



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
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)

TO: Interested Parties / Applicant

DATE: April 11, 2008

RE: Reliance Electric Company / 005-23566-00092

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

## Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures  
FNPER.dot12/03/07



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**NEW SOURCE REVIEW and  
MINOR SOURCE OPERATING PERMIT  
OFFICE OF AIR QUALITY**

**Reliance Electric Company  
(formerly known as Dodge Columbus Indiana)  
3300 East Tenth Street  
Columbus, Indiana 47201**

(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.: M005-23566-00092	
Issued by: Original signed by	Issuance Date: April 11, 2008
Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Expiration Date: April 11, 2013

## TABLE OF CONTENTS

<b>A. SOURCE SUMMARY</b> .....	4
A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]	
A.2 Emission Units and Pollution Control Equipment Summary	
<b>B. GENERAL CONDITIONS</b> .....	6
B.1 Definitions [326 IAC 2-1.1-1]	
B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.3 Term of Conditions [326 IAC 2-1.1-9.5]	
B.4 Enforceability	
B.5 Severability	
B.6 Property Rights or Exclusive Privilege	
B.7 Duty to Provide Information	
B.8 Certification	
B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]	
B.10 Preventive Maintenance Plan [326 IAC 1-6-3]	
B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]	
B.13 Permit Renewal [326 IAC 2-6.1-7]	
B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]	
B.15 Source Modification Requirement	
B.16 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]	
B.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]	
B.18 Annual Fee Payment [326 IAC 2-1.1-7]	
B.19 Credible Evidence [326 IAC 1-1-6]	
<b>C. SOURCE OPERATION CONDITIONS</b> .....	11
<b>Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]</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]	
C.2 Permit Revocation [326 IAC 2-1.1-9]	
C.3 Opacity [326 IAC 5-1]	
C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6 Fugitive Dust Emissions [326 IAC 6-4]	
C.7 Stack Height [326 IAC 1-7]	
C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
<b>Testing Requirements [326 IAC 2-6.1-5(a)(2)]</b>	
C.9 Performance Testing [326 IAC 3-6]	
<b>Compliance Requirements [326 IAC 2-1.1-11]</b>	
C.10 Compliance Requirements [326 IAC 2-1.1-11]	
<b>Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]</b>	
C.11 Compliance Monitoring [326 IAC 2-1.1-11]	
C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]	
C.13 Instrument Specifications [326 IAC 2-1.1-11]	
<b>Corrective Actions and Response Steps</b>	
C.14 Response to Excursions or Exceedances	

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test

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

- C.16 Malfunctions Report [326 IAC 1-6-2]
- C.17 General Record Keeping Requirements [326 IAC 2-6.1-5]
- C.18 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2]  
[IC 13-14-1-13]

**D.1. EMISSIONS UNIT OPERATION CONDITIONS ..... 17**

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

- D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

**D.2. EMISSIONS UNIT OPERATION CONDITIONS ..... 18**

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

- D.2.1 Particulate Matter Control [326 IAC 6-3-2(d)][326 IAC 6-3-2(c)]
- D.2.2 Particulate Control [326 IAC 6-3-2(d)]

**D.2. EMISSIONS UNIT OPERATION CONDITIONS ..... 20**

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

- D.3.1 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]
- D.3.2 Volatile Organic Compounds (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]
- D.3.3 Particulate Matter Control [326 IAC 6-3-2(d)]
- D.3.4 Preventative Maintenance Plan [326 IAC 1-6-3]

**Compliance Determination Requirements**

- D.3.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-2(a)]

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

- D.3.6 Particulate Matter [326 IAC 6-3-2(d)(2)]

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

- D.3.7 Record Keeping Requirements

Certification ..... 22  
Annual Notification ..... 23  
Malfunction Report ..... 24

## 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)]

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The Permittee owns and operates a stationary electrical motor gearbox manufacturing operation.

Source Address:	3300 East Tenth Street, Columbus, Indiana 47201
Mailing Address:	3300 East Tenth Street, Columbus, Indiana 47201
General Source Phone Number:	812-376-1458
SIC Code:	3562, 3566, 3568
County Location:	Bartholomew
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD 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

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

- (a) one (1) flux bath for cast iron metal parts cleaning, identified as # 1111 installed in 2002, using a maximum of 3 pounds of flux per hour, venting to stack #1111.
- (b) multiple detergent-based parts washers for pre-assembly metal parts cleaning, installed in 2002, using a combined total of 0.92 gallons of cleaner per hour, exhausting into the building.
- (c) multiple Safety-Kleen solvent parts washers for the Repair Department cleaning, installed in 2002, using a combined 0.12 gallons per hour of cleaning solvent, exhausting into the building.
- (d) two (2) tin coating baths for the tinning of cast iron parts, identified as # 2078 and 2773, installed in 2002, using a total maximum throughput for the two (2) tin coating baths of 2.5 pounds of tin solder per hour, venting to stacks # 2078 and 2773, respectively.
- (e) three (3) babbitt melting pots, identified as # 2772, 2930 and 9010, installed in 2002, using a total maximum of 28 pounds of Babbitt ingots per hour, with one (1) natural gas fired holding oven, identified as Oven #4, at a maximum heat input rate of 0.51 MMBtu per hour, exhausting to stacks # 2772, 2930 and 9010, respectively.
- (f) Babbitt casting coating process, identified as POURING TABLES, installed in 2002, pouring up to 28 pounds of melted Babbitt per hour, and coating tin-coated cast iron metal parts to produce 800 pounds of Babbitt-coated castings per hour, exhausting into the building.
- (g) machining operations of up to 800 pounds of Babbitt-coated castings per hour using machining centers, lathes, drills and milling machines, with some of the equipment identified as various, installed in 2002, all exhausting into the building.

- (h) Babbitt work-up/rework process for Babbitt castings repair and re-machining, identified as #0071A and 0071B, installed in 2002, with a capacity to process up to 375 pounds per hour of Babbitt-coated castings, using one (1) oxyacetylene torch and three (3) sanders, exhausting at stacks # 0071A and 071B.
- (i) machining operations of up to 800 pounds of metal parts per hour using machining centers, lathes, drills and milling machines and applying approximately 2.0 gallons per hour of machining coolant to several machines, with some of the equipment, identified as various, installed prior to 1970 and some of the equipment installed in 2002, all exhausting into the building.
- (j) two (2) shielded metal arc (SMA) welding stations, identified as 3701 and 4394, constructed in 2002, using a total of 5 pounds of welding rods per hour, exhausting to stacks # 3701 and 4394.
- (k) one (1) media blast unit, using 60 grit fused alumina shot for blasting, identified as Rotoblast unit, equipped with a baghouse for particulate control, installed on June 7, 2003, capacity: the maximum capacity of the machine is 375 pounds of shot per hour and cleans 30 parts per day up to 80 lbs in size but the average part size being 40 lbs.
- (l) three (3) paint spray booths, identified as Paint Booth 1, 2 and 3, installed in 2002, each using 0.10 gallons of coating per hour, equipped with a low pressure high volume spray application system and a dry filter for particulate matter overspray control, each exhausting to stacks # 0966, 1154 and 2587, respectively.
- (m) two (2) natural gas fired evaporators, for waste coolant/cutting solution recycling, identified as Evaporators 1 and 2, installed in 2002, each with a burner heat input rating of 0.195 MMBtu per hour, processing up to a total of 92 pounds of waste solution per hour, each exhausting to stack # 5461 and 7713, respectively.
- (n) two (2) natural gas fired endothermic heat treat ovens used for heat treating of metal parts during production, identified as T500 and T900, and two (2) natural gas fired Ipsen generators, identified as 0364 and 0366 installed prior to 1970, with a total heat input rating of 1.032 MMBtu per hour, and with T500 exhausting to four (4) stacks identified as HO-1, HO-2, HO-3 and HO-4, T900 exhausting to stack HO-5, and Ipsen exhausting to stack IG-1. Unit 0364 is a backup unit to 0366.
- (o) one (1) electric Grieve epoxy curing oven, identified as 9025, installed in 2002, operating at a maximum of 650 pounds of metal parts per 90 minute batch cycle, exhausting into the building.
- (p) five (5) Instapak foam packaging spray stations with self-contained dispensing, used for the finished metal parts packaging, identified as No IDs, using a total maximum of 0.5 gallons of foam component material per hour.
- (q) nine (9) propane fuel fired lift trucks.
- (r) twenty-three (23) miscellaneous natural gas fired space heaters, each with a heat input rating of 0.175 MMBtu per hour, 47 space heaters, each with a heat input rating of 0.052 MMBtu per hour, and one (1) hot water heater, with a heat input rating of 0.199 MMBtu per hour and two (2) hot water heaters each with a heat input of 0.040 MMBtu per hour.

