



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204  
(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

**Michael R. Pence**  
Governor

**Thomas W. Easterly**  
Commissioner

To: Interested Parties

Date: January 15, 2015

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

Source Name: Endress+Hauser Flowtec AG, Division U.S.A.

Permit Level: Minor Source Operating Permit (MSOP) Administrative Amendment

Permit Number: 081-35275-00062

Source Location: 2330 Endress Place  
Greenwood, Indiana

Type of Action Taken: Changes that are administrative in nature

## Notice of Decision: Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>  
To view the document, select Search option 3, then enter permit 35275.

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

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

*(continues on next page)*

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

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

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

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

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



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

Michael R. Pence  
Governor

Thomas W. Easterly  
Commissioner

January 15, 2015

Bart King  
Endress + Hauser Flowtec AG, Division U.S.A.  
2330 Endress Place  
Greenwood, IN, 46143

Re: 081-35275-00062  
Administrative Amendment to  
M081-32844-00062

Dear Mr. King:

Endress + Hauser Flowtec AG, Division U.S.A. was issued a Minor Source Operating Permit (MSOP) Renewal No. M081-32844-00062 on May 29, 2013 for a stationary flowtube manufacturing source located at 2330 Endress Place, Greenwood, IN, 46143. On December 22, 2014, the Office of Air Quality (OAQ) received an application from the source requesting to the installation of a new hard rubber lining operation and updating the description of EU-1.

Pursuant to the provisions of 326 IAC 2-6.1-6(d)(11), the permit is hereby administratively amended as described in the attached Technical Support Document.

All other conditions of the permit shall remain unchanged and in effect. Please find attached the entire MSOP as amended. The permit references the below listed attachment. Since this attachment has been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of this attachment with this amendment:

Attachment A: 40 CFR 63, Subpart XXXXXX, National Emissions Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

Previously issued approvals for this source containing these attachments are available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>.

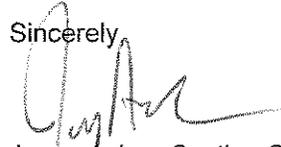
Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: [http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl).

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



This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.  
If you have any questions on this matter, please contact Julie Alexander of my staff at 317-233-1782 or 1-800-451-6027, and ask for extension 3-1782.

Sincerely,



Jenny Acker, Section Chief  
Permits Branch  
Office of Air Quality

Attachments: TSD, Updated Permit and Appendix A

JA/jla

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



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Michael R. Pence*  
Governor

*Thomas W. Easterly*  
Commissioner

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

## Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY

Endress+Hauser Flowtec AG, Division U.S.A.  
2330 Endress Place  
Greenwood, Indiana 46143

(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.: M081-32844-00062	
Issued by: <i>Original Signed:</i> Jenny Acker, Section Chief Permits Branch Office of Air Quality	Issuance Date: May 29, 2013  Expiration Date: May 29, 2023

Administrative Amendment No.: 081-35275-00062	
Issued by:  Jenny Acker, Section Chief Permits Branch Office of Air Quality	Issuance Date: January 15, 2015  Expiration Date: May 29, 2023

## TABLE OF CONTENTS

<b>SECTION A</b>	<b>SOURCE SUMMARY .....</b>	<b>4</b>
A.1	General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)].....	4
A.2	Emission Units and Pollution Control Equipment Summary.....	4
<b>SECTION B</b>	<b>GENERAL CONDITIONS.....</b>	<b>6</b>
B.1	Definitions [326 IAC 2-1.1-1].....	6
B.2	Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)].....	6
B.3	Term of Conditions [326 IAC 2-1.1-9.5] .....	6
B.4	Enforceability.....	6
B.5	Severability.....	6
B.6	Property Rights or Exclusive Privilege .....	6
B.7	Duty to Provide Information .....	6
B.8	Annual Notification [326 IAC 2-6.1-5(a)(5)].....	7
B.9	Preventive Maintenance Plan [326 IAC 1-6-3].....	7
B.10	Prior Permits Superseded [326 IAC 2-1.1-9.5] .....	8
B.11	Termination of Right to Operate [326 IAC 2-6.1-7(a)].....	8
B.12	Permit Renewal [326 IAC 2-6.1-7] .....	8
B.13	Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6] .....	9
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].....	9
B.16	Transfer of Ownership or Operational Control [326 IAC 2-6.1-6] .....	10
B.17	Annual Fee Payment [326 IAC 2-1.1-7] .....	10
B.18	Credible Evidence [326 IAC 1-1-6] .....	10
<b>SECTION C</b>	<b>SOURCE OPERATION CONDITIONS.....</b>	<b>11</b>
	<b>Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)].....</b>	<b>11</b>
C.1	Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2].....	11
C.3	Opacity [326 IAC 5-1].....	11
C.4	Open Burning [326 IAC 4-1][IC 13-17-9] .....	11
C.5	Incineration [326 IAC 4-2][326 IAC 9-1-2].....	11
C.6	Fugitive Dust Emissions [326 IAC 6-4] .....	12
C.7	Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M] .....	12
C.8	Performance Testing [326 IAC 3-6] .....	13
C.9	Compliance Requirements [326 IAC 2-1.1-11] .....	13
C.10	Compliance Monitoring [326 IAC 2-1.1-11].....	13
C.11	Instrument Specifications [326 IAC 2-1.1-11] .....	13
	<b>Corrective Actions and Response Steps.....</b>	<b>14</b>
C.12	Response to Excursions or Exceedances .....	14
C.13	Actions Related to Noncompliance Demonstrated by a Stack Test .....	14
	<b>Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)].....</b>	<b>15</b>
C.14	Malfunctions Report [326 IAC 1-6-2].....	15
C.15	General Record Keeping Requirements [326 IAC 2-6.1-5] .....	15
C.16	General Reporting Requirements [326 IAC 2-1.1-11][326 IAC 2-6.1-2][IC 13-14-1-13] .....	15
<b>SECTION D.1</b>	<b>EMISSIONS UNIT OPERATION CONDITIONS .....</b>	<b>17</b>
	<b>Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)].....</b>	<b>17</b>
D.1.1	Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2] .....	17
D.1.2	326 IAC 8-2-9 (Miscellaneous metal coating operations) .....	18
D.1.3	Preventative Maintenance Plan [326 IAC 2-6.1(b)] .....	18

D.1.4	Particulate Matter (PM)	18
D.1.5	Cartridges and Pulse Jet Bags Failure Detection	18
D.1.6	Volatile Organic Compounds	18
D.1.7	Record Keeping Requirements	18
D.1.8	Reporting Requirements	19
<b>SECTION E.1</b>	<b>EMISSIONS UNIT OPERATION CONDITIONS</b>	<b>20</b>
	<b>National Emission Standards for Hazardous Air Pollutants Requirements</b>	<b>20</b>
E.1.1	General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]	20
E.1.2	National Emissions Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories [40 CFR Part 63, Subpart XXXXXX]	21
	<b>ANNUAL NOTIFICATION</b>	<b>22</b>
	<b>MSOP Quarterly Report</b>	<b>23</b>
	<b>MALFUNCTION REPORT</b>	<b>24</b>

**Attachment A: NESHAP, Subpart XXXXXX**

## 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 flowtube manufacturing source.

Source Address:	2330 Endress Place, Greenwood, Indiana 46143
General Source Phone Number:	(317) 535-1357
SIC Code:	3317
County Location:	Johnson
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary

---

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

- (a) One (1) Zinc Coating Operation, consisting of one (1) Zinc Coating Booth, using Thermal Arc Spray method, approved in 2008 for construction, with a maximum capacity of coating six (6) flow-tubes per hour, using filters for particulate control, exhausting to outdoors, and one (1) Zinc Shot Blasting System, approved in 2008 for construction, with maximum capacity of 2,896 pounds of steel per hour, using cartridges and pulse jet bags for particulate control, exhausting to outdoors.
- (b) One (1) painting operation, identified as EU-3, approved in 2008 for construction, consisting of a paint booth, using HVLP spray gun and electric dryer, with usage of 12.1 pounds of coating per flowtube and maximum process rate of 0.625 flowtube per hour, using filters (CE-3) for particulate control, and exhausting outdoors through a stack (S-1).
- (c) One (1) Gibson centrifugal wheel shotblasting machine, identified as EU-2, approved in 2008 for construction, with a maximum usage of 15 pounds of steel shot per hour, using a cartridge dust collector (CE-2) and bag filters for particulate control, and exhausting indoors.
- (d) One (1) polyurethane lining operation, identified as EU-4, approved in 2008 for construction, with maximum usage of 1.88 pounds of Polyurethane Liner Component A per hour, 0.20 pounds of Polyurethane Liner Component B per hour, 0.04 pounds of Polyurethane Liner Component C per hour, 0.03 pounds of Primer Component A per hour, and 0.02 pounds of Primer Component B per hour and exhausting indoors.
- (e) Welding operations, identified as EU-1, approved in 2008 for construction and approved in 2010 for modification, consisting of one (1) mantle station (MIG) and one (1) EWM welding station (MIG) with a maximum usage of one (1) pound of electrode per hour for MIG welding, using fume extractors, and exhausting indoors.

