank No. 4, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(5) One (1) Tank No. 5, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(6) One (1) Tank No 6, constructed in 2003, with a maximum capacity of 21,186 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(7) One (1) Tank No. 7, constructed in 2003, with a maximum capacity of 21,186 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(8) One (1) Tank No. 8, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(9) One (1) Tank No. 9, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(10) One (1) Tank No. 10, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting...
through a stack, identified as S-3.

(11) One (1) Tank No. 11, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(12) One (1) Tank No. 12, constructed in May 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(13) One (1) Tank No. 13, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(14) One (1) Tank No. 14, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(15) One (1) Tank No. 15, constructed in June 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(16) One (1) Tank No. 16, constructed in June 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(e) One (1) HCl loading and unloading station, constructed in 1990, maximum capacity of 6,218 gallons/hr, controlled by fume scrubber and exhausting through stack, S-3

(f) One (1) Enrichment Facility, consisting of:

(1) One (1) processing tank, constructed in 1991 with HCl emissions controlled by an acid fume scrubber and exhausting through stack EP002.

(2) One (1) natural gas fired boiler, constructed in 2016, maximum capacity of 6.6 MMBtu/hr, uncontrolled and exhausting through stack EP001.

(g) One (1) Iron Oxide Packaging Unit, identified as P-1, constructed in 1991, with a maximum capacity of 12 tons/hr. and 30,000 tons/hr., venting to S-4, S-5 and/or a voluntary indoor dust collector which vents indoors.

(h) One (1) Iron Oxide Packaging Unit, identified as P-2, constructed in 1996, with a maximum capacity of 12 tons/hr. and 30,000 tons per year, venting to S-4, S-5 and/or a voluntary indoor dust collector which vents indoors.

(i) One (1) Iron Oxide Mill Unit, identified as P-3, constructed in 1996, with a maximum capacity of 24 tons/hr. and 30,000 tons per year, venting to S-4, S-5 and/or a voluntary indoor dust collector which vents indoors.

(j) Paved roads, constructed in 1990.
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, M127-41257-00039, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]
Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:
(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability
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 M127-41257-00039 and issued pursuant to permitting programs approved into the state implementation plan have been either:

1. incorporated as originally stated,
2. revised, or
3. deleted.

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

### B.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

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

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

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

Request for renewal shall be submitted to:

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

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

1. Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and
2. If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.
B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

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

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

(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

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

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

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

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

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

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

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

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.
B.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

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

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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

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

(a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,

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

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

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

Entire Source

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

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

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

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

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

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

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

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.
C.6 Fugitive Dust Emissions [326 IAC 6-4]

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

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

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.8 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.
(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

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

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6-1-5(a)(2)]

C.9 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.10 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.11 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.12 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.13 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.14 Actions Related to Noncompliance Demonstrated by a Stack Test

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

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

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

C.15 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.16 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.17 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
(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 Emission Unit Operation Conditions

**Emissions Unit Description:**

(a) Two (2) Process Lines, consisting of:

1. **Roaster A** - an iron oxide and hydrochloric acid production system, constructed in 1990 with a maximum processing rate of 12 tons per hour of ferrous chloride solution. This system consists of one (1) natural gas-fired spray roaster, identified as R-1, utilizing tangential firing and four (4) low-NOx burners rated at 7.5 MMBtu/hr each, with a maximum heat input rate of 30 MMBtu/hr total; equipped with one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed towers collector scrubbers operated in series. This system exhausts through the stack identified as S-1. The one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed towers are integral to the process.

2. **Roaster B** - an iron oxide and hydrochloric acid production system, constructed in 1990, with a maximum processing rate of 12 tons per hour of ferrous chloride solution. This system consists of one (1) natural gas-fired spray roaster, identified as R-2, utilizing tangential firing and four (4) low-NOx burners rated at 7.5 MMBtu/hr each, with a maximum heat input rate of 30 MMBtu/hr total; equipped with one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed tower collector scrubbers operated in series. This system exhausts through the stack identified as S-2. The one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed towers are integral to the process.

(b) One (1) iron oxide storage bin, identified as Bin A, constructed in 1990 and modified in 2006 from storage capacity of 100 tons to 50 tons and a process weight rate of 1.8 tons per hour, controlled by a voluntary baghouse and exhausting through stack S-4.

(c) One (1) iron oxide storage bin, identified as Bin B, constructed in 1990 with a storage capacity of 100 tons and a process weight rate of 1.8 tons per hour, controlled by a voluntary baghouse and exhausting through stack S-5.

(g) One (1) Iron Oxide Packaging Unit, identified as P-1, constructed in 1991, with a maximum capacity of 12 tons/hr and 30,000 tons per year, venting to S-4, S-5 and/or a voluntary indoor dust collector which vents indoors.

(h) One (1) Iron Oxide Packaging Unit, identified as P-2, constructed in 1996, with a maximum capacity of 12 tons/hr and 30,000 tons per year, venting to S-4, S-5 and/or a voluntary indoor dust collector which vents indoors.

(i) One (1) Iron Oxide Mill Unit, identified as P-3, constructed in 1996, with a maximum capacity of 24 tons/hr and 30,000 tons per year, venting to S-4, S-5 and/or a voluntary indoor dust collector which vents indoors.

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

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

#### D.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate matter (PM) from Roaster A, Roaster B, Storage Bin A, Storage Bin B,
Packaging Unit P1, Packaging Unit P2, Packaging Unit P3 shall not exceed the following PM limits as specified below. The pound per hour limitation was calculated with 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

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>P (ton/hr)</th>
<th>E (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roaster A</td>
<td>12</td>
<td>21.7</td>
</tr>
<tr>
<td>Roaster B</td>
<td>12</td>
<td>21.7</td>
</tr>
<tr>
<td>Storage Bin A</td>
<td>1.8</td>
<td>6.03</td>
</tr>
<tr>
<td>Storage Bin B</td>
<td>1.8</td>
<td>6.03</td>
</tr>
<tr>
<td>Iron Oxide Packaging Unit P1</td>
<td>12</td>
<td>21.7</td>
</tr>
<tr>
<td>Iron Oxide Packaging Unit P2</td>
<td>12</td>
<td>21.7</td>
</tr>
<tr>
<td>Iron Oxide Mill Unit P3</td>
<td>24</td>
<td>34.48</td>
</tr>
</tbody>
</table>

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and 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.1.3 Particulate and HCl Control

In order to assure that the source maintains its MSOP status under 326 IAC 2-6.1, the integral venturies, separators, absorbers, and packed scrubbers for PM, PM10, PM2.5 and HCl control shall be in operation and control emissions from Roasters A or/and Roaster B at all times the Roasters A or/and B are in operation.

D.1.4 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to assure that the source maintains its MSOP status under 326 IAC 2-6.1, the Permittee shall perform controlled HCl testing on Roaster A and establish makeup water flow rate to the integral packed scrubber 2 controlling HCl, within five (5) years of most recent valid compliance demonstration utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee’s obligations with regard to the performance testing required by this condition.

(b) Not later than 180 days after the restart of Roaster B, in order to assure that the source maintains its MSOP status under 326 IAC 2-6.1, the Permittee shall perform controlled HCl testing on Roaster B and establish minimum make up water flow rate for the integral packed scrubber 2, controlling HCl, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance
Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

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

D.1.5  Make Up Water Flow Rate Monitoring

The Permittee shall monitor and record the makeup water flow rate to scrubber 2 for each of the Roaster A and Roaster B, at least once per day when the Roaster A or/and Roaster B are in operation. When for any one reading, the makeup water flow rate to scrubber 2 of the Roaster A or Roaster B is below the minimum makeup water flow rate established during the most recent valid stack test, the Permittee shall take reasonable response steps. A makeup water flow rate reading that is below the above mentioned minimum makeup water flow rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.1.6  Scrubber or Absorber Failure Detection

In the event that a scrubber/absorber malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. 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 - Malfunctions Report).