## SECTION B GENERAL CONDITIONS

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

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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)]

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- (a) This permit, M005-23566-00092, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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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

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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

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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

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

### B.7 Duty to Provide Information

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- (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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

#### B.8 Certification

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- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

#### B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

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- (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 Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, IN 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.10 Preventive Maintenance Plan [326 IAC 1-6-3]

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, 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 Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of permits established prior to M005-23566-00092 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.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]**

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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 ninety (90) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

**B.13 Permit Renewal [326 IAC 2-6.1-7]**

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- (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 the certification 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  
Permits Branch, 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 ninety (90) 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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.

**B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]**

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- (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  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

**B.15 Source Modification Requirement**

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

**B.16 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]**

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

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- (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  
Permits Branch, 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 the certification 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.18 Annual Fee Payment [326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.
- (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.19 Credible Evidence [326 IAC 1-1-6]**

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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 5-1-3 (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 or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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

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

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

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

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

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- (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  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-52 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

#### **C.9 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

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

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

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

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

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

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

### **C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

### **C.13 Instrument Specifications [326 IAC 2-1.1-11]**

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- (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.
- (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.14 Response to Excursions or Exceedances**

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- (a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned 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 within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (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 maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

**C.15 Actions Related to Noncompliance Demonstrated by a Stack Test**

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- (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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

**C.16 Malfunctions Report [326 IAC 1-6-2]**

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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.17 General Record Keeping Requirements [326 IAC 2-6.1-5]**

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- (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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

**C.18 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]**

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

Indiana Department of Environmental Management  
Compliance Data Section, 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) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) one (1) flux bath for cast iron metal parts cleaning, identified as # 1111 installed in 2002, using a maximum of 3 pounds of flux per hour, venting to stack #1111.
- (b) multiple detergent-based parts washers for pre-assembly metal parts cleaning, installed in 2002, using a combined total of 0.92 gallons of cleaner per hour, exhausting into the building.
- (c) multiple Safety-Kleen solvent parts washers for the Repair Department cleaning, installed in 2002, using a combined 0.12 gallons per hour of cleaning solvent, exhausting into the building.

(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 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the Permittee shall ensure that the following requirements are met for the multiple Safety-Kleen type cold cleaning parts washers at the Repair Department:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (d) two (2) tin coating baths for the tinning of cast iron parts, identified as # 2078 and 2773, installed in 2002, using a total maximum throughput for the two (2) tin coating baths of 2.5 pounds of tin solder per hour, venting to stacks # 2078 and 2773, respectively.
- (e) three (3) babbitt melting pots, identified as # 2772, 2930 and 9010, installed in 2002, using a total maximum of 28 pounds of Babbitt ingots per hour, with one (1) natural gas fired holding oven, identified as Oven #4, at a maximum heat input rate of 0.51 MMBtu per hour, exhausting to stacks # 2772, 2930 and 9010, respectively.
- (f) Babbitt casting coating process, identified as POURING TABLES, installed in 2002, pouring up to 28 pounds of melted Babbitt per hour, and coating tin-coated cast iron metal parts to produce 800 pounds of Babbitt-coated castings per hour, exhausting into the building.
- (g) Babbitt coated castings machining operations, identified as Various, installed in 2002, machining up to 800 pounds per hour of Babbitt-coated castings, including machining centers, lathes, drills and milling machines, exhausting into the building.
- (h) Babbitt work-up/rework process for Babbitt castings repair and re-machining, identified as #0071A and 0071B, installed in 2002, with a capacity to process up to 375 pounds per hour of Babbitt-coated castings, using one (1) oxyacetylene torch and three (3) sanders, exhausting at stacks # 0071A and 071B.
- (i) machining operations of up to 800 pounds of metal parts per hour using machining centers, lathes, drills and milling machines and applying approximately 2.0 gallons per hour of machining coolant to several machines, with some of the equipment, identified as various, installed prior to 1970 and some of the equipment installed in 2002, all exhausting into the building.
- (j) two (2) shielded metal arc (SMA) welding stations, identified as 3701 and 4394, constructed in 2002, using a total of 5 pounds of welding rods per hour, exhausting to stacks # 3701 and 4394.
- (k) one (1) media blast unit, using 60 grit fused alumina shot for blasting, identified as Rotoblast unit, equipped with a baghouse for particulate control, installed on June 7, 2003. The maximum capacity of the machine is 375 pounds of shot per hour and cleans 30 parts per day up to 80 lbs in size but the average part size being 40 lbs.

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

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

#### D.2.1 Particulate Matter Control [326 IAC 6-3-2(e)]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate matter (PM) emitted from the facilities listed below shall be limited as stated, based on the following:

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

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

Emission Unit/Activity	Process Weight Rate (lbs/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Cast iron parts machining, using lathes, machining centers, drills and milling machines	800	2.2
Babbitt coated castings machining, using melting pots, holding oven, mold application, machining centers, boring machines and sanders	800	2.2
Babbitt work-up/rework repair and re-machining, using oxyacetylene torch and sanders	800	2.2
Media Blast Unit	375	1.34

- (b) Pursuant to 326 IAC 6-3-2(e), the allowable particulate matter emission rate from the following processes with maximum process weight rates less than 100 pounds per hour shall not exceed 0.551 pounds per hour:
- (1) tinning of cast iron parts, using one (2) tin coating baths at a maximum of 2.5 pounds of tin solder per hour;
  - (2) babbitt melting using three (3) melting pots at a total maximum of 28 pounds of babbitt ingots per hour;
  - (3) babbitt casting coating process, pouring up to 28 pounds of melted babbitt per hour; and
  - (4) two (2) shielded metal arc (SMA) welding stations using a total of 5 pounds of welding rods per hour.

**Compliance Determination Requirements**

**D.2.2 Particulate Control**

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The baghouse shall be in operation at all times the media blast unit is in operation.

## SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (l) three (3) paint spray booths, identified as Paint Booth 1, 2 and 3, installed in 2002, each using 0.10 gallons of coating per hour, equipped with a low pressure high volume spray application system and a dry filter for particulate matter overspray control, each exhausting to stacks #' 0966, 1154 and 2587, respectively.

(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.3.1 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, the volatile organic compound (VOC) content of coatings delivered to the applicators at Paint Booths 1, 2 and 3 shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried coatings.

#### D.3.2 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from the application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

#### D.3.3 Particulate Matter Control [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate overspray emissions from the surface coating operations at Paint Booth Nos. 1, 2 and 3 shall be controlled by a dry particulate filter control system and shall be operated in accordance with manufacturer's specifications.

#### D.3.4 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

### Compliance Determination Requirements

#### D.3.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

Compliance with the VOC content limitations contained in Condition D.3.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

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

#### D.3.6 Particulate Matter [326 IAC 6-3-2(d)(2)]

Pursuant to 326 IAC 6-3-2(d)(2) the Permittee shall be subject to the following requirement:

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

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

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

**D.3.7 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.3.3 and D.3.6, if overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.
- (b) To document compliance with Condition D.3.1, the Permittee shall maintain records of the amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents. These records shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.3.1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**MINOR SOURCE OPERATING PERMIT (MSOP)**  
**CERTIFICATION**

Source Name: Reliance Electric Company  
Source Address: 3300 East Tenth Street, Columbus, Indiana 47201  
Mailing Address: 3300 East Tenth Street, Columbus, Indiana 47201  
MSOP Permit No.: M005-23566-00092

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

Please check what document is being certified:

- Annual Compliance Notification
- Test Result (specify) \_\_\_\_\_
- Report (specify) \_\_\_\_\_
- Notification (specify) \_\_\_\_\_
- Affidavit (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_

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

Signature:

Printed Name:

Title/Position:

Date:

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

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

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

<b>Company Name:</b>	Reliance Electric Company
<b>Address:</b>	3300 East Tenth Street
<b>City:</b>	Columbus, Indiana 47201
<b>Phone #:</b>	812-376-1458
<b>MSOP #:</b>	M005-23566-00092

I hereby certify that Reliance Electric Company is :

still in operation.

no longer in operation.

I hereby certify that Reliance Electric Company is :

in compliance with the requirements of  
MSOP M005-23566-00092.

not in compliance with the requirements of  
MSOP M005-23566-00092.