- (f) Welding operations, identified as EU-5, approved in 2008 for construction and modified in 2012, consisting of one (1) mounting station (MIG and TIG), one (1) OD welder (MIG), one (1) ID welder (TIG), and one (1) block welding station (TIG) with a maximum usage of 1 pound electrode per hour for MIG welding and 0.1 pounds electrode per hour for TIG welding, using dust collector (CE-4) for particulate control, and exhausting indoors.
- (g) Welding operations, identified as EU-6, permitted in 2013, consisting of four (4) coriolis welding stations (TIG) with a maximum usage of 0.1 pounds electrode per hour, using mobile fume extractors with filters (CE-5) for particulate control, and exhausting indoors.
- (h) Six (6) natural gas fired air handling units used for building heating and cooling, approved in 2008 for construction, with a combined heat input rate of 2.38 MMBtu/hr.
- (i) Surface grinding and cutting operations (excluding cutting torches), using hand-held equipment only, and approved in 2008 for constructed.
- (j) One (1) hard rubber lining operation, identified as EU-7, permitted in 2015, consisting of the following:
  - (1) One (1) abrasive blast booth with a maximum usage of 60 pounds of steel shot per hour.
  - (2) One (1) adhesive and primer booth, using rollers, with maximum capacity of 0.03 flowtubes per hour.
  - (3) One (1) electric autoclave with a maximum capacity of 30 flowtubes/day.

Under NESHAP, 40 CFR 63, Subpart XXXXXX, Zinc Shot Blasting System, Gibson centrifugal wheel shotblasting machine (EU-2), Welding operations (EU-1 and EU-5), surface grinding and cutting operations are considered new affected source because the operations at these facilities involve usage of materials that contain finishing metal HAPs (MFHAP) (i.e., compounds of cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form with the exception of lead) or these facilities have potential to emit of finishing metal HAPs (MFHAP).

## 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, M081-32844-00062, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

---

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

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### B.4 Enforceability

---

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

### B.5 Severability

---

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

### B.6 Property Rights or Exclusive Privilege

---

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

### B.7 Duty to Provide Information

---

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

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

---

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

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

---

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.The Permittee shall implement the PMPs.
- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The Permittee shall implement the PMPs.

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

**B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

---

- (a) All terms and conditions of permits established prior to M081-32844-00062 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

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

---

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

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

---

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

Request for renewal shall be submitted to:

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

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

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

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

---

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

**B.14 Source Modification Requirement**

---

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

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

---

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

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

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

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

---

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

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

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

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

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

---

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

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

---

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

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

#### C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

---

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

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

---

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

All required notifications shall be submitted to:

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

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

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

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

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

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

---

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
no later than thirty-five (35) days prior to the intended test date.
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

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

---

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

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

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

---

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

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

---

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

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

### **Corrective Actions and Response Steps**

#### **C.12 Response to Excursions or Exceedances**

---

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

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

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

---

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

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

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

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

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

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

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

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

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

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

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

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

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

- (c) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) Zinc Coating Operation, consisting of, one (1) Zinc Coating Booth, using Thermal Arc Spray method, approved in 2008 for construction, with a maximum capacity of coating six (6) flow-tubes per hour, using filters for particulate control, exhausting to outdoors, and one (1) Zinc Shot Blasting System, approved in 2008 for construction, with maximum capacity of 2,896 pounds of steel per hour, using cartridges and pulse jet bags for particulate control, exhausting to outdoors.
- (b) One (1) painting operation, identified as EU-3, approved in 2008 for construction, consisting of a paint booth, using HVLP spray gun and electric dryer, with usage of 12.1 pounds of coating per flowtube and maximum process rate of 0.625 flowtube per hour, using filters (CE-3) for particulate control, and exhausting outdoors through a stack (S-1).
- (c) One (1) Gibson centrifugal wheel shotblasting machine, identified as EU-2, approved in 2008 for construction, with a maximum usage of 15 pounds of steel shot per hour, using a cartridge dust collector (CE-2) and bag filter for particulate control, and exhausting indoors.
- (e) One (1) polyurethane lining operation, identified as EU-4, approved in 2008 for construction, with maximum usage of 1.88 pounds of Polyurethane Liner Component A per hour, 0.20 pounds of Polyurethane Liner Component B per hour, 0.04 pounds of Polyurethane Liner Component C per hour, 0.03 pounds of Primer Component A per hour, and 0.02 pounds of Primer Component B per hour and exhausting 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]

- (a) Pursuant to 326 IAC 6-3-2(d), the Zinc Coating and painting operation (EU-3) shall be controlled by their respective filters and the Permittee shall operate the control devices in accordance with manufacture's specifications.
- (b) Pursuant to 326 IAC 6-3-2(d), if overspray from Zinc Coating and painting operation (EU-3) is visibly detected at the exhaust or accumulates on the ground, the source shall inspect the control device and do either of the following no later than four (4) hours after such observation:
  - (A) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
  - (B) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (c) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emission rate from the zinc shot blasting system shall be less than 5.3 pounds per hour when operating at a process weight rate of 1.4 tons per hour. The pounds per hour limit was calculated using the following equation:

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

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

#### D.1.2 326 IAC 8-2-9 (Miscellaneous metal coating operations)

---

In order to render the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations) not applicable, the Permittee shall comply with the following:

The VOC emissions from coatings, dilution solvents, and cleaning solvents, used in the painting operation, identified as EU-3, shall be less than 15.0 pounds per day.

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

#### D.1.3 Preventative Maintenance Plan [326 IAC 1-6-3]

---

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

### Compliance Determination Requirements

#### D.1.4 Particulate Matter (PM)

---

- (a) In order to ensure compliance with Condition D.1.1, the cartridges and pulse jet bags for particulate matter control shall be in operation and control emissions from the zinc shot blasting system at all times that the shot blaster system is in operation.
- (b) In order to ensure compliance with Condition D.1.1, the filters for particulate matter control shall be in operation and control emissions from the zinc coating line at all times that the coating line is in operation.
- (c) In order to ensure compliance with Condition D.1.1, the filters (CE-3) for particulate matter control shall be in operation and control emissions from the painting operation (EU-3) at all times that the painting operation (EU-3) are in operation.

#### D.1.5 Cartridges and Pulse Jet Bags Failure Detection

---

In the event that the cartridge and pulse jet bags failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

#### D.1.6 Volatile Organic Compounds

---

In order to comply with Conditions D.1.2, the VOC composition of coatings as applied shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) using formulation data supplied by the coating manufacturer. However, IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

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

#### D.1.7 Record Keeping Requirements

---

- (a) To document the compliance status with the Condition D.1.1(b), the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations.

- (b) To document the compliance status with Condition D.1.2, the Permittee shall maintain records for the total VOC usage for painting operation, (EU-3), each day. These records shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC emission limit for painting operation, EU-3:
  - (1) The amount and VOC content of each coating material, dilution solvent, and cleanup solvent used for each day. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount of materials used.
  - (2) The total VOC usage for each day.
- (c) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

#### D.1.8 Reporting Requirements

A quarterly report of VOC usage and a quarterly summary of the information to document the compliance status with D.1.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

**SECTION E.1**

**NESHAP**

**Emissions Unit Description :**

- (a) One (1) Zinc Coating Operation, consisting of, one (1) Zinc Coating Booth, using Thermal Arc Spray method, approved in 2008 for construction, with a maximum capacity of coating six (6) flow-tubes per hour, using filters for particulate control, exhausting to outdoors, and one (1) Zinc Shot Blasting System, approved for construction in 2008, with maximum capacity of 2,896 pounds of steel per hour, using cartridges and pulse jet bags for particulate control, exhausting to outdoors.
- (c) One (1) Gibson centrifugal wheel shotblasting machine, identified as EU-2, approved in 2008 for construction, with a maximum usage of 15 pounds of steel shot per hour, using a cartridge dust collector (CE-2) and bag filter for particulate control, and exhausting indoors.
- (e) Welding operations, identified as EU-1, approved in 2008 for construction and approved in 2010 for modification, consisting of one (1) mantle station (MIG) and one (1) EWM welding station (MIG) with a maximum usage of one (1) pound of electrode per hour for MIG welding, using fume extractors, and exhausting indoors.
- (f) Welding operations, identified as EU-5, approved in 2008 for construction and modified in 2012, consisting of one (1) mounting station (MIG and TIG), one (1) OD welder (MIG), one (1) ID welder (TIG), and one (1) block welding station (TIG) with a maximum usage of 1 pound electrode per hour for MIG welding and 0.1 pounds electrode per hour for TIG welding, using dust collector (CE-4) for particulate control, and exhausting indoors.
- (i) Surface grinding and cutting operation (excluding cutting torches), constructed in 2008, using hand-held equipment only.

Under NESHAP, 40 CFR 63, Subpart XXXXXX, Zinc Shot Blasting System, Gibson centrifugal wheel shotblasting machine (EU-2), Welding operations (EU-1 and EU-5), surface grinding and cutting operations are considered new affected source because the operations at these facilities involve usage of materials that contain finishing metal HAPs (MFHAP) (i.e., compounds of cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form with the exception of lead) or these facilities have potential to emit of finishing metal HAPs (MFHAP).