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

D.1.7  Record Keeping Requirements

(a) To document the compliance status with Condition D.1.5, the Permittee shall maintain daily records of the makeup water flow rates for scrubber 2 of Roaster A and Roaster B. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.
SECTION D.2	EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f)(2) One (1) natural gas fired boiler, constructed in 2016, maximum capacity of 6.6 MMBtu/hr, uncontrolled and exhausting through stack EP001.

(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.2.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, the allowable particulate emissions from the Enrichment facility Boiler shall not exceed 0.6 pounds per million British thermal units.

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

A Preventive Maintenance Plan is required for the Enrichment facility Boiler. Section B - Preventive Maintenance Plan contains the Permittee’s obligation with regard to the preventive maintenance plan required by this condition.
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>PVS Steel Services, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>1111 North State</td>
</tr>
<tr>
<td>City:</td>
<td>Burns Harbor, Indiana 46304</td>
</tr>
<tr>
<td>Phone #:</td>
<td>219-763-1199</td>
</tr>
<tr>
<td>MSOP #:</td>
<td>M127-41257-00039</td>
</tr>
</tbody>
</table>

I hereby certify that PVS Steel Services, Inc. is:

- [ ] still in operation.
- [ ] no longer in operation.

I hereby certify that PVS Steel Services, Inc. is:

- [ ] in compliance with the requirements of MSOP M127-41257-00039.
- [ ] not in compliance with the requirements of MSOP M127-41257-00039.

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.

<table>
<thead>
<tr>
<th>Noncompliance:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

This facility meets the applicability requirements because it has potential to emit 25 tons/year particulate matter? ___, 25 tons/year sulfur dioxide? ___, 25 tons/year nitrogen oxides? ___, 25 tons/year VOC? ___, 25 tons/year hydrogen sulfide? ___, 25 tons/year total reduced sulfur? ___, 25 tons/year reduced sulfur compounds? ___, 25 tons/year fluorides? ___, 100 tons/year carbon monoxide? ___, 10 tons/year any single hazardous air pollutant? ___, 25 tons/year any combination hazardous air pollutant? ___, 1 ton/year lead or lead compounds measured as elemental lead? ___, or is a source listed under 326 IAC 2-5.1-3(2)? ___. Emissions from malfunctioning control equipment or process equipment caused emissions in excess of applicable limitation ________.

This malfunction resulted in a violation of: 326 IAC _______ or, permit condition # _______ and/or permit limit of ________.

This incident meets the definition of “malfunction” as listed on reverse side? Y N

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

COMPANY: ______________________________________ PHONE NO. (___)___________
LOCATION: (CITY AND COUNTY) ____________________________________________
PERMIT NO. ______________ AFS PLANT ID: ______________ AFS POINT ID: ______________ INSP: __________
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _______________________________________

DATE/TIME MALFUNCTION STARTED: _____/_____/20____ AM/PM
ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: ________________________________

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

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: ________________________________
ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: ___________________________

MEASURES TAKEN TO MINIMIZE EMISSIONS: ___________________________________________________

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:
CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: ___________________________
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: ___________________________
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____________
INTERIM CONTROL MEASURES: (IF APPLICABLE) _______________________________________________

MALFUNCTION REPORTED BY: ______________________ TITLE: ________________________________
(SIGNATURE IF FAXED)
MALFUNCTION RECORDED BY: ___________________ DATE: ______________ TIME: ______________
*SEE PAGE 2
Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 “Malfunction” definition

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

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

If this item is checked on the front, please explain rationale:
Source Description and Location

Source Name: PVS Steel Services, Inc.
Source Location: 1111 North State Road 149, Burns Harbor, Indiana 46304
County: Porter
SIC Code: 2819 (Industrial Inorganic Chemicals, NEC)
Operation Permit No.: M 127-41257-00039
Permit Reviewer: Tripurari Sinha, Ph. D.

On March 28, 2019, the Office of Air Quality (OAQ) received an application from PVS Steel Services, Inc. related to the transition of a Title V permit to a MSOP.

Existing Approvals

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

(a) Part 70 Operating Permit Renewal No. T127-35710-00039, issued on April 5, 2016; and

Due to this application, the source is transitioning from a TV to a MSOP.

County Attainment Status

The source is located in Porter County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td>Cannot be classified for the area bounded on the north by Lake Michigan; on the west by the Lake County and Porter County line; on the south by I-80 and I-90; and on the east by the LaPorte County and Porter County line. The remainder of Porter County is 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>Moderate nonattainment effective June 3, 2016, for the 2008 8-hour ozone standard.¹</td>
</tr>
<tr>
<td>O₃</td>
<td>Unclassifiable or attainment effective August 3, 2018, for the 2015 8-hour ozone standard.¹</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable effective April 15, 2015, for the 2012 annual PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM₂.₅ 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>

¹Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area, including Porter County, for the 1-hour standard which was revoked effective June 15, 2005. The U. S. EPA has acknowledged in both the proposed and final rulemaking for this redesignation that the anti-backsliding provisions for the 1-hour ozone standard no longer apply as a result of the redesignation under the 8-hour ozone standard. Therefore, permits in Porter County are no longer subject to review pursuant to Emission Offset, 326 IAC 2-3 for the 1-hour standard.
(a) Ozone Standards

U.S. EPA, in the Federal Register Notice 77 FR 34228 dated June 11, 2012, designated Porter County as nonattainment for the 2008 8-hour ozone standard. On August 1, 2012, the air pollution control board issued an emergency rule adopting the U.S. EPA's designation. This rule became effective August 9, 2012. IDEM does not agree with U.S. EPA's designation of nonattainment. IDEM filed a suit against U.S. EPA in the U.S. Court of Appeals for the DC Circuit on July 19, 2012. However, in order to assure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's designation. 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. Therefore, VOC and NOx emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(b) PM$_{2.5}$

Porter County has been classified as attainment for PM$_{2.5}$. Therefore, direct PM$_{2.5}$, SO$_2$, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants

Porter 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

Since this type of operation is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit (326 IAC 2-7) and 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.
Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by PVS Steel Services, Inc. on March 28, 2019, relating to the transition from a Part 70 Operating permit to a MSOP. The source also wants removed the requirements of NESHAP 40 CFR 63, Subpart CCC from its permit. USEPA has changed its policy of "Once In Always In" policy for NESHAP. If a source is an area source for HAPs, it does not have to comply with major source NESHAP requirements.

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

(a) Two (2) Process Lines, consisting of:

(1) Roaster A - an iron oxide and hydrochloric acid production system, constructed in 1990 with a maximum processing rate of 12 tons per hour of ferrous chloride solution. This system consists of one (1) natural gas-fired spray roaster, identified as R-1, utilizing tangential firing and four (4) low-NOx burners rated at 7.5 MMBtu/hr., each, with a maximum heat input rate of 30 MMBtu/hr. total; equipped with one (1) venturi; one (1) separator, replaced in September 2018; one (1) absorber; and two (2) packed towers collector scrubbers operated in series. This system exhausts through the stack identified as S-1. The one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed towers are integral to the process.

(2) Roaster B - an iron oxide and hydrochloric acid production system, constructed in 1990, with a maximum processing rate of 12 tons per hour of ferrous chloride solution. This system consists of one (1) natural gas-fired spray roaster, identified as R-2, utilizing tangential firing and four (4) low-NOX burners rated at 7.5 MMBtu/hr., each, with a maximum heat input rate of 30 MMBtu/hr. total; equipped with one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed towers collector scrubbers operated in series. This system exhausts through the stack identified as S-2. The one (1) venturi; one (1) separator; one (1) absorber; and two (2) packed towers are integral to the process.

(b) One (1) iron oxide storage bin, identified as Bin A, constructed in 1990 and modified in 2006 from storage capacity of 100 tons to 50 tons and a process weight rate of 1.8 tons per hour, controlled by a voluntary baghouse and exhausting through stack S-4.