<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>

**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 ?\_\_\_\_, 100TONS/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 PERM 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:

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

Addendum to the Technical Support Document (ATSD) for a  
NSR/MSOP

**Source Background and Description**

<b>Source Name:</b>	<b>Reliance Electric Company</b>
<b>Source Location:</b>	<b>3300 East Tenth Street, Columbus, Indiana 47201</b>
<b>County:</b>	<b>Bartholomew</b>
<b>SIC Code:</b>	<b>3562, 3566, 3568</b>
<b>Current Permit No.:</b>	<b>R005-15340-00092</b>
<b>Permit Issuance Date:</b>	<b>June 5, 2002</b>
<b>Operation Permit No.:</b>	<b>M005-23566-00092</b>
<b>Permit Reviewer:</b>	<b>Janet Mobley</b>

On March 7, 2008, the Office of Air Quality (OAQ) had a notice published in The Republic, Columbus, Indiana, stating that Reliance Electric Company had applied for a New Source Construction and MSOP to continue to operate their stationary electrical motor gearbox manufacturing operation. The notice also stated that the OAQ proposed to issue a New Source Construction and Minor Source Operating Permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

**Comments and Responses**

On April 4, 2008, Lauren Evancheck and Charles J. Staehler of August Mack Environmental submitted comments to IDEM, OAQ on the draft MSOP permit.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

**Comment 1: The commentor requested that in Section B.2 that the permit term be changed from five (5) years to a ten (10) year term.**

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, M005-23566-00092, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

**Response to Comment 1:** The MSOP permit term can not be changed from five years to ten years because this is the initial MSOP. The longer permit term is only available for renewals. There are no changes made as a result of this comment.

**Comment 2: The commentor requested that in Section D.3.7(a) the requirement to keep records of**

**daily visible emission notations be removed.**

**Response to Comment 2:** IDEM agrees with the recommended change. The permit has been revised as follows:

**D.3.7 Record Keeping Requirements**

- (a) To document compliance with Conditions D.3.3 and D.3.6, if overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

~~The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).~~

<b>IDEM Contact</b>
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Questions regarding this NSR/MSOP can be directed to Janet Mobley at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5373 or toll free at 1-800-451-6027 extension 4-5373.

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

Technical Support Document (TSD) for a New Source Review and  
Minor Source Operating Permit (MSOP)

**Source Background and Description**

<b>Source Name:</b>	<b>Reliance Electric Company</b>
<b>Source Location:</b>	<b>3300 East Tenth Street, Columbus, Indiana 47201</b>
<b>County:</b>	<b>Bartholomew</b>
<b>SIC Code:</b>	<b>3562, 3566, 3568</b>
<b>Current Permit No.:</b>	<b>R005-15340-00092</b>
<b>Permit Issuance Date:</b>	<b>June 5, 2002</b>
<b>Operation Permit No.:</b>	<b>M005-23566-00092</b>
<b>Permit Reviewer:</b>	<b>Janet Mobley</b>

The Office of Air Quality (OAQ) has reviewed the application from Reliance Electric Company for a stationary electrical motor gearbox manufacturing operation.

**History**

On August 25, 2006, the source submitted an application to the OAQ requesting descriptive changes to the emission units and to add a media blast unit to its current Registration. Reliance Electric Company (formerly known as Dodge Columbus Indiana) was issued a registration (No. R005-15340-00092) on June 5, 2002. During this review process, IDEM has determined that this source has not obtained the appropriate permit level for the operations at the facility. IDEM is aware that the source has been operating under a Registration but has a PTE greater than 25 tons per year of PM and PM10 and should be operating under a MSOP (pursuant to 326 IAC 2-6.1). (See detailed explanation on page 7 of this TSD). The registration status of the source is upgraded to a MSOP. Also, the company name has changed and is operating as Reliance Electric Company.

**Source Definition**

As determined in the Registration 005-15340-00092, issued June 5, 2002, this plant is not considered to be a combined source with another plant in the Columbus area, and shall be considered as an independent source for the purposes of air permitting.

The source owns two (2) plants that are located approximately 1.5 miles apart, with the plants located at the following addresses:

- (a) Plant 1 is located at 3300 East Tenth Street, Columbus, Indiana, 47201; and
- (b) Plant 2 is located at 1225 Seventh Street, Columbus, Indiana, 47201.

These two (2) plants have the same SIC codes and are owned by one (1) company. However, the properties are not considered to be "adjacent" since there is no nexus between the activities at the two plant locations (i.e., no contribution of parts used in final production nor resource sharing). Based on this, Plants 1 and 2 are considered as two (2) separate sources.

During the review period, IDEM, OAQ was notified that Plant 2 was shutdown.

## Permitted Emission Units and Pollution Control Equipment

The operation includes the following emission units and pollution control devices:

- (a) one (1) flux bath for cast iron metal parts cleaning, identified as # 1111 installed in 2002, using a maximum of 3 pounds of flux per hour, venting to stack #1111.
- (b) multiple detergent-based parts washers for pre-assembly metal parts cleaning, installed in 2002, using a combined total of 0.92 gallons of cleaner per hour, exhausting into the building. [326 IAC 8-3-2]
- (c) multiple Safety-Kleen solvent parts washers for the Repair Department cleaning, installed in 2002, using a combined 0.12 gallons per hour of cleaning solvent, exhausting into the building.
- (d) two (2) tin coating baths for the tinning of cast iron parts, identified as # 2078 and 2773, installed in 2002, using a total maximum throughput for the two (2) tin coating baths of 2.5 pounds of tin solder per hour, venting to stacks # 2078 and 2773, respectively.
- (e) three (3) babbitt melting pots, identified as # 2772, 2930 and 9010, installed in 2002, using a total maximum of 28 pounds of Babbitt ingots per hour, with one (1) natural gas fired holding oven, identified as Oven #4, at a maximum heat input rate of 0.51 MMBtu per hour, exhausting to stacks # 2772, 2930 and 9010, respectively.
- (f) Babbitt casting coating process, identified as POURING TABLES, installed in 2002, pouring up to 28 pounds of melted Babbitt per hour, and coating tin-coated cast iron metal parts to produce 800 pounds of Babbitt-coated castings per hour, exhausting into the building.
- (g) machining operations of up to 800 pounds of Babbitt-coated castings per hour using machining centers, lathes, drills and milling machines, with some of the equipment identified as various, installed in 2002, all exhausting into the building. [326 IAC 6-3-2]
- (h) Babbitt work-up/rework process for Babbitt castings repair and re-machining, identified as #0071A and 0071B, installed in 2002, with a capacity to process up to 375 pounds per hour of Babbitt-coated castings, using one (1) oxyacetylene torch and three (3) sanders, exhausting at stacks # 0071A and 071B. [326 IAC 6-3-2]
- (i) machining operations of up to 800 pounds of metal parts per hour using machining centers, lathes, drills and milling machines and applying approximately 2.0 gallons per hour of machining coolant to several machines, with some of the equipment, identified as various, installed prior to 1970 and some of the equipment installed in 2002, all exhausting into the building. [326 IAC 6-3-2]
- (j) two (2) shielded metal arc (SMA) welding stations, identified as 3701 and 4394, constructed in 2002, using a total of 5 pounds of welding rods per hour, exhausting to stacks # 3701 and 4394. [326 IAC 6-3-2]
- (k) one (1) media blast unit, using 60 grit fused alumina shot for blasting, identified as Rotoblast unit, equipped with a baghouse for particulate control, installed on June 7,

2003, capacity: the maximum capacity of the machine is 375 pounds of shot per hour and cleans 30 parts per day up to 80 lbs in size but the average part size being 40 lbs.

- (l) three (3) paint spray booths, identified as Paint Booth 1, 2 and 3, installed in 2002, each using 0.10 gallons of coating per hour, equipped with a low pressure high volume spray application system and a dry filter for particulate matter overspray control, each exhausting to stacks # 0966, 1154 and 2587, respectively.
- (m) two (2) natural gas fired evaporators, for waste coolant/cutting solution recycling, identified as Evaporators 1 and 2, installed in 2002, each with a burner heat input rating of 0.195 MMBtu per hour, processing up to a total of 92 pounds of waste solution per hour, each exhausting to stacks # 5461 and 7713, respectively.
- (n) two (2) natural gas fired endothermic heat treat ovens used for heat treating of metal parts during production, identified as T500 and T900, and two (2) natural gas fired Ipsen generators, identified as 0364 and 0366 installed prior to 1970, with a total heat input rating of 1.032 MMBtu per hour, and with T500 exhausting to four (4) stacks identified as HO-1, HO-2, HO-3 and HO-4, T900 exhausting to stack HO-5, and Ipsen exhausting to stack IG-1. Unit 0364 is a backup unit to 0366.
- (o) one (1) electric Grieve epoxy curing oven, identified as 9025, installed in 2002, operating at a maximum of 650 pounds of metal parts per 90 minute batch cycle, exhausting into the building.
- (p) five (5) Instapak foam packaging spray stations with self-contained dispensing, used for the finished metal parts packaging, identified as No IDs, using a total maximum of 0.5 gallons of foam component material per hour.
- (q) nine (9) propane fuel fired lift trucks.
- (r) twenty-three (23) miscellaneous natural gas fired space heaters, each with a heat input rating of 0.175 MMBtu per hour, 47 space heaters, each with a heat input rating of 0.052 MMBtu per hour, and one (1) hot water heater, with a heat input rating of 0.199 MMBtu per hour and two (2) hot water heaters each with a heat input of 0.040 MMBtu per hour.