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

**National Emission Standards for Hazardous Air Pollutants Requirements**

**E.1.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]**

- (a) Pursuant to 40 CFR 63.11523, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for the emission units listed above, except when otherwise specified in 40 CFR 63 Subpart XXXXXX.
- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
Indianapolis, Indiana 46204

and

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

E.1.2 National Emissions Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories [40 CFR Part 63, Subpart XXXXXX]

---

Pursuant to 40 CFR Part 63, Subpart XXXXXX, the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart XXXXXX (included as Attachment A), for the above listed emissions units, as specified as follows:

- (1) 40 CFR 63.11514(a)(2) & (9), (b)(1), (2), (3) & (5), (d)
- (2) 40 CFR 63.11515(b)
- (3) 40 CFR 63.11516(a)(1) & (2), (b)(1) & (2), (c)(1) & (2), (f)(1) through (8)
- (4) 40 CFR 63.11517
- (5) 40 CFR 63.11519(a)(1) & (2), (b)(1), (2), (4), (5), (6), (8) & (9), (c)(1), (2), (3), (4), (11), (12), (13), (14) & (15)
- (6) 40 CFR 63.11521
- (7) 40 CFR 63.11522
- (8) 40 CFR 63.11523
- (9) Table 1 of Subpart XXXXXX
- (10) Table 2 of Subpart XXXXXX

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
COMPLIANCE AND ENFORCEMENT BRANCH  
OFFICE OF AIR QUALITY  
MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

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

<b>Company Name:</b>	Endress+Hauser Flowtec AG, Division U.S.A.
<b>Address:</b>	2330 Endress Place
<b>City:</b>	Greenwood, Indiana 46143
<b>Phone #:</b>	(317) 535-1357
<b>MSOP #:</b>	081-32844-00062

I hereby certify that Endress+Hauser Flowtec AG, Division U.S.A. is :

still in operation.

no longer in operation.

I hereby certify that Endress+Hauser Flowtec AG, Division U.S.A. is :

in compliance with the requirements of MSOP 081-32844-00062.

not in compliance with the requirements of MSOP 081-32844-00062.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

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.

<b>Noncompliance:</b>

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

Source Name: Endress+Hauser Flowtec AG, Division U.S.A.  
 Source Address: 2330 Endress Place, Greenwood, Indiana 46143  
 MSOP No.: 081-32844-00062  
 Facility: Painting Operations (EU-3)  
 Parameter: VOC emissions from coatings, dilution solvents, and cleaning solvents  
 Limit: Less than fifteen (15) pounds per day

Month: \_\_\_\_\_ Year: \_\_\_\_\_

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

- No deviation occurred in this month.
- Deviation/s occurred in this month.  
 Deviation has been reported on \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title/Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

**MALFUNCTION REPORT**  
**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**FAX NUMBER - (317) 233-6865**

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

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

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

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

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

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

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/20\_\_\_\_    \_\_\_\_\_ AM/PM

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_

INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

\*SEE PAGE 2

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

**326 IAC 1-6-1 Applicability of rule**

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

**326 IAC 1-2-39 "Malfunction" definition**

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

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

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

---

---

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

Technical Support Document (TSD) for an Administrative Amendment to a  
Minor Source Operating Permit (MSOP) Renewal

<b>Source Description and Location</b>
--

<b>Source Name:</b>	<b>Endress + Hauser Flowtec AG, Division U.S.A.</b>
<b>Source Location:</b>	<b>2330 Endress Place, Greenwood, IN 46143</b>
<b>County:</b>	<b>Johnson</b>
<b>SIC Code:</b>	<b>3317</b>
<b>Operation Permit No.:</b>	<b>M081-32844-00062</b>
<b>Operation Permit Issuance Date:</b>	<b>May 29, 2013</b>
<b>Administrative Amendment No.:</b>	<b>081-35275-00062</b>
<b>Permit Reviewer:</b>	<b>J. Alexander</b>

On December 22, 2014, the Office of Air Quality (OAQ) received an application from Endress + Hauser Flowtec AG, Division U.S.A. related to a modification to an existing stationary flowtube manufacturing source.

<b>Existing Approvals</b>
---------------------------

The source was issued MSOP Renewal No. M081-32844-00062 on May 29, 2013. There have been no subsequent approvals issued.

<b>County Attainment Status</b>
---------------------------------

The source is located in Johnson County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. <sup>1</sup>
PM <sub>2.5</sub>	Attainment effective July 11, 2013, for the annual PM <sub>2.5</sub> standard.
PM <sub>2.5</sub>	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM <sub>2.5</sub> standard.
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

- (a) **Ozone Standards**  
Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Johnson County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM<sub>2.5</sub>**  
 Johnson County has been classified as attainment for PM<sub>2.5</sub>. Therefore, direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**  
 Johnson County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

**Fugitive Emissions**

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

**Status of the Existing Source**

The table below summarizes the uncontrolled/unlimited potential to emit of the entire source, prior to the proposed amendment:

This PTE table is from the TSD or Appendix A of M081-32844-00062 issued on May 29, 2013.

Process/ Emission Unit	Uncontrolled/Unlimited Potential To Emit of the Entire Source Prior to Amendment (tons/year)							
	PM	PM10*	PM2.5**	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs
Zinc Spray Coating	4.63	4.63	4.63	-	-	-	-	-
Zinc Shotblast	50.74	43.63	43.63	-	-	-	-	-
Welding Operations	0.07	0.07	0.07	-	-	-	-	1.05
Gibson Centrifugal Wheel Shotblasting Machine (EU-2)	0.26	0.23	0.23	-	-	-	-	-
Painting Operation (EU-3)	11.56	11.56	11.56	-	-	8.78	-	5.38
Polyurethane Lining Operation (EU-4)	-	-	-	-	-	2.49	-	-
Surface Grinding and Cutting Operations(2)	1.00	1.00	1.00	-	-	-	-	-
Heating Units	0.02	0.08	0.08	6.13E-03	1.02	0.06	0.86	0.02
<b>Total PTE of Entire Source</b>	<b>68.27</b>	<b>61.19</b>	<b>61.19</b>	<b>6.13E-03</b>	<b>1.02</b>	<b>11.32</b>	<b>0.86</b>	<b>6.45</b>
PSD Major Source Thresholds	250	250	250	250	250	250	250	-
Title V Major Source Thresholds	-	100	100	100	100	100	100	25

- (a) This existing source is not a major stationary source under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories as specified in 326 IAC 2-2-1(ff)(1).
- (b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the unlimited potential to emit HAPs is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).
- (c) **GHG**  
 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](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 GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

#### **Description of Proposed Amendment**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Endress + Hauser Flowtec AG, Division U.S.A on December 22, 2014, relating to the installation of a new hard rubber lining operation and updating the description of EU-1.

The following is a list of the new emission units:

- (a) One (1) hard rubber lining operation, identified as EU-7, permitted in 2015, consisting of the following:
  - (1) One (1) abrasive blast booth with a maximum usage of 60 pounds of steel shot per hour.
  - (2) One (1) adhesive and primer booth, using rollers, with maximum capacity of 0.03 flowtubes per hour.
  - (3) One (1) electric autoclave with a maximum capacity of 30 flowtubes/day.

The following emission unit description has been updated:

- (a) Welding operations, identified as EU-1, approved in 2008 for construction and approved in 2010 for modification, consisting of one (1) mantle station (MIG) and one (1) EWM welding station (MIG) with a maximum usage of one (1) pound of electrode per hour for MIG welding, using fume extractors, and exhausting indoors.

#### **Enforcement Issues**

There are no pending enforcement actions related to this amendment.

#### **Emission Calculations**

See Appendix A of this TSD for detailed emission calculations.

#### **Permit Level Determination – Amendment**

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

Process/ Emission Unit	PTE of Proposed Amendment (tons/year)							
	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs
Blast Booth	1.05	0.90	0.90	-	-	-	-	-
Paint Booth	-	-	-	-	-	0.25	-	0.03
Autoclave	-	-	-	1.40	-	0.98	-	0.04
<b>Total PTE of Proposed Amendment</b>	<b>1.05</b>	<b>0.90</b>	<b>0.90</b>	<b>1.40</b>	<b>-</b>	<b>1.24</b>	<b>-</b>	<b>0.08</b>

Pursuant to 326 IAC 2-6.1-6(d)(11), this change to the permit is considered an administrative amendment because the permit is amended to add an emissions units, subject to 326 IAC 2-1.1-3 (Exemptions), at the request of the applicant.