(c) One (1) iron oxide storage bin, identified as Bin B, constructed in 1990 with a storage capacity of 100 tons and a process weight rate of 1.8 tons per hour, controlled by a voluntary baghouse and exhausting through stack S-5.

(d) One (1) tank farm, identified as T-6, consisting of sixteen (16) storage tanks,

(1) One (1) Tank No. 1, constructed in May 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(2) One (1) Tank No. 2, constructed in 2003, with a maximum capacity of 21,186 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(3) One (1) Tank No. 3, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(4) One (1) Tank No. 4, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.
(5) One (1) Tank No. 5, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(6) One (1) Tank No. 6, constructed in 2003, with a maximum capacity of 21,186 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(7) One (1) Tank No. 7, constructed in 2003, with a maximum capacity of 21,186 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(8) One (1) Tank No. 8, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(9) One (1) Tank No. 9, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(10) One (1) Tank No. 10, constructed in 1990, with a maximum capacity of 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(11) One (1) Tank No. 11, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(12) One (1) Tank No. 12, constructed in May 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(13) One (1) Tank No. 13, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(14) One (1) Tank No. 14, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(15) One (1) Tank No. 15, constructed in June 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(16) One (1) Tank No. 16, constructed in June 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(e) One (1) HCl loading and unloading station, constructed in 1990, maximum capacity of 6,218 gallons/hr., controlled by fume scrubber and exhausting through stack, S-3

(f) One (1) Enrichment Facility, consisting of:

(1) One (1) processing tank, constructed in 1991 with HCl emissions controlled by an acid
fume scrubber and exhausting through stack EP002.

(2) One (1) natural gas fired boiler, constructed in 2016, maximum capacity of 6.6 MMBtu/hr., uncontrolled and exhausting through stack EP001.

(g) One (1) Iron Oxide Packaging Unit, identified as P-1, constructed in 1991, with a maximum capacity of 12 tons/hr. and 30,000 tons per year, venting to S-4, S-5 and/or a voluntary indoor dust collector which vents indoors.

(h) One (1) Iron Oxide Mill Packaging Unit, identified as P-2, constructed in 1996, with a maximum capacity of 12 tons/hr. and 30,000 tons per year, venting to S-4, S-5 and/or a voluntary indoor dust collector which vents indoors.

(i) One (1) Iron Oxide Mill Unit, identified as P-3, constructed in 1996, with a maximum capacity of 24 tons/hr. and 30,000 tons per year, venting to S-4, S-5 and/or a voluntary indoor dust collector which vents indoors.

(j) Paved roads, constructed in 1990.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

Out of 16 tanks, ten were replaced with ten new tanks in different years.

(a) One (1) tank farm identified as T-6, consisting of sixteen (16) ten (10) storage tanks, each tank has a capacity to store 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product. As a maximum capacity twelve (12) tanks store a hydrochloric acid solution and four (4) tanks store a non-HAP/non-VOC production. Each tank is attached to a common vent header, connected to a fume scrubber to control vapor loss and exhausts through a stack, identified as S-3.

(b) One (1) 4 MMBtu/hr. natural gas boiler, constructed in 1994, exhausting through stack EP001.

“Integral Part of the Process” Determination

As part of Part 70 Operating Permit Renewal No. T127-35710-00039, issued on April 5, 2016, IDEM, OAQ previously determined that the venturi, separator, and packed bed scrubbers are an integral part of the two (2) iron oxide and hydrochloric acid production lines. See Appendix B to the TSD in Part 70 Operating Permit Renewal No. T127-35710-00039, issued on April 5, 2016 for the detailed review of the air pollution control justification as an integral part of the process.

IDEM, OAQ is not reevaluating this integral justification at this time. Therefore, the potential to emit for HCl, PM, PM10, PM2.5 from the two (2) iron oxide and hydrochloric acid production lines will continue to be calculated after the packed bed scrubbers for purposes of determining permitting level and applicability of MSOP (326 IAC 2-6.1) and source status under Section 112 of the Clean Air Act (CAA). Operating conditions in the proposed permit will specify that the venturies, separators, absorbers, and packed bed scrubbers shall operate at all times when one or both of the two (2) iron oxide and hydrochloric acid production lines are in operation.

Enforcement Issues

There are no pending enforcement actions related to this source.
As part of this permitting action, the source requested to add the following existing emission units constructed under the provisions of 326 IAC 2-1.1-3 (Exemptions):

(a) One (1) Tank No. 1, constructed in May 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(b) One (1) Tank No. 2, constructed in 2003, with a maximum capacity of 21,186 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(c) One (1) Tank No. 6, constructed in 2003, with a maximum capacity of 21,186 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(d) One (1) Tank No. 7, constructed in 2003, with a maximum capacity of 21,186 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(e) One (1) Tank No. 11, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(f) One (1) Tank No. 12, constructed in May 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(g) One (1) Tank No. 13, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(h) One (1) Tank No. 14, constructed in 2019, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(i) One (1) Tank No. 15, constructed in June 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, replacing the old Tank No. 15, with a capacity to store 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(j) One (1) Tank No. 16, constructed in June 2018, with a maximum capacity of 33,375 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, replacing the old Tank No. 16, with a capacity to store 31,150 gallons of either hydrochloric acid solution or non-HAP/non-VOC product, controlled by a common control, identified as fume scrubber and exhausting through a stack, identified as S-3.

(k) One (1) natural gas fired boiler, constructed in 2016, maximum capacity of 6.6 MMBtu/hr., uncontrolled and exhausting through stack EP001.

(l) One (1) separator (same size and type of old separator), constructed in 2018. Separator serves as integral control device for PM, PM10, PM2.5, and HCl.

These emission units are identified under (326 IAC 2-1.1-3(e)(2) - (46)).
The total potential to emit of the emission units is less than levels specified at 326 IAC 2-1.1-3(e)(1)(A) through (G) (Exemptions) and the addition of the emission units did not require the source to transition to a higher operation permit level. Therefore, pursuant to 326 IAC 2-1.1-3(e), the modification approval requirements under 326 IAC 2-7-10, including the requirement to submit an application, did not apply to the emission units, constructed when the source was operating under TV permit.

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

### Emission Calculations

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

#### Permit Level Determination - MSOP

This table reflects the unrestricted potential emissions of the 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>Unrestricted Source-Wide Emissions (ton/year)</th>
<th>PM$^{1}$</th>
<th>PM$^{10}$</th>
<th>PM$^{2.5}$</th>
<th>SO$_{2}$</th>
<th>NO$_{x}$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP$^{3}$</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives*</td>
<td>53.94</td>
<td>67.84</td>
<td>67.84</td>
<td>0.17</td>
<td>15.72</td>
<td>1.57</td>
<td>24.02</td>
<td>9.28 (HCl)</td>
<td>10.09</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>--</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Total PTE of Entire Source Including Source-Wide Fugitives *</td>
<td>71.31</td>
<td>71.31</td>
<td>68.69</td>
<td>0.17</td>
<td>15.72</td>
<td>1.57</td>
<td>24.02</td>
<td>9.28 (HCl)</td>
<td>10.09</td>
</tr>
<tr>
<td>MSOP Thresholds</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>100</td>
<td>25</td>
<td></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.

The total PTE of the Entire Source reflects the potential to emit after integral controls on Roaster A and Roaster B.

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

(a) The potential to emit (as defined in 326 IAC 2-1.1-1) of PM10 and PM2.5 are less than one hundred (100) tons per year, but greater than or equal to twenty-five (25) tons per year. The potential to emit of all other criteria pollutants is less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. The source will be issued a Minor Source Operating Permit (MSOP).

(b) The potential to emit (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1) 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 Minor Source Operating Permit (MSOP).
Federal Rule Applicability Determination

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 Small Industrial-Commercial Institutional Steam Generating Units, 40 CFR 60, Subpart Dc and 326 IAC 12, are not included in the permit for the natural gas fired boiler, since it has a capacity of less than 10 MMBtu/hr.