#### **Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit**

The source also consists of the following emission unit that was constructed and is operating without a permit:

- (k) one (1) media blast unit, using 60 grit fused alumina shot for blasting, identified as Rotoblast unit, equiped with a baghouse for particulate control, installed on June 7, 2003, capacity: the maximum capacity of the machine is 375 pounds of shot per hour and cleans 30 parts per day up to 80 lbs in size but the average part size being 40 lbs.

### **Air Pollution Control Justification as an Integral Part of the Process**

The applicant has submitted the following justification such that the baghouse be considered as an integral part of the media blast unit:

The media blast unit has an integral baghouse attached to it. The baghouse has to operate in order for the media blast unit to function properly. There is one set of controls for the media blast unit that activates both operations at the same time to assure the unit functions properly. The media blast unit has airflow of 900 actual cubic feet per minute, which allows the operator to see into the blasting area for quality purposes. The blasting area is completely enclosed which allows for 100 percent capture from the enclosure. The captured silica shot is carried out of the blasting zone and then recycled through the baghouse. The maximum capacity of the media blast machine is 375 pounds of silica shot per hour and the integral baghouse recycles a conservative product recovery rate of 90 percent of the shot back into the process to be reused multiple times. Virgin shot costs \$0.41 per pound. If all the shot used had to be virgin with no reclaim, the additional cost in shot material would be \$27,000 per year. This additional cost is not needed with the recycling of the shot material back into the process. Each pound of recycled shot is one pound of virgin shot that does not need to be purchased.

The IDEM, OAQ has evaluated the justifications and determined that the baghouse is not considered an integral part of the process. The baghouse serves primarily as particulate control. The justification centers primarily with maintaining the efficiency of the process and producing less defective products if the dust collector is operating; however, this does not necessarily mean that the process can not operate without the dust collector. The shot blaster can operate without the dust collector until the concentration of fines becomes too high. The reduction and purchasing cost savings is not an overwhelming economic impact. Therefore, the permitting level has been determined using the potential to emit before the baghouse.

### **Existing Approvals**

(a) The source has been operating under the previous approval:

Registered Construction and Operation Status 005-15340-00092 issued June 5, 2002.

(b) Units removed from the source that were permitted in the previous registration:

one (1) 869 gallon Kolene caustic cleaning tank  
one (1) sulfuric acid neutralization bath using a maximum of 1.03 pounds of sulfuric acid per hour;  
one (1) hydrochloric acid etching bath using a maximum of 0.30 pounds of hydrochloric acid per hour  
one (1) natural gas fired Kolene heater rated at 2.0 million British thermal units heat input per hour (MMBtu/hr)  
one (1) rust preventive bath, using 0.62 gallons of metal rust-preventive per hour  
one (1) natural gas fired evaporator  
one (1) paint spray booth (identified as the previous Paint Booth 1) that was constructed prior to 1970  
one (1) 7.25 gallon plastic seal dip tank, installed in 2002, using 0.11 pounds per hour of liquid plastic sealant exhausting to one (1) stack  
three(3) propane fuel fired lift trucks

- (c) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

**Enforcement Issue**

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit". This proposed permit is intended to satisfy the requirements of the construction permit rules.

During this review process, IDEM has determined that this source has not obtained the appropriate permit level for the operations at the facility. IDEM is aware that the source has been operating under a Registration but has a PTE greater than 25 tons per year of PM and PM 10 and should be operating under a MSOP (pursuant to 326 IAC 2-6.1). IDEM is reviewing these matters and will take appropriate action.

**Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)
HO-1	Heat Treat Oven T500	25.7	2.5
HO-2	Heat Treat Oven T500	26.7	0.7
HO-3	Heat Treat Oven T500	27.3	0.8
HO-4	Heat Treat Oven T500	22.2	1.25 x 1.25
HO-5	Heat Treat Oven T900	29.9	2
SIG-1	Ipsen Generator	22.25	0.8
S2078	Tin Bath (#2078)	unknown	unknown
S2773	Tin Bath (#2773)	unknown	unknown
S2772	Babbitt melting pot (#2772)	unknown	unknown
S2930	Babbitt melting pot (#2930)	unknown	unknown
S9010	Babbitt melting pot (#9010)	unknown	unknown
S0071A	Babbitt work-up/rework (#0071A)	unknown	unknown
S0071B	Babbitt work-up/rework (#0071B)	unknown	unknown
S5461	Evaporator #1	unknown	unknown
S7713	Evaporator #2	unknown	unknown
S0966	Paint Booth #1	unknown	unknown
S1154	Paint Booth #2	unknown	unknown
S2587	Paint Booth #3	unknown	unknown
S3701	Shielded metal arc (SMA) welding stations (#3701)	unknown	unknown

S4394	Shielded metal arc (SMA) welding stations (#4394)	unknown	unknown
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8835	Disc Brake	25	6" galvanized piping
5306	Disc Brake	25	3" PVC Piping
0148	Roller Bearing	25	6" PVC Piping
0061	Sleevoil	25	6" PVC Piping
0062	Sleevoil	25	6" PVC Piping
6611	Cast Iron Machining	25	12" galvanized piping

**Emission Calculations**

See Appendix A of this document for detailed emission calculations (Pages 1 through 15).

**County Attainment Status**

The source is located in Bartholomew County.

Pollutant	Status
PM-10	Attainment
PM-2.5	Attainment
SO <sub>2</sub>	Attainment
NOx	Attainment
8-Hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Bartholomew County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone. Bartholomew County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Bartholomew County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD applicability.

(e) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

**Unrestricted Potential Emissions**

This table reflects the unrestricted potential emissions of the entire source.

Pollutant	Potential To Emit (tons/year)
PM	65.69
PM-10	42.70
SO <sub>2</sub>	0.04
VOC	19.00
CO	3.15
NO <sub>x</sub>	3.8

HAPs	Potential To Emit (tons/year)
hydrochloric acid (HCl)	1.31
lead (Pb)	0.06
toluene	5.10
xylene	1.26
glycol ethers	1.01
total other misc. HAPs	1.01
TOTAL	9.76

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all criteria are less than 100 tons per year and the potential to emit of PM, and PM 10 are greater than 25 tons per year. Toluene, as a single hazardous air pollutant (HAP), is not equal to or greater than ten (10) tons per year, and the potential to emit the combination of HAPs is not equal to or greater than ten (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM, PM-10, VOC, SO<sub>2</sub>, CO and NO<sub>x</sub> are each greater than twenty-five (25) tons per year but less than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is subject to 326 IAC 2-6.1.
- (d) Fugitive Emissions  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards

that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD applicability.

**Actual Emissions**

No previous emission data has been received from the source.

**Potential to Emit After Control**

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

Process/emission unit	Potential To Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Babbitt Preparation, Application & Re-Work	13.14	13.14	0.01	0.05	0.77	1.18	1.31
Metal Parts Machining	0.33	0.14	0.00	3.22	0.00	0.00	0.33
Metal Parts Cleaning	0.00	0.00	0.00	4.32	0.00	0.00	0.00
Metal Parts Spray Painting (3 booths)	0.29	0.25	0.00	8.59	0.00	0.00	7.38
Coated cast Iron Parts Heat Treating & Curing	0.01	0.03	0.00	0.90	0.38	0.45	negligible
Coolant Recycling (2 evaporators)	0.00	0.03	0.00	1.03	0.25	0.34	negligible
Instapack Foam Spray Packaging Stations (5 Stations)	0.00	0.00	0.00	0.53	0.00	0.00	0.00
Welding (2 SMA stations)	3.03	3.03	0.00	0.00	0.00	0.00	0.17
Miscellaneous Natural Gas & Propane Combustion	0.02	0.10	0.01	0.07	0.54	1.30	negligible
Media blaster	4.4	2.13	0.00	0.00	0.00	0.00	0.00
<b>Total Emissions</b>	<b>21.18</b>	<b>18.85</b>	<b>0.02</b>	<b>19.00</b>	<b>1.94</b>	<b>3.27</b>	<b>9.76</b>

"-" does not emit a pollutant and negligible denotes an emission level of a pollutant emitted at less than 0.1 tons per year

- (a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than two hundred fifty (<250) tons per year, and it is not one of the twenty-eight (28) listed source categories.
- (b) Fugitive Emissions  
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

### **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (b) 40 CFR Part 63, Subpart X (National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting)

This source is not subject to the NESHAP for source categories, 326 IAC 20-14, (40 CFR 63, Subpart X), National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting, for its babbitt melting process since the source does not perform smelting, nor is the source a secondary lead smelter, pursuant to 40 CFR 63.542. Therefore this rule does not apply to the source.

40 CFR Part 63, Subpart T (National Emission Standards for Halogenated Solvent Cleaning)

The parts cleaning operation at the Repair Department that includes various Safety-Kleen solvent parts washer, is not subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 20, (40 CFR 63, Subpart T). Subpart T applies to degreasing operations using one of six listed halogenated solvents, or any combination of the solvents in a concentration greater than 5 percent by weight, as a cleaning or drying agent. The source does not use the regulated halogenated solvents in the degreasing operation; therefore, Subpart T does not apply.