**PTE of the Entire Source After Issuance of the Amendment**

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

Process/ Emission Unit	Uncontrolled/Unlimited Potential To Emit of the Entire Source After Issuance of the Amendment (tons/year)							
	PM	PM10*	PM2.5**	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs
Zinc Spray Coating	4.63	4.63	4.63	-	-	-	-	-
Zinc Shotblast	50.74	43.63	43.63	-	-	-	-	-
Welding Operations	0.07	0.07	0.07	-	-	-	-	1.05
Gibson Centrifugal Wheel Shotblasting Machine (EU-2)	0.26	0.23	0.23	-	-	-	-	-
Painting Operation (EU-3)	11.56	11.56	11.56	-	-	8.78	-	5.38
Polyurethane Lining Operation (EU-4)	-	-	-	-	-	2.49	-	-
Surface Grinding and Cutting Operations(2)	1.00	1.00	1.00	-	-	-	-	-
Heating Units	0.02	0.08	0.08	6.13E-03	1.02	0.06	0.86	0.02
<b>Hard Rubber-Blast Booth</b>	<b>1.05</b>	<b>0.90</b>	<b>0.90</b>	-	-	-	-	-
<b>Hard Rubber-Paint Booth</b>	-	-	-	-	-	<b>0.25</b>	-	<b>0.03</b>
<b>Hard Rubber-Autoclave</b>	-	-	-	<b>1.40</b>	-	<b>0.98</b>	-	<b>0.04</b>
Total PTE of Entire Source	<del>68.27</del> <b>69.33</b>	<del>61.19</del> <b>62.10</b>	<del>61.19</del> <b>62.10</b>	<del>6.13E-03</del> <b>1.41</b>	1.02	<del>11.32</del> <b>12.56</b>	0.86	<del>6.45</del> <b>6.53</b>
Title V Major Source Thresholds	-	100	100	100	100	100	100	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	-

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

Process/ Emission Unit	Uncontrolled/Unlimited Potential To Emit of the Entire Source After Issuance of the Amendment (tons/year)							
	PM	PM10*	PM2.5**	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs
Zinc Spray Coating	4.63	4.63	4.63	-	-	-	-	-
Zinc Shotblast	50.74	43.63	43.63	-	-	-	-	-
Welding Operations	0.07	0.07	0.07	-	-	-	-	1.05
Gibson Centrifugal Wheel Shotblasting Machine (EU-2)	0.26	0.23	0.23	-	-	-	-	-
Painting Operation (EU-3)	11.56	11.56	11.56	-	-	8.78	-	5.38
Polyurethane Lining Operation (EU-4)	-	-	-	-	-	2.49	-	-
Surface Grinding and Cutting Operations(2)	1.00	1.00	1.00	-	-	-	-	-

Process/ Emission Unit	Uncontrolled/Unlimited Potential To Emit of the Entire Source After Issuance of the Amendment (tons/year)							
	PM	PM10*	PM2.5**	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs
Heating Units	0.02	0.08	0.08	6.13E-03	1.02	0.06	0.86	0.02
Hard Rubber-Blast Booth	1.05	0.90	0.90	-	-	-	-	-
Hard Rubber-Paint Booth	-	-	-	-	-	0.25	-	0.03
Hard Rubber-Autoclave	-	-	-	1.40	-	0.98	-	0.04
<b>Total PTE of Entire Source</b>	<b>69.33</b>	<b>62.10</b>	<b>62.10</b>	<b>1.41</b>	<b>1.02</b>	<b>12.56</b>	<b>0.86</b>	<b>6.53</b>
Title V Major Source Thresholds	-	100	100	100	100	100	100	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	-

- (a) MSOP Status
  - (1) Criteria Pollutants
 

This amendment to an existing Title V minor stationary source will not change the minor status, because the uncontrolled/unlimited potential to emit criteria pollutants from the entire source will still be less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-6.1 (MSOP).
  - (2) HAPs
 

This amendment will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (b) PSD Minor Source – PM
 

This modification to an existing PSD minor stationary source will not change the PSD minor status, because the uncontrolled/unlimited potential to emit PM from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (c) PSD Minor Source – Other Regulated Pollutants
 

This modification to an existing PSD minor stationary source will not change the PSD minor status, because the uncontrolled/unlimited potential to emit of all PSD regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Amendment Section above or Appendix A.

**Federal Rule Applicability Determination**

**New Source Performance Standards (NSPS)**

- (a) There are no New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 applicable to this source and none are included for this proposed amendment.

**National Emission Standards for Hazardous Air Pollutants (NESHAP)**

- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing, 40 CFR 63.7980, Subpart HHHHH and 326 IAC 20-88, are not included for this proposed amendment, since this source is not a major source of HAPs.
- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63.11169, Subpart HHHHHH, are not included for this proposed amendment, since the

new units do not use coating that contain chromium, lead, manganese, nickel, methylene chloride or cadmium.

- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants for Nine Metal Fabrication and Finishing Source Categories (40 CFR 63.11514, Subpart XXXXXX), are not included for this proposed amendment. The new units are located in a fabricated metal products source and a Valves and pipe fitting source, but the units do not perform any dry abrasive blasting, machining, dry grinding, welding or spray painting.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR 63.11193, Subpart JJJJJJ), are not included for this proposed amendment because the autoclave located at the source are all gas-fired boiler and are not subject to this subpart.
- (f) There are no National Emission Standards for Hazardous Air Pollutants (40 CFR Part 63), 326 IAC 14 and 326 IAC 20 included for this proposed amendment.

### **Compliance Assurance Monitoring (CAM)**

- (g) 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.

<b>State Rule Applicability Determination</b>
---

- (a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))  
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))  
See PTE of the Entire Source After Issuance of the MSOP Amendment Section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The proposed amendment is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.  
  
See PTE of the Entire Source After Issuance of the MSOP Amendment Section above.
- (d) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)  
The blast booth has a potential particulate emissions of less than 0.551 pounds per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14) the blast booth is exempt from 326 IAC 6-3-2. The new adhesive and primer booth use rollers to coat the flowtubes, pursuant to 326 IAC 6-3-1(b)(6) the new adhesive and primer booth are exempt from 326 IAC 6-3.
- (e) 326 IAC 8-1-6 (New facilities; general reduction requirements)  
The new paint booth and auto clave units is not subject to any other Article 8 rule, but the potential VOC less than 25 tons per year and therefor is exempt from 326 IAC 8-1-6.
- (f) 326 IAC 8-2 (Surface Coating Emission Limitations)  
The facility will be constructed after July 1, 1990, but it has the potenal to emit of less than 15 lbs of VOC per day. Therefor the new units are exempt from 326 IAC 8-2.

### Compliance Determination, Monitoring and Testing Requirements

The existing compliance requirements will not change as a result of this amendment. The source shall continue to comply with the applicable requirements and permit conditions as contained in MSOP Renewal No: M081-32844-00062, issued on May 29, 2013 with its most recent revisions and amendments.

### Proposed Changes

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

#### Summary of IDEM Updates Throughout the Permit

- (a) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule citations listed in the permit. These changes are not changes to the underlining provisions. The change is only to cite of these rules in Section B - Prior Permits Superseded, Section B - Termination of Right to Operate.
- (b) **Section A - Emission Units and Pollution Control Equipment Summary**  
EU-1 description has been update to include the change to the exhaust system. The hard rubber lining operation description has been added to the emission unit list.
- (c) **Section C - Incineration**  
IDEM, OAQ has revised Section C - Incineration to more closely reflect the two underlying rules.
- (d) **Section C - Instrument Specifications**  
IDEM has clarified Section C - Instrument Specifications to indicate that the analog instrument must be capable of measuring the parameters outside the normal range.
- (e) **Section E - NESHAP**  
IDEM has been clarified which emission units are effected and where to send the notifications and reports.

The permit has been amended as follows:

#### A.2 Emission Units and Pollution Control Equipment Summary

- \*\*\*
- (e) Welding operations, identified as EU-1, approved in 2008 for construction and approved in 2010 for modification, consisting of one (1) mantle station (MIG) and one (1) EWM welding station (MIG) with a maximum usage of one (1) pound of electrode per hour for MIG welding, using ~~filters (CE-1) for particulate control~~ **a fume extractors**, and exhausting ~~outdoor through a vent (V-1)~~ **indoors**.
- \*\*\*
- (j) **One (1) hard rubber lining operation, identified as EU-7, permitted in 2015, consisting of the following:**
    - (1) **One (1) abrasive blast booth with a maximum usage of 60 pounds of steel shot per hour.**
    - (2) **One (1) adhesive and primer booth, using rollers, with maximum capacity of 0.03 flowtube per hour.**

**(3) One (1) electric autoclave with a maximum capacity of 30 flowtubes/day.**

\*\*\*

**B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5(a)]**

\*\*\*

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

\*\*\*

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

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

(b) \*\*\*

**E.1.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][40 CFR Part 63, Subpart A]**

(a) Pursuant to 40 CFR 63.11523, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, **for the emission units listed above, except when otherwise specified in 40 CFR 63 Subpart XXXXXX.**

(b) \*\*\*

**and**

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

**E.1.2 National Emissions Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories [40 CFR Part 63, Subpart XXXXXX]**

Pursuant to 40 CFR Part 63, Subpart XXXXXX, the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart XXXXXX (included as Attachment A), **for the above listed emissions units, as specified as follows:**

\*\*\*

**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 December 23, 2014.

**IDEM Contact**

- (a) Questions regarding this proposed permit can be directed to Julie Alexander at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-1782 or toll free at 1-800-451-6027 extension 3-1782.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