(b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

On January 25, 2018, the U.S. EPA issued a guidance memorandum titled "Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act." This memorandum withdrew the 1995 policy regarding major sources of hazardous air pollutants (HAP) that became area sources commonly known as "once in, always in" (the OIAI policy). Under the 1995 policy, once a source was classified as a major source of HAP under Section 112 of the Clean Air Act (CAA) and determined to be subject to a major source NESHAP (MACT) the source remained subject to the major source NESHAP for perpetuity.

Effective immediately, the guidance memorandum titled "Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act." withdraws the 1995 policy commonly known as "once in, always in" (the OIAI policy). Based on the 2018 memorandum, a source that was previously classified as a major source of HAP under Section 112 of the Clean Air Act (CAA) and subject to a major source NESHAP, and which is now classified as an area source of HAP under Section 112 of the Clean Air Act (CAA), will no longer be subject to a NESHAP that was applicable to it as a major source of HAP.

A number of environmental organizations filed a March 26th Petition for Review ("Petition") in the United States Court of Appeals for the District of Columbia Circuit challenging a the 2018 memorandum rescinding its Clean Air Act "Once In, Always In" policy.

The 2018 memorandum can be found at the following internet site:

As a result of this change in U.S. EPA policy, IDEM, OAQ determined that the following major source NESHAP is no longer applicable to this source and have been removed from the permit:

National Emission Standards for Hazardous Air Pollutants for Steel Pickling - HCl Process Facilities and Hydrochloric Acid Regeneration Plants, 40 CFR 63, Subpart CCC.

(b) "The requirements of the NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJ (63.11193 through 63.11237), are not included in the permit for the natural gas fired boiler, as defined by 40 CFR 63.11237, which is specifically exempted from this rule under 40 CFR 63.11195(e).

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Hydrochloric Acid Production, 40 CFR 63, Subpart NNNNN and 326 IAC 20-76 are not included in the permit for this source, since the source is not located at a major source of HAPs.

(d) There are no other 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):

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

State Rule Applicability - Entire Source

326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the PTE of the Permit Level Determination - MSOP section of this document.

326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)
(a) The potential to emit of all PSD regulated pollutants from the entire source is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
(b) This existing stationary source is minor under Emission Offset (326 IAC 2-3) because the potential to emit of all nonattainment regulated pollutants, NOx and VOC, from the entire source is less than the Emission Offset major source threshold levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
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)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is located in Porter County, it has actual emissions of NOx and VOC of less than twenty-five (25) tons per year, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

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

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

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the source has the potential to emit fugitive particulate emissions. 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 Porter 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 Porter 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 Porter County) is not subject to the requirements of 326 IAC 6.8-10 because it is not located in Lake County.

State Rule Applicability - Individual Facilities

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

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(d), Enrichment Facility Boiler, which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

\[ Pt = \frac{1.09}{Q^{0.26}} \]

Where:

- Pt = 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.

Pursuant to 326 IAC 6-2-4(a), for Q less than 10 MMBtu/hr., Pt shall not exceed 0.6 lb./MMBtu.

| Indirect Heating Units Which Began Operation After September 21, 1983 |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Facility                    | Construction Date | Operating Capacity (MMBtu/hr.) | Q (MMBtu/hr.) | Calculated Pt (lb./MMBtu) | Particulate Limitation, (Pt) (lb./MMBtu) | PM PTE based on AP-42 (lb./MMBtu) |
| Enrichment Facility Boiler  | 2016             | 6.6                          | 6.6           | 0.667                      | 0.6                                 | 0.0019                            |

Using the emission factors and heating values provided, the following conclusions can be made:

\[ PM \text{ Emissions} \quad = \quad 1.9 \text{ lb. PM/MM SCF} \times \text{ MM SCF} / 1,020 \text{ MMBtu} \]
\[ = \quad 0.0019 \text{ lbs. /MMBtu} \]

The 0.0019 lbs./MMBtu emission rate estimated using the AP-42 emission factor is less than the 0.60 lb./MMBtu limit. Therefore, all heaters are able to comply with 326 IAC 6-2-4.
326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1 (b)(1), Enrichment Facility Boiler, is not subject to the requirements of 326 IAC 6-3, since it is a combustion emission unit for indirect heating.

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 Roaster A, Roaster B, Storage Bin A, Storage Bin B, Packaging Unit P1, Packaging Unit P2, and Mill Unit P3, since they are manufacturing processes 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).

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from Roaster A, Roaster B, Storage Bin A, Storage Bin B, Packaging Unit P1, Packaging Unit P2, and Mill Unit P3 were calculated with the following equation:

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
- \( P \) = process weight rate in tons per hour

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>( P ) (ton/hr.)</th>
<th>( E ) (lb./hr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roaster A</td>
<td>12</td>
<td>21.7</td>
</tr>
<tr>
<td>Roaster B</td>
<td>12</td>
<td>21.7</td>
</tr>
<tr>
<td>Storage Bin A</td>
<td>1.8</td>
<td>6.03</td>
</tr>
<tr>
<td>Storage Bin B</td>
<td>1.8</td>
<td>6.03</td>
</tr>
<tr>
<td>Packaging Unit P1</td>
<td>12</td>
<td>21.7</td>
</tr>
<tr>
<td>Packaging Unit P2</td>
<td>12</td>
<td>21.7</td>
</tr>
<tr>
<td>Mill Unit P3</td>
<td>24</td>
<td>34.48</td>
</tr>
</tbody>
</table>

Packaging units P1 and P2 total running time is only 2500 hours per year. Mill unit P3 running time is 1250 hour per year.

Based on calculations, the control equipment is not needed to comply with these limits. However, to assure compliance with these limits the integral venturi, separator, absorber, and packed bed scrubbers shall be in operation at all times Roaster A or/and Roaster B are in operation.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations
The burners for Roasters A and B; and the enrichment facility boiler are not subject to 326 IAC 326 IAC 7-1.1 because they have a potential to emit sulfur dioxide (SO2) of less than 25 tons per year or 10 pounds per hour, each.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Even though, the burners for Roasters A and B; and the enrichment facility boiler were constructed after January 1, 1980, they are not subject to the requirements of 326 IAC 8-1-6 because its unlimited VOC emissions are less than twenty-five (25) tons per year, each.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The requirements of 326 IAC 9-1 do not apply to the burners for Roasters A and B; and the enrichment facility boiler, 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.
326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the burners for Roasters A and B; and the enrichment facility boiler, 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).

Compliance Determination and Monitoring Requirements

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

Testing Requirements:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Control Device</th>
<th>Timeframe for Testing or Date of Latest Stack Test Valid Demonstration</th>
<th>Pollutant/Parameter</th>
<th>Frequency of Testing</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roaster A</td>
<td>Venturi, separator, absorber, and packed tower scrubbers</td>
<td>June 19, 2018 on Roaster A</td>
<td>HCl</td>
<td>every 5 years</td>
<td>326 IAC 2-6.1-5(a)(2)</td>
</tr>
<tr>
<td>Roaster B</td>
<td>Venturi, separator, absorber, and packed tower scrubbers</td>
<td>Not later than 180 days after restarting Roaster B</td>
<td>HCl</td>
<td>every 5 years</td>
<td>326 IAC 2-6.1-5(a)(2)</td>
</tr>
</tbody>
</table>

(1) In order for the venturies, separators, absorbers, and scrubbers to be integral to the process for HCl and the source to be an area source for HAPs, the testing for HCl is required.

(2) In order for the venturi, separator, absorber, and scrubbers to be integral control for PM, PM10, PM2.5, and HCl; and the source to be an area sorce for HAPs, these control devices shall operate all the times Roasters A or/and Roaster B are operating.

(3) The PM/PM10/PM2.5 testing requirements for Roasters A and B were removed in TV permit 127-35710-00039, because the integral control efficiency required to comply with PSD Limits are low.