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

### **State Rule Applicability – Entire Source**

#### **326 IAC 2-2 (Prevention of Significant Deterioration)**

Pursuant to 326 IAC 2-2, this source constructed in part after 1980, is not considered a major source and is not subject to the requirements of 326 IAC 2-2 because the potential to emit of all criteria pollutants are less than 250 tons per year or more of any pollutant, therefore, this source is a minor source for PSD purposes.

#### **326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)**

This source is not subject to the requirements of 326 IAC 2-4.1 because the potential to emit any single HAP is less than 10 tons per year of any HAP and the potential to emit any combination of HAPs is less than 25 tons per year.

#### **326 IAC 2-6 (Emission Reporting)**

This source is not subject to the requirements of 326 IAC 2-6 because the source is located in Bartholomew County and is not required to have an operating permit under 326 IAC 2-7 and does not emit lead into the ambient air at levels equal to or greater than 5 tons per year.

#### **326 IAC 5-1 (Opacity Limitations)**

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

### **State Rule Applicability – Individual Facilities**

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

- (a) Pursuant to 326 IAC 6-3-2(d), the particulate overspray emissions at Paint Booth Nos. 1, 2 and 3 shall be controlled by a dry filter control system and shall be subject to the following:
  - (1) The source shall operate the control device in accordance with manufacturer's specifications.
  - (2) If overspray is visibly detected at the exhaust or accumulates on the ground, the source shall inspect the control device and do either of the following no later than four (4) hours after 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.

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

(Note: The finished metal parts packaging process, consisting of five (5) Instapak foam packaging spray stations, is determined to generate no particulate overspray emissions. and confirmed by OAQ, Compliance Section. The process involves spraying polymerizing foam (containing MDI) into an enclosed package that contains the finished metal product to prevent product damage during shipping.)

- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate matter (PM) emitted from the facilities listed below shall be limited as stated, based on the following:

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

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

Emission Unit/Activity	Process Weight Rate (lbs/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Cast iron parts machining, using lathes, machining centers, drills and milling machines	800	2.2
Babbitt coated castings machining, using melting pots, holding oven, mold application, machining centers, boring machines and sanders	800	2.2
Babbitt work-up/rework repair and re-machining, using oxyacetylene torch and sanders	800	2.2
Media Blast Unit	375	1.34

There will be no compliance monitoring condition specified in the approval for these facilities/activities since they do not have a control device and do not have actual emissions exceeding 25 tons per year, nor do they have allowable emissions for the controlled pollutant (i.e., PM) exceeding 10 pounds per hour.

The media blast unit will not be in compliance with this rule without the baghouse. Therefore the media blast unit shall not be operated without the baghouse.

(c) Pursuant to 326 IAC 6-3-2(c), (Particulate Emission Limitations for Manufacturing Processes) the allowable particulate matter emission rate from the following processes with maximum process weight rates less than 100 pounds per hour shall not exceed 0.551 pounds per hour:

- (1) tinning of cast iron parts, using two (2) tin coating baths at a maximum of 2.5 pounds of tin solder per hour;
- (2) babbitt melting using three (3) melt pots at a total maximum of 28 pounds of babbitt ingots per hour;
- (3) babbitt casting coating process, pouring up to 28 pounds of melted babbitt per hour; and
- (4) two (2) shielded metal arc (SMA) welding stations using a total of 5 pounds of welding rods per hour.

There will be no compliance monitoring condition specified for these facilities/activities since they do not have a control device and do not have actual emissions exceeding 25 tons per year, nor do they have allowable emissions for the controlled pollutant (i.e., PM) exceeding 10 pounds per hour.

- (d) Pursuant to 326 IAC 6-3-2(e), (Particulate Emission Limitations for Manufacturing Processes) the particulate matter from the grinding and machining operations shall not exceed 0.551 pounds per hour when operating at a process weight rate of less than 100 pounds per hour. When operating at a process weight rate of 100 pounds per hour or more, the particulate matter shall not exceed the pound per hour emission rate established as E in the following equation:

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

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

326 IAC 8-1-6 (General Reduction Requirements for VOC Emissions)

Pursuant to 326 IAC 8-1-6, any facility constructed after January 1, 1980 that has a potential to emit greater than or equal to 25 tons of VOC per year that is not regulated by another 326 IAC 8 rule shall reduce VOC emissions using BACT.

Paint Booth #1 through #3 are subject to the requirements of 326 IAC 8-2-9. Therefore, these units are not subject to the requirements of 326 IAC 8-1-6.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

This source coats metal products in three (3) spray paint booths, constructed in 2002, with actual VOC emissions of greater than fifteen (15) pounds per day before add-on controls. Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings delivered to the applicators at Paint Booths 1, 2 and 3 shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

326 IAC 8-3-2 (Cold Cleaner Operations)

The source, which is located in Bartholomew County and maintains various Safety-Kleen type cold cleaning parts washers at the Repair Department, and detergent-based parts washers for pre-assembly metal parts cleaning are subject to the applicable rule requirements since the cleaners, installed in 2002, are new after January 1, 1980. As such, and pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the owner or operator shall ensure that the following requirements are met for the various Safety-Kleen type cold cleaning parts washers at the Repair Department:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;

- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

The source shall comply with these requirements.

#### 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The requirements of this rule apply to cold cleaning degreasers without remote solvent reservoirs that either existed as of July 1, 1990 and were located in a specified county, or the cleaning facility was constructed after July 1, 1990 and was located anywhere in the state. This source, located in Bartholomew County, which is a non-listed county, is not subject to the applicable rule requirements since the degreaser has a remote solvent reservoir.

### Testing Requirements

The following is noted with respect to the potential to emit lead from the three (3) babbitt melting pots that use a total maximum of 28 pounds of babbitt ingots per hour. The source has indicated in the application that during 1995, a test of lead emissions was performed at the babbitt melt pots, and the test results indicated that there was no lead detected from the babbitt melting process. A review of U.S. EPA's AP-42 emission factor document, Section 12.17 Miscellaneous Lead Products, indicates that lead used in the manufacture of bearings (i.e., the babbiting process described herein), produces negligible lead emissions from melting and casting, even without controls. Since this statement from AP-42 is consistent with the stated results of the 1995 test, no requirement for further testing has been included in this approval.

### Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-6.1 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-6.1-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) Visible emissions notations of the roboblaster stack exhaust shall be performed once per day during normal daylight operations, when venting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start up or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

## **Recommendation**

The staff recommends to the Commissioner that the MSOP be approved. This recommendation is based on the following facts and conditions:

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 August 25, 2006. Additional information was received on December 18, 2006, May 2007, July 27, 2007 and January 14, 2008.

## **Conclusion**

The operation of this electrical motor gearbox manufacturing operation shall be subject to the conditions of the attached NSR/MSOP No.: M005-23566-00092.

Company Name: Reliance Electric Company  
 Address City IN Zip: 3300 East Tenth Street, Columbus, Indiana 47201  
 MSOP No.: M005-23566-00092  
 Reviewer: Janet Mobley  
 Date: July 30, 2007

Uncontrolled Potential Emissions (tons/year)							
Emissions Generating Activity	Pollutant						
	PM	PM10	SO2	NOx	VOC	CO	HAPs
Babbitt Preparation, Application & Re-Work *	13.14	13.14	0	0	0	0.77	1.31
Cast Iron Parts Machining	0.0238	0.0004	0	0	3.48	0	0.33
Cast Iron Parts Cleaning	0	0	0	0	4.87	0	0
Cast Iron Parts Spray Painting (3 Paint Booths)	4.89	4.89	0	0	8.59	0	7.38
Coated cast Iron Parts Heat Treating & Curing *	0	0	0	0	0	0.38	negl.
Coolant Recycling (2 Evaporators) *	0	0.03	0	0.34	1.03	0.25	negl.
Instapak Foam Spray Packaging Stations (5 Stations)	0	0	0	0	0	0	0
Welding (2 SMA stations)	3.03	3.03	0	0	0	0	0.17
Miscellaneous Natural Gas & Propane Combustion	0.06	0.24	0.02	3.03	0.7	1.94	0.013
Media Blast	44.35	21.35					
Total Uncontrolled Potential to Emit (tons/year):	65.69	42.7	0.04	3.8	19	3.15	9.76

Controlled/Limited Potential Emissions (tons/year)							
Emissions Generating Activity	Pollutant						
	PM	PM10	SO2	NOx	VOC	CO	HAPs
Babbitt Preparation, Application & Re-Work *	13.14	13.14	0.1	1.18	0.05	0.77	1.31
Cast Iron Parts Machining	0.33	0.14	0	0	3.22	0	0.33
Cast Iron Parts Cleaning	0	0	0	0	4.32	0	0
Cast Iron Parts Spray Painting (3 Paint Booths)	0.25	0.25	0	0	8.61	0	7.38
Coated cast Iron Parts Heat Treating & Curing *	0.01	0.03	0	0.45	0.9	0.38	negl.
Coolant Recycling (2 Evaporators) *	0	0.03	0	0.34	1.03	0.25	negl.
Instapak Foam Spray Packaging Stations (5 Stations)	0	0	0	0	0.53	0	0
Welding (2 SMA stations)	3.03	3.03	0.1	0	0	0	0.17
Miscellaneous Natural Gas & Propane Combustion	0.02	0.1	0.1	1.3	0.07	0.54	negl.
Media Blast	4.4	2.13	0	0	0	0	0
Total Controlled/Limited Potential to Emit (tons/year):	21.18	18.85	0.02	3.27	19	1.94	9.76

## Notes:

\* Includes natural gas combustion emissions, as computed on page 2 of 15 of TSD Appendix A.