Appendix A: Emission Calculations  
PTE Summary

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
Permit Number: M081-32844-00062  
Administrative Amendment No.: 081-35275-00062  
Reviewer: J. Alexander  
Date: January 7, 2015

<b>Uncontrolled Potential to Emit (tons/yr)</b>								
Emission Unit	PM	PM10	PM2.5 *	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs
Zinc Spray Coating	4.63	4.63	4.63	-	-	-	-	-
Zinc Shotblast	50.74	43.63	43.63	-	-	-	-	-
Welding Operations	0.07	0.07	0.07	-	-	-	-	1.05
Gibson Centrifugal Wheel Shotblasting Machine (EU-2)	0.26	0.23	0.23	-	-	-	-	-
Painting Operation (EU-3)	11.56	11.56	11.56	-	-	8.78	-	5.38
Polyurethane Lining Operation (EU-4)	-	-	-	-	-	2.49	-	-
Surface Grinding and Cutting Operations <sup>(2)</sup>	1.00	1.00	1.00	-	-	-	-	-
Heating Units	0.02	0.08	0.08	6.13E-03	1.02	0.06	0.86	0.02
<b>Total PTE for Existing Units</b>	<b>68.27</b>	<b>61.19</b>	<b>61.19</b>	<b>6.13E-03</b>	<b>1.02</b>	<b>11.32</b>	<b>0.86</b>	<b>6.45</b>
<i>New Units</i>								
Hard Rubber-Blast Booth	1.05	0.90	0.90	-	-	-	-	-
Hard Rubber-Paint Booth	-	-	-	-	-	0.25	-	0.03
Hard Rubber-Autoclave	-	-	-	1.40	-	0.98	-	0.04
<i>New Units Total</i>	<i>1.05</i>	<i>0.90</i>	<i>0.90</i>	<i>1.40</i>	<i>-</i>	<i>1.24</i>	<i>-</i>	<i>0.08</i>
<b>Source-Wide Total</b>	<b>69.33</b>	<b>62.10</b>	<b>62.10</b>	<b>1.41</b>	<b>1.02</b>	<b>12.56</b>	<b>0.86</b>	<b>6.53</b>

\* PM2.5 listed is direct PM2.5

Appendix A: Emission Calculations  
PTE Summary

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
 Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
 Permit Number: M081-32844-00062  
 Administrative Amendment No.: 081-35275-00062  
 Reviewer: J. Alexander  
 Date: January 7, 2015

Potential to Emit after Control (tons/yr)								
Emission Unit	PM	PM10	PM2.5 *	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs
Zinc Spray Coating	0.09	0.09	0.09	-	-	-	-	-
Zinc Shotblast	0.51	0.44	0.44	-	-	-	-	-
Welding Operations	0.07	0.07	0.07	-	-	-	-	1.05
Gibson Centrifugal Wheel Shotblasting Machine (EU-2)	5.26E-03	0.02	0.02	-	-	-	-	-
Painting Operation (EU-3)	0.02	0.02	0.02	-	-	8.78	-	5.38
Polyurethane Lining Operation (EU-4)	-	-	-	-	-	2.49	-	-
Surface Grinding and Cutting Operations(2)	1.00	1.00	1.00	-	-	-	-	-
Heating Units	0.02	0.08	0.08	6.13E-03	1.02	0.06	0.86	0.02
<b>Total PTE for Existing Units</b>	<b>1.72</b>	<b>1.73</b>	<b>1.73</b>	<b>6.13E-03</b>	<b>1.02</b>	<b>11.32</b>	<b>0.86</b>	<b>6.45</b>
New Units								
Hard Rubber-Blast Booth	0.01	9.04E-03	9.04E-03					
Hard Rubber-Paint Booth	-	-	-	-	-	0.25	-	0.03
Hard Rubber-Autoclave	-	-	-	1.40	-	0.98	-	0.04
<i>New Units Total</i>	<i>0.01</i>	<i>9.04E-03</i>	<i>9.04E-03</i>	<i>1.40</i>	<i>-</i>	<i>1.24</i>	<i>-</i>	<i>0.08</i>
<b>Source-Wide Total</b>	<b>1.73</b>	<b>1.73</b>	<b>1.73</b>	<b>1.41</b>	<b>1.02</b>	<b>12.56</b>	<b>0.86</b>	<b>6.53</b>

\* PM2.5 listed is direct PM2.5

Appendix A: Emission Calculations  
PTE Summary

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
Permit Number: M081-32844-00062  
Administrative Amendment No.: 081-35275-00062  
Reviewer: J. Alexander  
Date: January 7, 2015

<b>Potential to Emit after Issuance (tons/yr)</b>								
Emission Unit	PM	PM10	PM2.5 *	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs
Zinc Spray Coating	4.63	4.63	4.63	-	-	-	-	-
Zinc Shotblast	50.74	43.63	43.63	-	-	-	-	-
Welding Operations	0.07	0.07	0.07	-	-	-	-	1.05
Gibson Centrifugal Wheel Shotblasting Machine (EU-2)	0.26	0.23	0.23	-	-	-	-	-
Painting Operation (EU-3)	11.56	11.56	11.56	-	-	8.78	-	5.38
Polyurethane Lining Operation (EU-4)	-	-	-	-	-	2.49	-	-
Surface Grinding and Cutting Operations(2)	1.00	1.00	1.00	-	-	-	-	-
Heating Units	0.02	0.08	0.08	6.13E-03	1.02	0.06	0.86	0.02
<b>Total PTE for Existing Units</b>	<b>68.27</b>	<b>61.19</b>	<b>61.19</b>	<b>6.13E-03</b>	<b>1.02</b>	<b>11.32</b>	<b>0.86</b>	<b>6.45</b>
New Units								
Hard Rubber-Blast Booth	1.05	0.90	0.90	-	-	-	-	-
Hard Rubber-Paint Booth	-	-	-	-	-	0.25	-	0.03
Hard Rubber-Autoclave	-	-	-	1.40	-	0.98	-	0.04
New Units Total	1.05	0.90	0.90	1.40	-	1.24	-	0.08
<b>Source-Wide Total</b>	<b>69.33</b>	<b>62.10</b>	<b>62.10</b>	<b>1.41</b>	<b>1.02</b>	<b>12.56</b>	<b>0.86</b>	<b>6.53</b>

\* PM2.5 listed is direct PM2.5

Appendix A: Emission Calculations  
The Zinc Coating Operation

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
 Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
 Permit Number: M081-32844-00062  
 Administrative Amendment No.: 081-35275-00062  
 Reviewer: J. Alexander  
 Date: January 07, 2015

(a) Zinc Coating Booth

Material	Volume % Non-Volatiles (solids)	Coating Usage (Lbs/flowtube)	Number of flowtubes/hr	PM/PM <sub>10</sub> /PM <sub>2.5</sub> before Control (lbs/hr)	PM/PM <sub>10</sub> /PM <sub>2.5</sub> before Control (ton/yr)	PM/PM <sub>10</sub> /PM <sub>2.5</sub> After Control (lbs/hr)	PM/PM <sub>10</sub> /PM <sub>2.5</sub> After Control (ton/yr)	Transfer Efficiency	Control Efficiency
Zinc Coating Booth	100.00%	0.44	6.00	1.06	4.63	0.02	0.09	60%	98%

(b) Zinc Shot Blasting System

Table 1 - Emission Factors for Abrasives

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM <sub>10</sub> / lb PM
Sand	0.04	0.70
Grit	0.01	0.70
Steel Shot	4.00E-03	0.86
Other	0.01	

PM EF = emission factor (lb PM/ lb abrasive) From Table 1 = 4.00E-03  
 PM10 EF = emission factor (lb PM10/ lb PM) From Table 1 = 0.86  
 FR = Flow Rate (lb/hr) = 2,896.00 per nozzle  
 w = fraction of time of wet blasting = 0 %  
 N = number of nozzles = 1.00

PM Emissions Before Controls	PM Emissions After Controls
11.58 lb/hr	0.12 lb/hr
<b>50.74 ton/yr</b>	<b>0.51 ton/yr</b>
PM10/PM2.5 Emissions Before Controls	PM10/PM2.5 Emissions After Controls
9.96 lb/hr	0.10 lb/hr
<b>43.63 ton/yr</b>	<b>0.44 ton/yr</b>

(c) PTE for The Zinc Coating Operation

Operation	Criteria Air Pollutants		
	PM	PM <sub>10</sub>	PM <sub>2.5</sub>
Zinc Coating Booth	4.63	4.63	4.63
Zinc Shot Blasting System	50.74	43.63	43.63
<b>Total Uncontrolled Zinc Operations</b>	<b>55.36</b>	<b>48.26</b>	<b>48.26</b>
Zinc Coating Booth	0.09	0.09	0.09
Zinc Shot Blasting System	0.51	0.44	0.44
<b>Total Control Zinc Operations</b>	<b>0.60</b>	<b>0.53</b>	<b>0.53</b>

METHODOLOGY-Zinc Coating Booth

Pounds of Material per hour based on 0.2 kg/flow tube (information provided by source)

Potential to Emit Before Control

Particulate Potential (lb per hour) = Coating usage (lb/unit) \* numbers of units (units/hr) \* (1-Transfer efficiency)