Summary of Monitoring Requirements

<table>
<thead>
<tr>
<th>Integral controls</th>
<th>Type of Parametric Monitoring</th>
<th>Frequency</th>
<th>Range or Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final packed tower scrubber 2 for Roaster A</td>
<td>Make up water flow rate</td>
<td>Daily</td>
<td>Minimum value established during the performance test</td>
</tr>
<tr>
<td>Final packed tower scrubber 2 for Roaster B</td>
<td>Make up water flow rate</td>
<td>Daily</td>
<td>Minimum value established during the performance test</td>
</tr>
</tbody>
</table>
These monitoring conditions are necessary as controls are integral to the process for PM, PM10, PM2.5, and HCl.

The PM/PM10/PM2.5 compliance monitoring requirements for the Roasters A and B, were removed from the permit no. 127-35710-00039, because integral control efficiencies needed for Roasters A and B were low and the monitoring required by 40 CFR 63 fulfilled the monitoring requirements. After the issuance of this MSOP permit, the requirements of 40 CFR 63 will not apply because the source will become minor source for HAPs.

A typical scrubber used as a pollution control device operates by circulating a scrubbing solvent. As the solvent becomes more and more saturated with the acid being absorbed, the pH of the solvent drops. In this case, the pH acts as a good parameter to determine when the scrubbing solvent becomes inefficient and needs to be changed. The intent of the PVS process is to create an acid solution as the final product. The equipment (absorber, scrubber 1, and scrubber 2) are integral to this process. The scrubbing solvent is withdrawn from the absorber as an acid solution. Additional water must be added to the process. Unlike a typical scrubber, the scrubbing solvent (water) in PVS process is partially recirculated and partially cascades from scrubber 2 to scrubber 1 to the absorber. The pH of the scrubbing solvent decreases as the water recirculates and cascades. The scrubbing solvent is not changed, and a low pH is the desired intent as a part of the process. Fresh water is continually added to the process compensating for the scrubbing solvent withdrawn from the absorber as an acid solution. Therefore the pH will always be low as there always an acid content in the scrubbing solvent. The product being produced is acid, this is not an effective method for determining compliance as the final product will have a low pH. Therefore, pH is not being monitored.

Steve Friend of Compliance Data Section agrees with the compliance monitoring condition of only monitoring makeup water.

## 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 28, 2019. Additional information was received on April 15, May 8, May 13, July 8, and July 15, and August 22, 2019.

The operation of this source shall be subject to the conditions of the attached proposed MSOP No. 127-41257-00039. The staff recommends to the Commissioner that the MSOP be approved.

## IDEM Contact

(a) If you have any questions regarding this permit, please contact Dr. Trip Sinha, 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) 234-4907 or (800) 451-6027, and ask for Tripurari Sinha, PH. D. or (317) 234-4907.

(b) A copy of the findings is available on the Internet at: [http://www.in.gov/ai/appfiles/idem-caats/](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: [http://www.in.gov/idem/airquality/2356.htm](http://www.in.gov/idem/airquality/2356.htm); and the Citizens’ Guide to IDEM on the Internet at: [http://www.in.gov/idem/6900.htm](http://www.in.gov/idem/6900.htm).
# Appendix A: Emissions Calculations

## Emission Summary

**Source Name:** PVS Steel Services  
**Source Location:** 1111 North State Road 149, Burns Harbor, IN 46304  
**Permit Number:** M127-41257-00039  
**Reviewer:** Tripurari Sinha, Ph. D.

Unrestricted Potential to Emit with Integral Controls on Roaster A and Roaster B

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>PM  (tons/yr)</th>
<th>PM10 (tons/yr)</th>
<th>PM2.5 (tons/yr)</th>
<th>SO2 (tons/yr)</th>
<th>NOx (tons/yr)</th>
<th>VOC (tons/yr)</th>
<th>CO (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roaster A &amp; Roaster B*</td>
<td>12.53</td>
<td>12.53</td>
<td>12.53</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Burners for Roasters A &amp; B</td>
<td>0.49</td>
<td>1.96</td>
<td>1.96</td>
<td>0.15</td>
<td>12.88</td>
<td>1.42</td>
<td>21.64</td>
</tr>
<tr>
<td>Storage Bins A &amp; B</td>
<td>8.76</td>
<td>21.02</td>
<td>21.02</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HCL Storage and Loading</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>FeO Packaging and Milling</td>
<td>32.11</td>
<td>32.11</td>
<td>32.11</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enrichment Facility Boiler</td>
<td>0.05</td>
<td>0.22</td>
<td>0.22</td>
<td>0.02</td>
<td>2.83</td>
<td>0.16</td>
<td>2.38</td>
</tr>
<tr>
<td>Enrichment Facility Process Tank</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total PTE of Entire Source Excluding Fugitives</strong></td>
<td><strong>53.94</strong></td>
<td><strong>67.84</strong></td>
<td><strong>67.84</strong></td>
<td><strong>0.17</strong></td>
<td><strong>15.72</strong></td>
<td><strong>1.57</strong></td>
<td><strong>24.02</strong></td>
</tr>
<tr>
<td>Fug. Dust from the Road</td>
<td>17.37</td>
<td>3.47</td>
<td>0.85</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total PTE of Entire Source including Fugitives</strong></td>
<td><strong>71.31</strong></td>
<td><strong>71.31</strong></td>
<td><strong>68.69</strong></td>
<td><strong>0.17</strong></td>
<td><strong>15.72</strong></td>
<td><strong>1.57</strong></td>
<td><strong>24.02</strong></td>
</tr>
</tbody>
</table>

HAP Summary

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Single HAP (HCl)</th>
<th>Single HAP (Hexane)</th>
<th>Single HAP (Cl)</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roaster A &amp; Roaster B*</td>
<td>5.35</td>
<td>0.27</td>
<td>5.62</td>
<td></td>
</tr>
<tr>
<td>Burners for Roasters A &amp; B</td>
<td>0.46</td>
<td>-</td>
<td>0.49</td>
<td>-</td>
</tr>
<tr>
<td>Storage Bins A &amp; B</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HCL Storage and Loading</td>
<td>-</td>
<td>3.12</td>
<td>-</td>
<td>3.12</td>
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<tr>
<td>FeO Packaging and Milling</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enrichment Facility Boiler</td>
<td>0.05</td>
<td>-</td>
<td>-</td>
<td>0.05</td>
</tr>
<tr>
<td>Enrichment Facility Process Tank</td>
<td>-</td>
<td>0.81</td>
<td>-</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Total PTE of Entire Source Excluding Fugitives</strong></td>
<td><strong>0.51</strong></td>
<td><strong>9.28</strong></td>
<td><strong>0.27</strong></td>
<td><strong>10.09</strong></td>
</tr>
<tr>
<td>Fug. Dust from the Road</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total PTE of Entire Source Including Fugitives</strong></td>
<td><strong>0.51</strong></td>
<td><strong>9.28</strong></td>
<td><strong>0.27</strong></td>
<td><strong>10.09</strong></td>
</tr>
</tbody>
</table>
## Appendix A: Emissions Calculations

### Emission Summary

Source Name: PVS Steel Services  
Source Location: 1111 North State Road 149, Burns Harbor, IN 46304  
Permit Number: M127-41257-00039  
Reviewer: Tripurari Sinha, Ph. D.