1-Coolant for Babbitt machining accounted for in metal machining operations

2-Epoxy cure contains no VOCs and is applied as a paste by hand for no PM emissions

3-Instant foam packaging contains no VOC's and is dispensed as a two component liquid into sealed bags

Total potential to emit based on rated capacity at 8,760 hours/year.

Appendix A: Emission Calculations  
Natural Gas & Propane Combustion  
MM BTU/HR <100

Company Name: Reliance Electric Company  
Address City IN Zip: 3300 East Tenth Street, Columbus, Indiana 47201  
MSOP No.: M005-23566-00092  
Reviewer: Janet Mobley  
Date: July 29, 2007

Combustion Unit Type	Heat Capacity (MMBtu/hr)	No. of Units	Pot. Gas Thruput (MMCF/yr)	Emission Factor in lb/MMCF						Potential Emission Rate in tons/year					
				PM*	PM10*	SO2	NOx**	VOC	CO***	PM	PM10	SO2	NOx	VOC	CO
Natural Gas Firing															
Curing (Heat Treat Ovens T500 & T900, & Ipsen Generator - Total)	1.032	1	9.04	7.6	7.6	0.6	100	5.5	84	0.01	0.03	0	0.45	0.02	0.38
Evaporator 1 Burner	0.30	1	2.63	7.6	7.6	0.6	94	5.5	40	0	0.01	0	0.08	0	0.03
Evaporator 2 Burner	0.30	1	2.63	7.6	7.6	0.6	100	5.5	84	0	0.01	0	0.13	0.01	0.11
Oven #4 (Babbitt Melt Pots)	0.51	1	4.47	7.6	7.6	0.6	94	5.5	40	0	0	0	0.06	0	0.03
Space Heaters (Plant-wide)	0.175	23	21.46	7.6	7.6	0.6	94	5.5	40	0.02	0.08	0.01	1.01	0.06	0.43
Space Heaters (Plant-wide)	0.052	47	21.41	7.6	7.6	0.6	94	5.5	40	0.02	0.08	0.01	1.01	0.06	0.43
Hot Water Heater	0.199	1	5.23	7.6	7.6	0.6	94	5.5	40	0	0.02	0	0.25	0.01	0.1
Hot Water Heaters	0.04	2	7.00	7.6	7.6	0.6	94	5.5	40						
Propane Firing															
Propane Lift Trucks			6.02	0.4	0.4	0.6	14	0.5	1.9	0	0	0	0.04	0	0.01
			(10^3 gallons)			(0.10S)			**TOC value						
Uncontrolled Potential to Emit (tons per year):										0.06	0.24	0.02	3.03	0.17	1.94

Methodology

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.  
\*\*Emission Factors for NOx: Uncontrolled = 94 for heat input capacity < 0.3 MMBtu/hr; = 100 for heat input capacity =>0.3 MMBtu/hr  
\*\*Emission Factors for CO: Uncontrolled = 40 for heat input capacity < 0.3 MMBtu/hr; = 84 for heat input capacity =>0.3 MMBtu/hr

All emission factors are based on normal firing.  
MMBtu = 1,000,000 Btu  
MMCF = 1,000,000 Cubic Feet of Gas

For Natural Gas Firing:

Potential Throughput for each building combustion unit (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu  
Emission Factors for all units except generators 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 (SUPPL. D 7/98)

For Propane Firing:

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-03-010-02)  
1 gallon of LPG has a heating value of 94,000 Btu ;1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)  
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu  
PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

Company Name: Reliance Electric Company  
 Address City IN Zip: 3300 East Tenth Street, Columbus, Indiana 47201  
 MSOP No.: M005-23366-00092  
 Reviewer: Janet Mobley  
 Date: July 30, 2007

Material (as applied)	Density (Lb/Gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Weight % toluene	Weight % xylene	Weight % glycol ethers	Weight % (pollutant)	Weight % (pollutant)	Weight % (pollutant)	HAP EMISSION RATES (TONS PER YEAR)					
										toluene	xylene	glycol ethers	(pollutant)	(pollutant)	(pollutant)
Coatings Applied															
Paint Booth 1 (using Titan Blue/Green)	11.2	0.201	(gal/hr)	20.00%	0.00%	5.00%	0.00%	0.00%	0.00%	1.97	0	0.49	0	0	0
Paint Booth 2 (using Tital Blue/Green)	11.2	0.056	(gal/hr)	20.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.55	0	0.14	0	0	0
Paint Booth 3 (using Tital Blue/Green)	11.2	0.052	(gal/hr)	20.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.51	0	0.13	0	0	0
Solvent Usage for Clean Up															
xylene cleanup usage - Paint Booth 1	7.19	0.02	(gal/hr)	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0	0.63	0	0	0	0
xylene cleanup usage - Paint Booth 2	7.19	0.02	(gal/hr)	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0	0.63	0	0	0	0
toluene cleanup usage - Paint Booth 3	6	0.02	(gal/hr)	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.53	0	0	0	0	0
Uncontrolled Potential to Emit (tons/year):										5.1	1.26	1.01	0	0	0
Limited/Controlled Potential to Emit (tons/year):										5.1	1.26	1.01	0	0	0

METHODOLOGY

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

Total = worst coating + sum of all solvents used

Total HAPs
2.46
0.69
0.64
0.63
0.63
0.53
7.38
7.38

Appendix A: Emission Calculations  
 VOC and Particulate  
 From Surface Coating Operations

Company Name: Reliance Electric Company  
 Address City IN Zip: 3300 East Tenth Street, Columbus, Indiana 47201  
 MSOP No.: M005-23566-00092  
 Reviewer: Janet Mobley  
 Date: January 30, 2007

Potential Uncontrolled Emissions:																	
Coating Material	Type of Product Being Coated	Density (Lb/Gal)	Weight % Volatile (H2O& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (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
<b>Coatings Applied</b>																	
Paint Booth 1 (using Titan Blue/Green)	metal	11.2	31.00%	0.00%	31.00%	0.00%	54.00%	0.201	(gal/hr)	3.47	3.47	0.7	16.71	3.05	2.38	4.18	65%
Paint Booth 2 (using Titan Blue/Green)	metal	11.2	31.00%	0.00%	31.00%	0.00%	54.00%	0.056	(gal/hr)	3.47	3.47	0.2	4.69	0.86	0.67	4.18	65%
Paint Booth 3 (using Titan Blue/Green)	metal	11.2	31.00%	0.00%	31.00%	0.00%	54.00%	0.052	(gal/hr)	3.47	3.47	0.18	4.34	0.79	0.62	4.18	65%
<b>Solvent Usage for Clean Up</b>																	
xylene cleanup usage - Paint Booth 1		7.19	100.00%	0.00%	100.00%	0.00%	0.00%	0.02	(gal/hr)			0.14	3.45	0.63	0	#DIV/0!	100%
xylene cleanup usage - Paint Booth 2		7.19	100.00%	0.00%	100.00%	0.00%	0.00%	0.02	(gal/hr)			0.14	3.45	0.63	0	#DIV/0!	100%
toluene cleanup usage - Paint Booth 3		6	100.00%	0.00%	100.00%	0.00%	0.00%	0.02	(gal/hr)			0.12	2.88	0.53	0	#DIV/0!	100%
<b>Total Uncontrolled Potential to Emit:</b>												1.96	47.09	8.59	4.89		
<b>Total Controlled Potential to Emit:</b>										12-mos Input Usage Limit VOC	Control Efficiency PM	Controlled VOC lbs per Hour	Controlled VOC lbs per Day	Controlled VOC tons per Year	Controlled PM tons/yr		
										100.00%	94.00%	1.84	44.26	8.59	0.29		

Methodology:

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
 Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
 Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
 Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
 Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
 Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
 Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids) \* Transfer Efficiency  
 Total = Sum of Worst Coatings per booth + Sum of all solvents used  
 Controlled VOC Emission Rate = Uncontrolled Emission Rate \* (1 - VOC Input Limitation)  
 Controlled PM Emission Rate = Uncontrolled Emission Rate \* (1 - Control Efficiency)

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

Maximum Potential VOC Emissions From Paint Usage  
 Company Name: Reliance Electric Company  
 Address City IN Zip: 3300 East Tenth Street, Columbus, Indiana 47201  
 Permit Number: M005-23566-00092  
 Reviewer: Janet Mobley  
 Date: August 3, 2007

TABLE 1

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Max. Usage (gal./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 to Emit VOC tons/year	Potential to Emit PM/PM10 (tons/yr)	lb VOC/gal solids	Transfer Efficiency	Control Efficiency	Control Potential to Emit PM/PM10 (tons/year)
Paint Booth 1 (Small Assembly) Titan Blue Green	10.8	32.30%	0.00%	32.30%	0.00%	54.00%	0.1	3.5	3.5	0.35	8.4	1.53	0.8	5.86	75%	80%	0.16
Paint Booth 2 (Large Assembly) Titan Blue Green	10.8	32.30%	0.00%	32.30%	0.00%	54.00%	0.1	3.5	3.5	0.35	8.4	1.53	0.8	5.86	75%	80%	0.16
Paint Booth 3 (Bearing) Titan Blue Green	10.8	32.30%	0.00%	32.30%	0.00%	54.00%	0.1	3.5	3.5	0.35	8.4	1.53	0.8	5.86	75%	80%	0.16
							<b>2628</b>				Total	4	2				0.48

METHODOLOGY

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

TABLE 2

Process	Nozzle Spray (flow/min)	Part #	Actual Painting Time (sec/part)	Maximum Number of Parts produced per hour (parts/hr)	Paint Volume (flow/hr)	Paint Volume (gal/hr)	Paint Volume (gal/yr)	VOC Emissions from Paint (tons/yr)
Paint Booth 1 (Small Assembly)	10	1	13	8	17.33	0.14	1186.25	2.07
Paint Booth 2 (Large Assembly)	10	1	40	1.08	7.2	0.06	492.75	0.86
Paint Booth 3 (Bearing)	10	1	40	1	6.67	0.05	456.25	0.8
Total VOC Emissions from Paint:								1.66

Calculation Formulas:

- 1 Paint Volume (fl oz/hr) = [Nozzle Spray fluid ounces/minute] / 60 seconds/minute] x [Actual Painting Time seconds] x [Number of Maximum Parts Produced per hour]
- 2 Paint Volume (gal/hr) = Paint Volume fluid ounces per hour / 128 fluid ounces per gallon
- 3 Paint Volume (gal/yr) = (Paint Volume gallons per hour) x (8,760 hours per year)
- 4 VOC Emissions from Paint = (Paint Volume gallons per year) x (3.49 pounds VOC per gallon/ 200 pounds per ton)

Company Name: Reliance Electric Company  
 Address City IN Zip: 3300 East Tenth Street, Columbus, Indiana 47201  
 MSOP No.: M005-23566-00092  
 Reviewer: Janet Mobley  
 Date: January 30, 2007

PROCESS	Total No. of Stations	Total Max. Electrode Consumption (lbs/hr)	EMISSION FACTORS * (lb pollutant / lb electrode)					EMISSIONS (lb/hr)				
			PM = PM10	Manganese	Nickel	Cobalt	Chromium	PM = PM10	Manganese	Nickel	Cobalt	Chromium
Shielded Metal Arc Welding (E7018)	2	37.56	1.84E-02	1.03E-03	2.00E-06	1.00E-06	6.00E-06	6.91E-01	3.87E-02	7.51E-05	3.76E-05	2.25E-04
Uncontrolled Potential to Emit (tons/year)								3.03	0.17	0	0	0

#### METHODOLGY

Emission Factors from AP 42 (January 1995), Chapter 12.19, Tables 12.19-1 and 12.19-2.  
 Welding emissions, lb/hr: (max. lbs of electrode used/hr)(emission factor, lb. pollutant/lb. of electrode used)  
 Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/day x 1 ton/2,000 lbs.

TOTAL HAPS
0.04
0.17

## APPENDIX A: PROCESS EMISSIONS SUMMARY

### BABBITT PREPARATION

Process:	(1) Flux Bath, (2) Tin coating Baths
Estimation Method:	Mass Balance and Emission Factors
Maximum Process Throughput:	
Flux Bath	26,280 maximum lbs/87660 = 3lbs/flux solution per hour 3 x 8760/2000 = 13.14 tons per year PM/PM10
Tin/Solder Bath	21,900 max. lbs/8760 = 2.5 lbs/tin lead alloy per hour 2.5 x 8760/2000 = 10.95 tons per year
Source of Emissions:	Material Safety Data Sheets and USEPA Fire Database 6.23
Pollutants Generated By Process:	PM, PM10, SO <sub>2</sub> , NO <sub>x</sub> , VOC, CO, HAPs
Pollution Control Equipment:	None

#### Flux Bath (as zinc chloride, ammonium chloride and water)

Quantity of NO<sub>x</sub> emitted = (Maximum Process Throughput)(Percentage of NO<sub>x</sub>)(Density)  
(8,760 hours/year)(1 ton/2,000 pounds)(Number of Baths)

Quantity of NO<sub>x</sub> emitted = (0.375 gallons/hour)(0.044)(7.62 pounds/gallons)(8,760 hr/yr)  
(1 ton/2,000 pounds)(1) = 0.55 tons/year

\* \* \* \* \*

### BABBITT APPLICATION

Process:	Three melting pots, one natural gas holding oven, mold application, three machining centers, two boring machines, and three sanders
Estimation Method:	Emission Factors & Mass Balance
Maximum Process Throughput:	
Babbitt Melting =	28 pounds Babbitt material per hour
Natural Gas Holding Oven =	0.51 mmBTU per hour
Machining Centers =	800 pounds per hour each
Boring Machines =	800 pounds per hour each
Sanders =	800 pounds per hour each
Source of Emissions:	US EPA Fire Database 6.23 & Mass Balance
Pollutants Generated By Process	PM, PM10, SO <sub>x</sub> , NO <sub>x</sub> , VOC, CO and HAPs (Pb)
Pollution Control Equipment:	None

#### Babbitt Melting:

In 1995, August Mack collected lead air samples from above the Babbitt hood at a similar operation at another source. The Babbitt melting hood was selected to determine the "worst-case" emissions because of the high lead content in the Babbitt material and the melting pot is maintained at a high temperature of approximately 550 degrees Fahrenheit. As a result of the air sampling, no lead was detected in the air sample filters. The study also concluded that Antimony would not be detected since it is present in a much lower percentage of the material and melts at a much higher temperature than lead. Therefore, as the temperature increases, airborne lead would be detectable before airborne antimony.

(Note: USEPA's AP-42 emission factor document, Section 12.17 (Miscellaneous Lead Products) shows "negligible lead emissions from metal melting for bearing manufacturing" (i.e., this process). Further, Section 12.17.3.1 states that "emissions from bearing manufacturing are negligible, even without controls." This determination in AP-42 would tend to support the results of the air sampling; therefore, further testing or detailed review of the 1995 study report has not been required or conducted as part of this approval process. However, for purposes of these computations, HAP metal emissions are assumed as lead)

Natural Gas Oven (1-03-006-03)

(see attached spreadsheet for natural gas fired combustion units, page 2 of 15)

Machining Centers

The machining centers are completely enclosed and utilize a coolant to capture particulate emissions therefore this process does not generate any criteria pollutants or HAPS emissions.