Particulate Potential (tons per year) = Coating usage (lb/unit) \* numbers of units (units/hr) \*\* (1-Transfer efficiency)\*(8760 hrs/yr)\* (1 ton/2000 lbs)

Potential to Emit After Control

Particulate Potential (lb per hour) = Potential to emit before control (lb/hr) \* (1-Control efficiency)

Particulate Potential (tons per year) = Potential to emit before control (tons/yr) \* (1-Control efficiency)

METHODOLOGY-Zinc Shot Blasting System

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

Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs

Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)<sup>2</sup> x (D/D1)

E = EF x FR x (1-w/200) x N

w should be entered in as a whole number (if w is 50%, enter 50)

Control efficiency is 99%

Appendix A: Emission Calculations  
Welding Emissions

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
Permit Number: M081-32844-00062  
Administrative Amendment No.: 081-35275-00062  
Reviewer: J. Alexander  
Date: January 07, 2015

Emission Unit	Type of Welding Operation	Number of Stations	Electrode Type (4)	Max. Electrode Consumption per Station (lb/hr)	Emission Factors				Uncontrolled Potential Emissions					
					PM/PM <sub>10</sub> /PM <sub>2.5</sub>	Chromium	Manganese	Nickel	PM/PM <sub>10</sub> /PM <sub>2.5</sub>	Chromium	Manganese	Nickel	Combined HAPs	
EU-1	MIG Welding	2.00	316L/C-22	1.00	3.20E-03	5.28E-04	2.45E-04	2.26E-04	6.40E-03	1.06E-03	4.90E-04	4.52E-04	2.00E-03	
									Total (tpy) <sup>(3)</sup>	0.03	4.63E-03	2.15E-03	1.98E-03	8.75E-03
EU-5	MIG Welding	2.00	316L/C-22	1.00	3.20E-03	5.28E-04	2.45E-04	2.26E-04	6.40E-03	1.06E-03	4.90E-04	4.52E-04	2.00E-03	
	TIG Welding	3.00	Tungsten	0.10	5.50E-03	N/A	5.00E-04	N/A	1.65E-03	-	-	-	-	
									Total (lb/hr)	8.05E-03	1.06E-03	4.90E-04	4.52E-04	2.00E-03
									Total (tpy) <sup>(3)</sup>	0.04	4.63E-03	9.80E-04	9.04E-04	8.75E-03
EU-6	TIG Welding	4.00	Tungsten	0.10	5.50E-03	N/A	5.00E-04	N/A	2.20E-03	-	2.00E-04	-	-	
									Total (tpy) <sup>(3)</sup>	9.64E-03	0.04	0.18	0.81	1.04
									Welding PTE=	0.07	0.05	0.19	0.81	1.05

**Notes:**

- (1) Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2g/min emitted). Therefore, the emission factor for plasma cutting is for 8
- (2) Uncontrolled Potential Emissions (lb/hr) = Max. Electrode Consumption per Station (lb/hr) x Emission Factor (lb pollutant / lb electrode) x Number of Stations
- (3) Uncontrolled Potential Emissions (tpy) = Emissions (lb/hr) x 8,760 hr/yr / 2,000 lb/ton
- (4) Worst case electrodes were selected for these potential emissions calculations.

Appendix A: Emission Calculations  
Gibson Centrifugal Wheel Shotblasting Machine (EU-2)

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
Permit Number: M081-32844-00062  
Administrative Amendment No.: 081-35275-00062  
Reviewer: J. Alexander  
Date: January 07, 2015

Abrasive Type	Emission Factors (1)	
	lb PM / lb abrasive	lb PM <sub>10</sub> /PM <sub>2.5</sub> / lb PM
Sand	0.04	0.70
Grit	0.01	0.70
<b>Steel Shot</b>	<b>4.00E-03</b>	<b>0.86</b>
Other	0.01	

Approximate Steel Shot Consumption Rate Per Wheel (FR) (lb/hr) = 7.50  
Number of Wheels (N) = 2.00  
Wet Blasting Fraction of Time (w) (%) = 0%

<b>Uncontrolled Potential PM Emissions (lb/hr) (2) =</b>	<b>0.06</b>
<b>Uncontrolled Potential PM Emissions (tpy) (3) =</b>	<b>0.26</b>
PM Control Efficiency (%) =	98%
<b>Controlled Potential PM Emissions (lb/hr) (5) =</b>	<b>1.20E-03</b>
<b>Controlled Potential PM Emissions (tpy) (3) =</b>	<b>5.26E-03</b>

<b>Uncontrolled Potential PM<sub>10</sub>/PM<sub>2.5</sub> Emissions (lb/hr) (4) =</b>	<b>0.05</b>
<b>Uncontrolled Potential PM<sub>10</sub>/PM<sub>2.5</sub> Emissions (tpy) (3) =</b>	<b>0.23</b>
PM <sub>10</sub> /PM <sub>2.5</sub> Control Efficiency (%) =	90%
<b>Controlled Potential PM<sub>10</sub>/PM<sub>2.5</sub> Emissions (lb/hr) (5) =</b>	<b>5.16E-03</b>
<b>Controlled Potential PM<sub>10</sub>/PM<sub>2.5</sub> Emissions (tpy) (3) =</b>	<b>0.02</b>

**Notes:**

- (1) Emission factors are from STAPPA/ALAPCO's Air Quality Permits Handbook, Section 3 "Confined Abrasive Blasting Cabinets/Rooms.
- (2) Uncontrolled Potential PM Emissions (lb/hr) = EF x FR x (1 - w/2) x N
- (3) Uncontrolled/Controlled Potential PM/PM10 Emissions (tpy) = Uncontrolled/Controlled Potential PM/PM10 Emissions (lb/hr) x 8,760 hr/yr / 2,000 lb/ton
- (4) Uncontrolled Potential PM10 Emissions (lb/hr) = Uncontrolled Potential PM Emissions (lb/hr) x PM10 Emission Factor (lb PM10/lb PM)
- (5) Controlled Potential PM/PM10 Emissions (lb/hr) = Uncontrolled Potential PM/PM10 Emissions (lb/hr) x (100% - PM/PM10 Control Efficiency)

Appendix A: Emission Calculations  
Painting Operation Emissions (EU-3)

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
Permit Number: M081-32844-00062  
Administrative Amendment No.: 081-35275-00062  
Reviewer: J. Alexander  
Date: January 07, 2015

Worse Case Product Components	Manufacturer	Product Type	Product Density (lb/gal)	Material Usage (lb/flowtube)	Flowtube Throughput (flowtube/hr)	Material Usage (gal/flowtube)	VOC Content (wt. %) (2)	Xylene Content CAS # 1330-20-7 (wt. %) (2)	Flash Off (%) (3)	Potential VOC Emissions (lb/hr) (4)	Potential VOC Emissions (tpy) (5)	Potential Xylene Emissions (lb/hr) (4)	Potential Xylene Emissions (tpy) (5)
Eclon EP DS Steel Primer	Eclatin AG	Primer Component	13.18	6.06	0.63	0.46	23%	20%	100%	0.87	3.82	0.76	3.32
Hardener A-2497 (1)	Eclatin AG	Primer Component	11.43	6.06	0.63	0.53	34%	20%	100%	1.29	5.64	0.76	3.32
Eclon-SIL-2K-Email (1)	Eclatin AG	Final Coat Component	11.76	6.06	0.63	0.52	9%	0.03	100%	0.34	1.49	0.09	0.41
Hardener A-2511	Eclatin AG	Final Coat Component	7.92	6.06	0.63	0.77	0%	0%	100%	0	0	0	0
Total =										1.63	7.14	0.85	3.73

Worse Case Product Mixture	Material Usage (lb/flowtube)	Flowtube Throughput (flowtube/hr)	Solids Content (wt. %) (2)	Transfer Efficiency (%)	Uncontrolled Potential PM/PM <sub>10</sub> /PM <sub>2.5</sub> Emissions (lb/hr) (8)	Uncontrolled Potential PM/PM <sub>10</sub> /PM <sub>2.5</sub> Emissions (tpy) (10)	Control Efficiency (%) (11)	Controlled Potential PM/PM <sub>10</sub> /PM <sub>2.5</sub> Emissions (lb/hr) (9)	Controlled Potential PM/PM <sub>10</sub> /PM <sub>2.5</sub> Emissions (tpy) (10)
Final Coat Mixture	6.10	0.63	96%	60%	1.46	6.41	1.00	2.93E-03	0.01
Primer Mixture	6.10	0.63	77%	60%	1.17	5.14	1.00	2.35E-03	0.01
Total =					2.64	11.56		5.28E-03	0.02

Product	Manufacturer	Product Type	Maximum Usage Rate (gal/hr)	Maximum Usage Rate (lb/hr)	Product Density (lb/gal)	VOC Content (wt. %) (2)	Xylene Content CAS # 1330-20-7 (wt. %) (2)	Ethylbenzene Content CAS # 100-41-4 (wt. %) (2)	Flash Off (%) (3)	Potential VOC Emissions (lb/hr)	Potential VOC Emissions (tpy) (5)	Potential Xylene Emissions (lb/hr) (15)	Potential Xylene Emissions (tpy) (5)	Potential Ethylbenzene Emissions (lb/hr)	Potential Ethylbenzene Emissions (tpy) (5)
Amercoat 65 Thinner	PPG	Cleaner	0.05	0.38	7.51	100%	85%	15%	100%	0.38	1.64	0.32	1.40	0.06	0.25