### Unrestricted Potential to Emit without Integral Controls

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>PM (tons/yr)</th>
<th>PM$_{10}$ (tons/yr)</th>
<th>PM$_{2.5}$ (tons/yr)</th>
<th>SO$_2$ (tons/yr)</th>
<th>NOx (tons/yr)</th>
<th>VOC (tons/yr)</th>
<th>CO (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roaster A &amp; Roaster B</td>
<td>125.27</td>
<td>125.27</td>
<td>125.27</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Burners for Roasters A &amp; B</td>
<td>0.49</td>
<td>1.96</td>
<td>1.96</td>
<td>0.15</td>
<td>12.88</td>
<td>1.42</td>
<td>21.64</td>
</tr>
<tr>
<td>Storage Bins A &amp; B</td>
<td>8.76</td>
<td>21.02</td>
<td>21.02</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HCL Storage and Loading</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>FeO Packaging and Milling</td>
<td>32.11</td>
<td>32.11</td>
<td>32.11</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Enrichment Facility Boiler</td>
<td>0.05</td>
<td>0.22</td>
<td>0.22</td>
<td>0.02</td>
<td>2.83</td>
<td>0.16</td>
<td>2.38</td>
</tr>
<tr>
<td>Enrichment Facility Process Tank</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fug. Emiss. From Road</td>
<td>17.37</td>
<td>3.47</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Emissions</strong></td>
<td><strong>166.68</strong></td>
<td><strong>180.58</strong></td>
<td><strong>180.58</strong></td>
<td><strong>0.17</strong></td>
<td><strong>15.72</strong></td>
<td><strong>1.57</strong></td>
<td><strong>24.02</strong></td>
</tr>
</tbody>
</table>

### Unrestricted HAPs Potential to Emit without Integral Controls

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>HAP</th>
<th>Worst Case</th>
<th>Single (tons/yr)</th>
<th>Total (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roaster A &amp; Roaster B</td>
<td>HCl</td>
<td>26.280</td>
<td>56.185</td>
<td></td>
</tr>
<tr>
<td>Burners for Roasters A &amp; B</td>
<td>Hexane</td>
<td>0.464</td>
<td>0.486</td>
<td></td>
</tr>
<tr>
<td>Storage Bins A &amp; B</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>HCL Storage and Loading</td>
<td>HCl</td>
<td>3.124</td>
<td>3.124</td>
<td></td>
</tr>
<tr>
<td>FeO Packaging and Milling</td>
<td>Hexane</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Enrichment Facility Boiler</td>
<td>Hexane</td>
<td>0.051</td>
<td>0.051</td>
<td></td>
</tr>
<tr>
<td>Enrichment Facility Process Tank</td>
<td>HCl</td>
<td>0.805</td>
<td>0.805</td>
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</tr>
<tr>
<td><strong>Total Emissions</strong></td>
<td><strong>HCl</strong></td>
<td><strong>30.724</strong></td>
<td><strong>60.651</strong></td>
<td></td>
</tr>
</tbody>
</table>
Appendix A: Emissions Calculations
Roaster A and B Controlled by One Absorber and Two Water Scrubbers in Series
Roasters A & B

Company Name: PVS Steel Services
Address City IN Zip: 1111 North State Road 149, Burns Harbor, IN 46304
Permit ID: M127-41257-00039
Reviewer: Tripurari Sinha, Ph. D.

<table>
<thead>
<tr>
<th>Emissions (lb/hr)</th>
<th>Emissions (TPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM/PM10/PM2.5</td>
<td>14.30</td>
</tr>
<tr>
<td></td>
<td>62.63</td>
</tr>
<tr>
<td>HCl</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>13.14</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>6.41</td>
</tr>
<tr>
<td></td>
<td>28.09</td>
</tr>
</tbody>
</table>

Unrestricted Potential Emissions of HCl without Integral Controls (TPY) = 2.90*(12 tpy/11.6 tpy)
from stack test results (lb/hr)*(Tested at PWR 11.60 ton/hr and max cap is 12 ton/hr)

<table>
<thead>
<tr>
<th>Emissions (lb/hr)</th>
<th>Emissions (TPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>6.26</td>
</tr>
<tr>
<td>PM10</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>6.26</td>
</tr>
<tr>
<td>PM2.5</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>6.26</td>
</tr>
<tr>
<td>HCl</td>
<td>0.61</td>
</tr>
<tr>
<td></td>
<td>2.67</td>
</tr>
<tr>
<td>CI</td>
<td>0.031</td>
</tr>
<tr>
<td></td>
<td>0.14</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>0.641</td>
</tr>
<tr>
<td></td>
<td>2.809</td>
</tr>
</tbody>
</table>

Tested rate at PWR for Roaster A for HCl and Cl2 11.60 ton/hr
Max capacity 12.00 ton/hr

Notes:
The integral controls for PM, PM10, PM2.5, HCl, and Cl2 are the venturi, separator, absorber, and packed towers.
Unrestricted Potential Emissions of PM, PM10, and PM2.5 with Integral Controls (TPY) = 5/28/2014 stack test results (lb/hr) * conversion (8760 hr/yr) * conversion (1 ton/2000 lbs)*(Maxm PWR/Tested PWR)
Unrestricted Potential Emissions of HCl and Cl2 with Integral Controls (TPY) = 6/19/2018 stack test results (lb/hr) * conversion (8760 hr/yr) * conversion (1 ton/2000 lbs)
Total emission TPY = Roaster A Emissions (TPY) + Roaster B Emissions (TPY)
Total HAPs (TPY) = HCl + CI

Assumptions:
Roaster B emission are equal to Roaster A emission.
**Roasters A & B each with 30 MMBtu per hour natural gas burners**

Company Name: PVS Steel Services  
Address City IN Zip: 1111 North SR 149, Burns Harbor, IN 46304  
Permit ID: M127-41257-00039  
Reviewer: Tripurari Sinha, Ph. D.

### Emission Calculations

#### Natural Gas Combustion Only

<table>
<thead>
<tr>
<th>Heat Input Capacity</th>
<th>HHV MMBtu/hr</th>
<th>Potential Throughput MMscf</th>
<th>MCF/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>60.0</td>
<td>1020</td>
<td>515.3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/MMCF</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM1*</td>
<td>1.9</td>
<td>0.49</td>
</tr>
<tr>
<td>PM10*</td>
<td>7.6</td>
<td>1.96</td>
</tr>
<tr>
<td>Direct PM2.5*</td>
<td>7.6</td>
<td>1.96</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>0.15</td>
</tr>
<tr>
<td>NOx 50</td>
<td><strong>see below</strong></td>
<td>12.88</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>1.42</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>21.64</td>
</tr>
</tbody>
</table>

**PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission factor is filterable and condensable PM2.5 combined.**

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32**

### Methodology

All emission factors are based on normal firing.  
MMBtu = 1,000,000 Btu  
MMCF = 1,000,000 Cubic Feet of Gas  
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03  
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu  
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF) / 2,000 lb/ton

### HAPS Calculations

#### HAPs - Organics

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Benzene 2.1E-03</th>
<th>Dichlorobenzene 1.2E-03</th>
<th>Formaldehyde 7.5E-02</th>
<th>Hexane 1.6E+00</th>
<th>Toluene 3.4E-03</th>
<th>Total - Organics 4.848E-01</th>
</tr>
</thead>
</table>

#### HAPs - Metals

<table>
<thead>
<tr>
<th>Emission Factor in lb/MMCF</th>
<th>Lead 5.0E-04</th>
<th>Cadmium 1.1E-03</th>
<th>Chromium 1.4E-03</th>
<th>Manganese 3.8E-04</th>
<th>Nickel 2.1E-03</th>
<th>Total - Metals 1.412E-03</th>
</tr>
</thead>
</table>

**Methodology is the same as above.**

The five highest organic and metal HAPs emission factors are provided above. Additional HAP's emission factors are available in AP-42, Chapter 1.4.
Appendix A: Emissions Calculations

HCl Storage and Loading

<table>
<thead>
<tr>
<th>Number of Tanks</th>
<th>Tank ID</th>
<th>Product</th>
<th>Tank Type</th>
<th>Tank Color</th>
<th>Tank Dimensions (Max (\text{min} \text{ Liquid Volume})</th>
<th>HAP Throughput (gallons/year)</th>
<th>HAP Working Losses (lbs/yr)</th>
<th>HAP Standing Losses (lbs/yr)</th>
<th>Total HAP Losses (lbs/yr)</th>
<th>Control Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>RA Tanks 1, 2, 3, 4, 5, 6</td>
<td>18% HCl Solution</td>
<td>AST/Vertical yellow</td>
<td>38 x 12</td>
<td>33,375</td>
<td>26,425</td>
<td>500</td>
<td>0</td>
<td>2,428.13</td>
<td>2,428.13</td>
</tr>
<tr>
<td>10</td>
<td>WPL Tanks 1, 2, 3, 4, 5, 6, 7, 8, 9, 10</td>
<td>Mixed Solution FeCl2-21%, HCl-2.5%, rest water</td>
<td>AST/Vertical yellow</td>
<td>38 x 12</td>
<td>33,375</td>
<td>34,042</td>
<td>500</td>
<td>0</td>
<td>695.98</td>
<td>695.98</td>
</tr>
</tbody>
</table>