**Total Emissions from EU-3**

	PM	PM10	PM2.5	VOC	Xylene	Total HAPs
Total Uncontrolled Emissions from EU-3	11.56	11.56	11.56	8.78	5.13	5.38
Total Controlled Emissions from EU-3	0.02	0.02	0.02	8.78	5.13	5.38

**Notes:**

- (1) Worse Case Scenario for Emissions. The worse case scenario for emissions occurs when processing DN600 flowtubes (5.5 kg of coating per flowtube).
- (2) The VOC, HAP, and solids contents were supplied by the manufacturer of the product.
- (3) Conservatively assumed a flash off of 100% for all VOCs and organic HAPs.
- (4) Xylene is the worst HAP
- (5) Potential VOC/HAP Emissions (tpy) = Potential VOC/HAP Emissions (lb/hr) x 8,760 hr/yr / 2,000 lb/ton
- (6) The material usage was based on 3.5 kg of coating per flowtube and the coating consisting of 50% primer and 50% final coat.
- (8) Uncontrolled Potential PM/PM10 Emissions (lb/hr) = Material Usage (lb/flowtube) x Flowtube Throughput (flowtube/hr) x Solids Content (wt. %) x [100% - Transfer Efficiency (%)]
- (9) Controlled Potential PM/PM10 Emissions (lb/hr) = Uncontrolled Potential PM/PM10 Emissions (lb/hr) x (100% - Control Efficiency)
- (10) Uncontrolled/Controlled Potential PM/PM10 Emissions (tpy) = Uncontrolled/Controlled Potential PM/PM10 Emissions (lb/hr) x 8,760 hr/yr / 2,000 lb/ton
- (11) The control efficiency was provided by the filter manufacturer.
- (12) Estimated Actual PM/PM10 Emissions (lb/hr) = Material Usage (lb/flowtube) x Flowtube Throughput (flowtube/hr) x Solids Content (wt. %) x [100% - Transfer Efficiency (%)] x [100% - Control Efficiency]

Appendix A: Emission Calculations  
Polyurethane Lining Operation Emissions (EU-4)

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
Permit Number: M081-32844-00062  
Administrative Amendment No.: 081-35275-00062  
Reviewer: J. Alexander  
Date: January 07, 2015

**Potential Emissions from Polyurethane Lining**

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water or other non-VOC	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Material Usage (lbs/hr)*	Material Usage (pounds/month)*	Potential VOC pounds per hour*	Potential VOC pounds per day	Potential VOC tons per year
Polyurethane Liner Component A (Hyperlast prepolymer 7855235)	10.01	15.00%	0	0.15	0	85.00%	1.88	300.53	0.28	6.76	1.23
Polyurethane Liner Component B (Hyperlast Diprane C)	8.51	100.00%	0	1.00	0	0.00%	0.20	18.08	0.20	4.80	0.88
Polyurethane Liner Component C (Blackcat)	8.46	95.00%	0	0.95	0	5.00%	0.04	6.06	0.04	0.86	0.16
Polyurethane Liner Primer Component A (Isocyanate Component)	10.26	100.00%	0	1.00	0	0.00%	0.03	5.29	0.03	0.79	0.14
Polyurethane Liner Primer Component B (Hyperlast 7983165)	13.18	100.00%	0	1.00	0	0.00%	0.02	2.65	0.02	0.40	0.07
<b>Potential Emissions</b>									<b>0.57</b>	<b>13.62</b>	<b>2.49</b>

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

Potential VOC Pounds per Day = Potential VOC (lb/hr) \* 24 (hrs/day)

Potential VOC Tons per Year = Potential to emit (lb/hr) of VOC \* 8760 (hrs/yr) / 2000 (tons/month)

\* Information provided by source

Appendix A: Emission Calculations  
Natural Gas Combustion Emissions

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
Permit Number: M081-32844-00062  
Administrative Amendment No.: 081-35275-00062  
Reviewer: J. Alexander  
Date: January 07, 2015

	Heat Input Capacity MMBtu/hr	Number of units	Heat Input Capacity MMBtu/hr		
RTU-D-1	0.08	1.00	0.08	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
RTU-B-1 & RTU-B-2	0.25	2.00	0.50		
RTU-A-1, RTU-A-2 & RTU-A-3	0.60	3.00	1.80		
	<b>0.93</b>	<b>6.00</b>	<b>2.38</b>	<b>1,020.00</b>	<b>20.44</b>

Pollutant							
Emission Factor in lb/MMCF	PM*	PM10*	direct PM2.5*	SO2	NOx 100.00 **see below	VOC	CO
Potential Emission in tons/yr	0.02	0.08	0.08	6.13E-03	1.02	0.06	0.86

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.10E-03	Dichlorobenzene 1.20E-03	Formaldehyde 0.08	Hexane 1.80	Toluene 3.40E-03
Potential Emission in tons/yr	2.15E-05	1.23E-05	7.67E-04	0.02	3.47E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.00E-04	Cadmium 1.10E-03	Chromium 1.40E-03	Manganese 3.80E-04	Nickel 2.10E-03
Potential Emission in tons/yr	5.11E-06	1.12E-05	1.43E-05	3.88E-06	2.15E-05
	<b>Total</b>				<b>0.02</b>

**Methodology**

RTU-D01, RTU-B-1, RTU-B-2, RTU-A-1, RTU-A-2 & RTU-A-3 are commercial air handling units for building heating and cooling located on the roof top.

\*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

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

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

**Appendix A: Emission Calculations  
Abrasive Blasting - Confined**

**Company Name:** Endress + Hauser Flowtec AG, Division U.S.A  
**Address City IN Zip:** 2330 Endress Place, Greenwood, IN 46143  
**Permit Number:** M081-32844-00062  
**Administrative Amendment No.:** 081-35275-00062  
**Reviewer:** J. Alexander  
**Date:** January 07, 2015

**Table 1 - Emission Factors for Abrasives**

Abrasive	Emission Factor (EF)	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.04	0.70
Grit	0.01	0.70
<b>Steel Shot</b>	<b>4.00E-03</b>	<b>0.86</b>
Other	0.01	

<b>Potential to Emit Before Control</b>			
FR = Flow rate of actual abrasive (lb/hr) =	60.00	lb/hr (per nozzle)	
w = fraction of time of wet blasting =	0	%	
N = number of nozzles =	1.00		
EF = PM emission factor for actual abrasive from Table 1 =	4.00E-03	lb PM/ lb abrasive	
PM10 emission factor ratio for actual abrasive from Table 1 =	0.86	lb PM10-PM2.5 / lb PM	
	<b>PM</b>	<b>PM10/PM2.5</b>	
<b>Potential to Emit (before control) =</b>	<b>0.24</b>	<b>0.21</b>	<b>lb/hr</b>
=	<b>5.76</b>	<b>4.95</b>	<b>lb/day</b>
=	<b>1.05</b>	<b>0.90</b>	<b>ton/yr</b>

<b>Potential to Emit After Control</b>			
	<b>PM</b>	<b>PM10/PM2.5</b>	
<b>Emission Control Device Efficiency =</b>	<b>0.99</b>	<b>0.99</b>	
<b>Potential to Emit (after control) =</b>	<b>2.40E-03</b>	<b>2.06E-03</b>	<b>lb/hr</b>
=	<b>0.06</b>	<b>0.05</b>	<b>lb/day</b>
=	<b>0.01</b>	<b>9.04E-03</b>	<b>ton/yr</b>

**METHODOLOGY**

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

Potential to Emit (before control) =  $EF \times FR \times (1 - w/200) \times N$  (where w should be entered in as a whole number (if w is 50%, enter 50))

Potential to Emit (after control) = [Potential to Emit (before control)] \* [1 - control efficiency]

Potential to Emit (tons/year) = [Potential to Emit (lbs/hour)] x [8760 hours/year] x [ton/2000 lbs]

Appendix A: Emission Calculations  
HARD RUBBER CHEMICAL USAGE CHART

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
Permit Number: M081-32844-00062  
Administrative Amendment No.: 081-35275-00062  
Reviewer: J. Alexander  
Date: January 07, 2015

Tube size	Product Usage (g/tube)				Max. Flowtube Throughput (tube/hr)	Product Usage (g/hr)				VOC Usage (g/hr)	VOC Usage (lb/hr)
	Chemlok 205 Primer	Chemlok 6220 Adhesive	Exxsol DSP 60/95 S	Denatured Ethanol		Chemlok 205 Primer	Chemlok 6220 Adhesive	Exxsol DSP 60/95 S	Denatured Ethanol		
2"	7.07	7.07	4.36	0.08	0.04	0.27	0.27	0.16	2.83E-03	0.43	9.73E-05
3"	8.83	8.83	5.45	0.09	0.06	0.55	0.55	0.34	5.90E-03	0.90	2.02E-04
4"	10.60	10.60	6.54	0.11	0.09	0.93	0.93	0.57	9.91E-03	1.52	3.40E-04
6"	11.78	11.78	7.27	0.13	0.10	1.18	1.18	0.73	0.01	1.92	4.32E-04
8"	13.25	13.25	8.18	0.14	0.05	0.66	0.66	0.41	7.08E-03	1.08	2.43E-04
10"	17.67	17.67	10.90	0.19	0.05	0.88	0.88	0.55	9.44E-03	1.44	3.24E-04
12"	21.20	21.20	13.08	0.23	0.01	0.27	0.27	0.16	2.83E-03	0.43	9.72E-05
14"	40.00	40.00	24.69	0.43	0.03	1.00	1.00	0.62	0.01	1.63	3.67E-04
16"	53.00	53.00	32.71	0.57	0.01	0.66	0.66	0.41	7.08E-03	1.08	2.43E-04
18"	80.00	80.00	49.37	0.85	0.01	1.00	1.00	0.62	0.01	1.63	3.67E-04
20"	85.00	85.00	52.46	0.91	0.01	1.06	1.06	0.66	0.01	1.74	3.90E-04
24"	90.00	90.00	55.54	0.96	0.03	2.25	2.25	1.39	0.02	3.68	8.25E-04
28"	100.00	100.00	61.71	1.07	0	0	0	0	0	0.00	0.00E+00
30"	110.00	110.00	67.88	1.18	0.01	1.38	1.38	0.85	0.01	2.25	5.04E-04
32"	120.00	120.00	74.06	1.28	0	0	0	0	0	0.00	0.00E+00
36"	150.00	150.00	92.57	1.60	0	0	0	0	0	0.00	0.00E+00

## Notes:

(1) The worst case scenario for VOC and organic HAP emissions will occur when priming the 24" flowtubes.

Appendix A: Emission Calculations  
PRIMER BOOTH PTE

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
Permit Number: M081-32844-00062  
Administrative Amendment No.: 081-35275-00062  
Reviewer: J. Alexander  
Date: January 07, 2015

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency	
Chemlok 205 Primer	7.9	75.42%	23.0%	52.4%	0.0%	26.00%	0.20	0.03	4.11	4.11	0.02	0.49	0.09	0.00	15.83	100%	
Chemlok 6220 Adhesive	8.1	73.68%	25.5%	48.2%	1.0%	29.50%	0.20	0.03	3.82	3.88	0.02	0.46	0.08	0.00	13.16	100%	
Exsol DSP 60/95 S	5.4	100%	0.0%	100.0%	0.0%	0.00%	0.12	0.03	5.42	5.42	0.02	0.40	0.07	0.00	-	100%	
Denatured Ethanol	6.8	100%	0.0%	100.0%	5.8%	0.00%	2.12E-03	0.03	7.18	6.76	0.00	0.01	0.00	0.00	-	100%	
LS 21100	15.4	0%	0.0%	0.0%	0.0%	100.00%	2.36E-03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	
Wagunit H 1005 (rubber)	13.2	0%	0.0%	0.0%	0.0%	100.00%	2.59E-03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	
Murphy Oil Soap Liquid	8.3	99%	0.0%	99.0%	0.0%	0.00%	2.83E-03	0.03	8.26	8.26	0.00	0.01	0.00	0.00	-	100%	
Total Potential to Emit =												0.06	1.37	0.25	0.00		

Product Name	HAP Content (wt.%) (1)						HAP PTE (lb/hr) (2)						HAP PTE (tpy) (3)					
	Methyl Isobutyl Ketone CAS No. 108-10-1	Xylene CAS No. 1330-20-7	Ethyl Benzene CAS No. 100-41-4	Tetrachloroethylene CAS No. 127-18-4	n-Hexane CAS No. 110-54-3	Methyl Isobutyl Ketone CAS No. 108-10-1	Xylene CAS No. 1330-20-7	Ethyl Benzene CAS No. 100-41-4	Tetrachloroethylene CAS No. 127-18-4	n-Hexane CAS No. 110-54-3	Methyl Isobutyl Ketone CAS No. 108-10-1	Xylene CAS No. 1330-20-7	Ethyl Benzene CAS No. 100-41-4	Tetrachloroethylene CAS No. 127-18-4	n-Hexane Content CAS No. 10-54-3			
Chemlok 205 Primer	60%	15%	5%	-	-	2.98E-03	7.44E-04	2.48E-04	-	-	1.30E-02	3.26E-03	1.09E-03	-	-			
Chemlok 6220 Adhesive	-	60%	15%	1%	-	-	2.98E-03	7.44E-04	3.06E-05	-	1.30E-02	3.26E-03	1.34E-04	-				
Exsol DSP 60/95 S	-	-	-	-	5%	-	-	-	-	1.53E-04	-	-	-	6.70E-04				
Denatured Ethanol	1%	-	-	-	-	2.65E-07	-	-	-	1.16E-06	-	-	-	-				
LS 21100	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Wagunit H 1005 (rubber)	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Murphy Oil Soap Liquid	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Totals =											0.01	0.02	4.35E-03	1.34E-04	6.70E-04			
Combined HAP Total =											0.03							

Notes:

- The VOC and HAP contents were obtained from the manufacturer's MSDS/SDS for the product.
  - VOC/HAP PTE (lb/hr) = Material Usage (lb/hr) x VOC/HAP Content (wt. %)
  - VOC/HAP PTE (tpy) = VOC/HAP PTE (lb/hr) x 8,760 hr/yr / 2,000 lb/ton
  - All product physical properties and contents were obtained from the manufacturer's MSDS/SDS.
- Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1-Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations  
AUTOCLAVE PTE

Company Name: Endress + Hauser Flowtec AG, Division U.S.A  
 Address City IN Zip: 2330 Endress Place, Greenwood, IN 46143  
 Permit Number: M081-32844-00062  
 Administrative Amendment No.: 081-35275-00062  
 Reviewer: J. Alexander  
 Date: January 07, 2015

Regulated Air Pollutant	Emission Rate (g/hr) (1)	Emission Rate (lb/hr) (2)	PTE (tpy) (3)
VOCs	102.00	0.22	0.98
SO <sub>2</sub>	145.00	0.32	1.40
Formaldehyde CAS No. 50-00-0	3.60	7.94E-03	0.03
Phenol CAS No. 108-95-2	0.33	7.28E-04	3.19E-03
Tetrachloroethylene CAS No. 127-18-4	0.34	7.50E-04	3.28E-03

## Notes:

(1) Autoclave curing utilizes saturated steam at an elevated pressure to cure the rubber mix and is the predominant curing method in nontire rubber manufacturing facilities. When depressurizing the vessel, the steam blow-off can contain a number of pollutants based on the type of chemicals used. Endress + Hauser Flowtec's company in Cernay, France has done a number of testing on the autoclave curing process. The process in France has a higher throughput than the plant in Greenwood, Indiana. To be conservative, these numbers will be used.

(2) Emission Rate (lb/hr) = Emission Rate (g/hr) / 453.6 g/lb

(3) PTE (tpy) = Emission Rate (lb/hr) x 8,760 hr/yr / 2,000 lb/ton

CAS - Chemical Abstracts Service



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204  
(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

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

**TO:** Bart King  
Endress + Hauser Flowtec AG, Division U.S.A.  
2330 Endress Place  
Greenwood, IN 46143

**DATE:** January 15, 2015

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

**SUBJECT:** Final Decision  
Minor Source Operating Permit (MSOP) Administrative Amendment  
081-35275-00062

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:  
Stefan Grotzer, General Manager  
Matt Thomas, Conestoga-Rovers & Associates  
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 6/13/2013

# Mail Code 61-53

IDEM Staff	VHAUN 1/15/2015 081-35275-00062 FINAL Endress + Hauser Flowtec AG, Division U.S.A.		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Bart King Endress + Hauser Flowtec AG, Division U.S.A. 2330 Endress Place Greenwood IN 46143 (Source CAATS) VIA CERTIFIED MAIL USPS										
2		Stefan Grotzer General Manager Endress + Hauser Flowtec AG, Division U.S.A. 2330 Endress Place Greenwood IN 46143 (RO CAATS)										
3		Johnson County Commissioners 5 East Jefferson Franklin IN 46131 (Local Official)										
4		Johnson County Health Department 86 W. Court St, Courthouse Annex Franklin IN 46131-2345 (Health Department)										
5		Frederick & Iva Moore 6019 W 650 N Ligonier IN 46767 (Affected Party)										
6		Larry and Becky Bischoff 10979 North Smokey Row Road Mooresville IN 46158 (Affected Party)										
7		Greenwood City Council and Mayors Office 300 South Madison Avenue Greenwood IN 46142-3149 (Local Official)										
8		Matt Thomas Conestoga-Rovers & Associates 6520 Corporate Drive Indianapolis IN 46278 (Consultant)										
9												
10												
11												
12												
13												
14												
15												

Total number of pieces Listed by Sender  <b>7</b>	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
---	--	--	--