Total: 3,137.13 lbs/yr

Basis of Calculations:

- 18% HCl vent vapor composition
- WPL vent vapor composition
- WPL Composition

<table>
<thead>
<tr>
<th>Temp</th>
<th>mole %</th>
<th>Mass</th>
<th>mass %</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 deg C</td>
<td>6.66 mmHg</td>
<td>1.13</td>
<td>41.26</td>
</tr>
<tr>
<td>176 deg F</td>
<td>90 deg C</td>
<td>0.28</td>
<td>6.72</td>
</tr>
<tr>
<td>80 deg C</td>
<td>1.4 mmHg</td>
<td>0.18</td>
<td>6.72</td>
</tr>
<tr>
<td>176 deg F</td>
<td>90 deg C</td>
<td>0.28</td>
<td>6.72</td>
</tr>
</tbody>
</table>

- Vapor pr of HCl
- Vapor pr of FeCl2
- Vapor pr of water
- Air

| Total HCl release from RA Tanks | 2,428.13 lbs/yr |
| HCl release from WPL Tanks | 695.98 lbs/yr |
Appendix A: Emissions Calculations
Iron Oxide Storage Bins Controlled by Baghouse
Storage Bins A and B

Company Name: PVS Steel Services
Address City IN Zip: 1111 North SR 149, Burns Harbor, IN 46304
Permit ID: M127-41257-00039
Reviewer: Tripurari Sinha, Ph. D.

<table>
<thead>
<tr>
<th>Unrestricted Potential Emissions</th>
<th>Iron Oxide Storage Bin A</th>
<th>Iron Oxide Storage Bin B</th>
<th>Uncontrolled Total Storage Bin Emissions (TPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Emissions (lb/hr)</td>
<td>PM</td>
<td>PM</td>
<td></td>
</tr>
<tr>
<td>Potential Emissions (TPY)</td>
<td>1.00</td>
<td>1.00</td>
<td>8.76</td>
</tr>
<tr>
<td>Potential Emissions (lb/hr)</td>
<td>PM10/PM2.5</td>
<td>PM10/PM2.5</td>
<td></td>
</tr>
<tr>
<td>Potential Emissions (TPY)</td>
<td>2.40</td>
<td>2.40</td>
<td>21.02</td>
</tr>
</tbody>
</table>

| Controlled Emissions (lb/hr)    | Controlled Emissions (TPY) |
| Filterable PM                   | 0.05                      | 0.22                      | 0.05                                           |
| Condensable PM                  | 0.07                      | 0.31                      | 0.07                                           |
| PM                               | 0.05                      | 0.22                      | 0.05                                           |
| PM10/PM2.5                      | 0.12                      | 0.53                      | 0.12                                           |

The 326 IAC 6-3-2 limit is 6.03 lb/hr. The storage bin complies with the PM limit without controls.

Storage Bin B emission are equal to Storage Bin A emission, since they have the same process weight rate of 1.8 tons/hr.

Methodology
PM is equal to filterable PM.
PM10 and PM2.5 is equal to filterable PM plus condensable PM
Unrestricted Potential Emissions without controls PM (lb/hr) = Controlled Emissions lb/hr / (1.0 - 0.95 control efficiency)
Unrestricted Potential Emissions without Controls PM10/PM2.5 (lb/hr) = Controlled Emissions lb/hr / (1.0 - 0.95 control efficiency)
TPY = Potential Emissions lb/hr * 8760 hr/yr * 1 ton/2000 lb
Total Storage Bin Emissions (TPY) = Storage Bin A Emission (TPY) + Storage Bin B Emission (TPY)
### Bagging and Milling Process

**Company Name:** PVS Steel Services  
**Address City IN Zip:** 1111 North State Road 149  
**Permit ID:** M127-41257-00039  
**Reviewer:** Tripurari Sinha, Ph. D.

<table>
<thead>
<tr>
<th>Emission Unit Description</th>
<th>Inlet grain (gr/acf)</th>
<th>Outlet grain (gr/acf)</th>
<th>Flow Rate (acfm)</th>
<th>Operating Hours (hr/yr)</th>
<th>Unrestricted Potential Emissions* (tons/yr)</th>
<th>Unrestricted Potential Emissions* (lbs/hr)</th>
<th>Control Efficiency (%)</th>
<th>Controlled Potential Emissions (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging Unit P-1 or P-2</td>
<td>3.0</td>
<td>0.03</td>
<td>666</td>
<td>2500</td>
<td>17</td>
<td>21.4</td>
<td>99%</td>
<td>0.2</td>
</tr>
<tr>
<td>P-3 Milling Unit Loading</td>
<td>3.0</td>
<td>0.03</td>
<td>666</td>
<td>1250</td>
<td>17</td>
<td>10.7</td>
<td>99%</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>32.1</strong></td>
<td><strong>0.3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>0.3</strong></td>
</tr>
</tbody>
</table>

The source has a bottleneck of 30,000 tons/yr, each bag fill of 1 ton takes 5 min. Therefore, total operating time is 2500 hrs/yr.

The process weight rate for bagging is 12 tons per hour based on 30,000 tons per year capacity and 2500 hours.

P-3 will run half the time of Bagging Units (1250 hrs).

The capacity of Milling unit is also 30,000 tons/yr.

The process weight rate for milling is 24 tons per hour based on 30,000 tons per year capacity and 1250 hours.

**METHODOLOGY**

*Uncontrolled Potential Emissions (tons/yr) = Inlet Gran (gr/acf) * Flow Rate (acfm) * 1 lb/7000 gr* 60 min/hr * 2500 hrs/yr * 1 ton/2000 lbs

*Uncontrolled Potential Emissions (lbs/hr) = Inlet Gran (gr/acf) * Flow Rate (acfm) * 1 lb/7000 gr* 60 min/hr
### One four (4) MMBtu per hour Boiler associated with

**Company Name:** PVS Steel Services  
**Address City IN Zip:** 1111 North SR 149, Burns Harbor, IN 46304  
**Permit ID:** M127-41257-00039  
**Reviewer:** Tripurari Sinha, Ph. D.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/MMCF</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>1.9</td>
<td>0.05</td>
</tr>
<tr>
<td>PM10*</td>
<td>7.6</td>
<td>0.22</td>
</tr>
<tr>
<td>direct PM2.5*</td>
<td>7.6</td>
<td>0.22</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>0.02</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>2.83</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>0.16</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>2.38</td>
</tr>
</tbody>
</table>

**PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission factor is filterable and condensable PM2.5 combined.**

**Emission Factors for NOx:** Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

### Methodology

All emission factors are based on normal firing.

MMBTu = 1,000,000 Btu  
MMCF = 1,000,000 Cubic Feet of Gas  
Potential Throughput (MMCF) = Heat Input Capacity (MMBTu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu  
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

### HAPS Calculations

#### HAPS - Organics

<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></td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>5.952E-05</td>
<td>3.401E-05</td>
<td>2.126E-03</td>
<td>5.101E-02</td>
<td>9.636E-05</td>
<td>5.333E-02</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>
<tr>
<td>Potential Emission in tons/yr</td>
<td>1.417E-05</td>
<td>3.118E-05</td>
<td>3.968E-05</td>
<td>1.077E-05</td>
<td>5.952E-05</td>
<td>1.553E-04</td>
</tr>
</tbody>
</table>

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
Enrichment Facility Including One (1) Process Tank Controlled by an Acid Fume Scrubber

Company Name: PVS Steel Services
Address City IN Zip: 1111 North SR 149, Burns Harbor, IN 46304
Permit ID: M127-41257-00036
Reviewer: Tripurari Sinha, Ph. D.

Uncontrolled HCl Emissions

\[
\frac{4.17 \text{ lb-mole flow (hr)}}{\text{lb-mole}} \times \frac{0.0012 \text{ lb-mole HCl}}{\text{lb-mole}} = \frac{0.005 \text{ HCl lb-moles}}{\text{hr}}
\]

\[
\frac{0.005 \text{ HCl lb-moles}}{\text{hr}} \times \frac{36.44 \text{ lbs}}{\text{lb-mole HCl}} = \frac{0.18 \text{ HCl lbs}}{\text{hr}}
\]

\[
\frac{0.18 \text{ HCl lbs}}{\text{hr}} \times \frac{8760 \text{ hrs}}{\text{yr}} \div \frac{2000 \text{ lbs}}{\text{hr}} = \frac{0.81 \text{ HCl tons}}{\text{yr}}
\]

Controlled HCl Emissions

\[
\frac{0.81 \text{ Uncontrolled HCl tons yr}}{\text{yr}} \times (100\% \text{ percent} \div 95\% \text{ percent efficient}) = \frac{0.04 \text{ HCl tons yr}}{\text{yr}}
\]
Paved Roads at Industrial Site

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

Vehicle Information (provided by source)

<table>
<thead>
<tr>
<th>Type</th>
<th>Maximum number of vehicles per day</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 (feet/trip)</th>
<th>Maximum one-way distance (miles/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)</td>
<td>10.0</td>
<td>2.0</td>
<td>20.0</td>
<td>40.0</td>
<td>850.0</td>
<td>2640</td>
<td>0.500</td>
<td>10.0</td>
<td>3,650.0</td>
</tr>
<tr>
<td>Vehicle (leaving plant)</td>
<td>6.0</td>
<td>2.0</td>
<td>12.0</td>
<td>40.0</td>
<td>480.0</td>
<td>2640</td>
<td>0.500</td>
<td>6.0</td>
<td>2,190.0</td>
</tr>
<tr>
<td>Vehicle (entering plant)</td>
<td>3.0</td>
<td>2.0</td>
<td>6.0</td>
<td>65.0</td>
<td>390.0</td>
<td>2640</td>
<td>0.500</td>
<td>3.0</td>
<td>1,095.0</td>
</tr>
<tr>
<td>Vehicle (leaving plant)</td>
<td>3.0</td>
<td>2.0</td>
<td>6.0</td>
<td>65.0</td>
<td>390.0</td>
<td>2640</td>
<td>0.500</td>
<td>3.0</td>
<td>1,095.0</td>
</tr>
<tr>
<td>Vehicle (leaving plant)</td>
<td>4.0</td>
<td>2.0</td>
<td>8.0</td>
<td>20.0</td>
<td>160.0</td>
<td>2640</td>
<td>0.500</td>
<td>4.0</td>
<td>540.0</td>
</tr>
<tr>
<td>Totals</td>
<td>52.0</td>
<td></td>
<td></td>
<td></td>
<td>2220.0</td>
<td></td>
<td>26.0</td>
<td></td>
<td>9,490.0</td>
</tr>
</tbody>
</table>

Average Vehicle Weight Per Trip = \[\frac{\text{Average Miles Per Trip}}{\text{Average Vehicle Weight Per Trip}}\] = 42.7 tons/trip

Average Miles Per Trip = \[\frac{\text{Total Weight driven per day (ton/day)}}{\text{Maximum trips per day (trip/day)}}\] = 0.50 miles/trip

Unmitigated Emission Factor, \( \text{EF} = \left[ k \times (sL)^{0.91} \times (W)^{1.02} \right] \) (Equation 1 from AP-42 13.2.1)

where

- \( k \) = 0.011 PM, 0.002 PM10, 0.00054 PM2.5
- \( W \) = 42.7 average vehicle weight (provided by source)
- \( sL \) = 9.7 silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, \( \text{Eext} = \text{EF} \times \left[ 1 - \left( \frac{p}{4N} \right) \right] \) (Equation 2 from AP-42 13.2.1)

where

- \( p \) = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
- \( N \) = 365 days per year

Unmitigated Emission Factor, \( \text{EF} = \frac{\text{PM}}{\text{PM10}} \times \frac{\text{PM2.5}}{\text{PM10}} \) b/mile

Mitigated Emission Factor, \( \text{Eext} = \text{EF} \times \left[ 1 - \left( \frac{p}{4N} \right) \right] \) b/mile

<table>
<thead>
<tr>
<th>Process</th>
<th>Unmitigated PTE of PM (tons/yr)</th>
<th>Unmitigated PTE of PM10 (tons/yr)</th>
<th>Unmitigated PTE of PM2.5 (tons/yr)</th>
<th>Mitigated PTE of PM (tons/yr)</th>
<th>Mitigated PTE of PM10 (tons/yr)</th>
<th>Mitigated PTE of PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle (entering plant)</td>
<td>9.90</td>
<td>1.90</td>
<td>0.47</td>
<td>8.63</td>
<td>1.74</td>
<td>0.43</td>
</tr>
<tr>
<td>Vehicle (leaving plant)</td>
<td>9.90</td>
<td>1.90</td>
<td>0.47</td>
<td>8.63</td>
<td>1.74</td>
<td>0.43</td>
</tr>
<tr>
<td>Totals</td>
<td>18.99</td>
<td>3.80</td>
<td>0.93</td>
<td>17.37</td>
<td>3.47</td>
<td>0.85</td>
</tr>
</tbody>
</table>

Methodology

- Maximum one-way distance (miles/yr) = \[\text{Maximum one-way distance (miles/trip)} \times \frac{\text{Maximum trips per year (trip/day)}}{\text{Maximum one-way distance (miles/yr)}}\]
- Average Miles Per Trip (miles/trip) = \[\text{SUM} \times \text{Maximum one-way distance (miles/trip)} / \text{SUM} \times \text{Maximum trips per year (trip/day)}\]
- Unmitigated PTE (tons/yr) = \[\text{SUM} \times \text{Maximum one-way distance (miles/trip)} / \text{SUM} \times \text{Maximum trips per year (trip/day)}\]

Abbreviations

- PM = Particulate Matter
- PM10 = Particulate Matter (<10 um)
- PM2.5 = Particle Matter (<2.5 um)
- PTE = Potential to Emit
September 4, 2019

Mr. Calvin Thomas
PVS Steel Services
1111 North State Road 149
Burns Harbor, IN  46304

Re: Public Notice
PVS Steel Services
Permit Level: MSOP
Permit Number: 127-41257-00039

Dear Mr. Thomas:

Enclosed is a copy of your draft MSOP, Technical Support Document, emission calculations, and the Public Notice.

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/5474.htm

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 Westchester Public Library, 200 W. Indiana Avenue in Chesterton, IN  46304. 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 enclosed 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 Tripurari Sinha, PH.D., 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 4-4907 or dial (317) 234-4907.

Sincerely,

Vicki Biddle

Vicki Biddle
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter 4/12/19
September 4, 2019

To: Westchester 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: PVS Steel Services
Permit Number: 127-41257-00039

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 Smiddie-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

September 4, 2019
PVS Steel Services
127-41257-00039

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/5474.htm](https://www.in.gov/idem/5474.htm).

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 Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@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.

Enclosure
PN AAA Cover Letter 4/12/2019
Mail Code 61-53

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<th>VBIDDLE 9/4/2019</th>
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<td>Calvin Thomas  PVS Steel Services Inc 1111 N SR 149 Burns Harbor IN 46304 (Source CAATS)</td>
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<td>Mr. Ed Dybel 900 Parker Place, Suite A Schererville IN 46325-1482 (Affected Party)</td>
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Total number of pieces Listed by Sender: 14
Total number of Pieces Received at Post Office: 14
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 on 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 of coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.