Boring Machines (3-04-003-60)

Quantity of PM emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Boring Machines)

Quantity of PM emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(2) = 0.0164 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Boring Machines)

Quantity of PM10 emitted = (800 lbs/hr)(0.0045 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(2) = 0.0074 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Boring Machines)

Quantity of HAP emitted = (800 lbs/hr)(0.011 lb/ ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(2) = 0.0164 tons/year

Sanders (3-04-003-60)

Quantity of PM emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/yr)(Number of Sanders)

Quantity of PM emitted = (800 lbs/hr)(0.011 lb/ ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hrs/yr)(3) = 0.0246 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Sanders)

Quantity of PM10 emitted = (800 lbs/hr)(0.0045 lb/ ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hrs/yr)(3) = 0.0111 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Sanders)

Quantity of HAP emitted = (800 lbs/hr)(0.011b/ ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hrs/yr)(3) = 0.0246 tons/year

\* \* \* \* \*

### BABBITT RE-WORK

Process:	One oxyacetylene torch and three sanders
Estimation Method:	Emission Factors & Mass Balance
Maximum Process Throughput:	
Sanders =	800 pounds per hour each
Source of Emissions:	US EPA Fire Database 6.23 & Mass Balance
Pollutants Generated By Process:	PM, PM10, HAPS
Pollution Control Equipment:	None

#### Sanders (3-04-003-60)

Quantity of PM emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Sanders)

Quantity of PM emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hrs/yr)(3) = 0.0246 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Sanders)

Quantity of PM10 emitted = (800 lbs/hr)(0.0045 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hrs/yr)(3) = 0.0111 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Sanders)

Quantity of HAP emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hrs/yr)(3) = 0.0246 tons/year

\* \* \* \* \*

### CAST IRON PARTS MACHINING OPERATIONS

#### Machining Using Lubricants and Cutting Oils

Process:	Machining
Estimation Method:	Mass Balance
Maximum Process Throughput:	6,700 gallons/year
VOC content	0.9606 pounds of VOC per gallon*
Source of Emissions:	Mass Balance
Pollutant Generated By Process:	VOC
Pollution Control Equipment:	N/A

#### VOC Emissions from Coolant:

Quantity of VOC emitted = (Maximum Process Throughput)(Emission Factor)(1 ton/2,000 pounds)  
Reliance Electric Company

Quantity of VOC emitted = (6,700 gallons/yr)(0.9606 lb VOC/gal)(1 ton/2,000 pounds)  
= 3.218 tons/year

\*Note: Emission factor of 0.9606 lbs VOC/gallon was taken from previous air emission inventory

Additional Machining Equipment Not Utilizing a Coolant to Capture Particulate Emissions

Process:	4 Lathes, 4 Machining Centers, 22 Drills, 1 Grinders, 1 Band Saw, 10 Chuckers, and 4 Milling Machines
Estimation Method:	Mass Balance & Emission Factors
Maximum Process Throughput:	
Lathes =	200 pounds per hour each
Machining Centers =	0.375 pounds per hour each
Drills =	800 pounds per hour each
Grinders =	800 pounds per hour each
Ban Saw =	800 pounds per hour each
Chuckers =	800 pounds per hour each
Milling Machines =	800 pounds per hour each
Source of Emissions:	Mass Balance & US EPA FIRE Database 6.23
Pollutants Generated By Process:	PM, PM10, HAPS
Pollution Control Equipment:	None

The machines that utilize a coolant to capture particulate emissions do not generate any criteria pollutants or HAPS emissions. These machines are not included in the following emission calculations.

Lathes (3-04-003-60)

Quantity of PM emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Lathes)

Quantity of PM emitted = (200 lbs/hr)(0.01lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(4) = 0.0175 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Lathes)

Quantity of PM10 emitted = (200 lbs/hr)(0.0045lb/ ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(4) = 0.0079 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Lathes)(Percent HAP)

Quantity of HAP emitted = (200 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(4)(1.00) = 0.0175 tons/year

Machining Centers

Quantity of PM emitted = (Maximum Capacity)(Percent Material Loss)(1 ton/2,000 pounds)  
(8,760 hours/year)(Number of Machining Centers)

Quantity of PM emitted = (0.375lbs/hr)(0.0005)(1 ton/2,000 pounds)(8,760 hours/year)(4)  
= 0.0033 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Percent Material Loss)(1 ton/2,000 pounds)  
(8,760 hours/year)(Number of Machining Centers)

Quantity of PM10 emitted = (0.375lbs/hr)(0.0005)(1 ton/2,000 pounds)(8,760 hours/year)(4)  
= 0.0033 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Percent Material Loss)(1 ton/2,000 pounds)  
(8,760 hours/year)(Number of Machining Centers)(Percent HAP)

Quantity of HAP emitted = (0.375 lbs/hr)(0.0005)(1 ton/2,000 pounds)(8,760 hours/year)(4)(1.00)  
= 0.0033 tons/year

Drills (3-04-003-60)

Quantity of PM emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Drills)

Quantity of PM emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(22) = 0.1807 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Drills)

Quantity of PM10 emitted = (800 lbs/hr)(0.0045 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(22) = 0.0813 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Drills)(Percent HAP)

Quantity of HAP emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(22)(1.00) = 0.1807 tons/year

Grinders (3-04-003-60)

Quantity of PM emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Grinders)

Quantity of PM emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(1) = 0.0082 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Grinders)

Quantity of PM10 emitted = (800 lbs/hr)(0.0045 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(1) = 0.0037 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Grinders)(Percent HAP)

Quantity of HAP emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(1)(1.00) = 0.0082 tons/year

Ban Saw (3-04-003-60)

Quantity of PM emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Ban Saws)

Quantity of PM emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(1) = 0.0082 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Ban Saws)

Quantity of PM10 emitted = (800 lbs/hr)(0.0045 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(1) = 0.0037 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Ban Saws)(Percent HAP)

Quantity of HAP emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(1)(1.00) = 0.0082 tons/year

Chuckers (3-04-003-60)

Quantity of PM emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Chuckers)

Quantity of PM emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(10) = 0.0821 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Chuckers)

Quantity of PM10 emitted = (800 lbs/hr)(0.0045 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(10) = 0.0370 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Chuckers)(Percent HAP)

Quantity of HAP emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hours/year)(10)(1.00) = 0.0821 tons/year

Milling Machines (3-04-003-60)

Quantity of PM emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Milling Machines)

Quantity of PM emitted = (800 lbs/hr)(0.01 lb/ton)(1 ton/2,000 pounds)(8,760 hours/year)(4)  
= 0.0328 tons/year

Quantity of PM10 emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Milling Machines)

Quantity of PM10 emitted = (800 lbs/hr)(0.0045 lb/ton)(1 ton/2,000 pounds)(8,760 hours/year)(4)  
= 0.0148 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)(Number of Milling Machines) (Percent HAP)

Quantity of HAP emitted = (800 lbs/hr)(0.01 lb/ ton)(1 ton/2,000 pounds)(8,760 hours/year)  
(4)(1.00) = 0.0328 tons/year

According to the MSDS, the cast iron material processed through the above mentioned machining equipment contains the following HAPS up to the weight percentages noted:

- Aluminum = 0.1 percent;
- Antimony = 0.95 percent;
- Chromium = 0.9 percent;
- Copper = 94.0 percent;
- Lead = 25.0 percent;
- Manganese = 1.1 percent;
- Nickel = 1.5 percent; and,
- Zinc = 12.0 percent

\* \* \* \* \*

### PARTS CLEANING PROCESS

Process:	Multiple detergent-based Parts Washers One Electric Dryer Multiple Safety-Kleen Parts Washers Located in the Warranty Repair Department
Estimation Method:	Mass Balance
Maximum Process Throughput:	
Parts Washer =	0.92 gallons per hour of Fuchs Parts Washer
Rust Preventive =	0.62 gallons per hour of Fuchs Rust Preventive
Source of Emissions:	Mass Balance
Pollutants Generated By Process:	VOC
Pollution Control Equipment:	None

#### Parts Washers (detergent based)

Quantity of VOC emitted = (Maximum Capacity)(Emission Factor)(Density of Water)  
(1 ton/2,000 pounds)(8,760 hours/year)

Quantity of VOC emitted = (0.92 gal/hour)(0.18 lbs/gal)(1 ton/2,000 pounds)(8,760 hr/yr)  
= 0.7253 tons/year

#### Rust Preventive

According to the MSDS provided by the source, the rust preventive solutions (i.e., Chemetall Oakite Inpro-Tect 600 and Oakite 398T) in use by the source contain no volatiles, and the quantity of VOC emitted is zero.

#### Parts Washers (Safety-Kleen)

Quantity of VOC emitted = (Maximum Capacity)(Emission Factor)(Density of Water)  
(1 ton/2,000 pounds)(8,760 hours/year)

Quantity of VOC emitted = (0.92 gal/hour)(0.18 lbs/gal)(1 ton/2,000 pounds)(8,760 hr/yr)  
= 0.7253 tons/year

\* \* \* \* \*

### COOLANT RECYCLING OPERATIONS

Process: Evaporators 1 and 2 Natural Gas Fired Units  
Estimation Method: Emission Factors  
Maximum Process Throughput:  
    Evaporators 1 and 2 13.68 pounds per hour each  
    0.3 mmBTU per hour each  
Source of Emissions: US EPA FIRE Database 6.23  
Pollutants Generated By Process: PM, PM10, SOx, NOx, VOCs, and CO  
Pollution Control Equipment: None

#### Evaporators 1 & 2 (4-90-002-02)

Quantity of VOC emitted = (Maximum Capacity)(Emission Factor)(1 ton/2,000 pounds)  
(1 ton/2,000 pounds)(8,760 hours/year)

Quantity of VOC emitted = (27.36 pounds/hr)(3.3 lb/ton)(1 ton/2,000 pounds)(1 ton/2,000 pounds)  
(8,760 hr/yr) = 0.1977 tons/year

#### Natural Gas Fired Units (1-03-006-03)

(see attached spreadsheet for natural gas fired combustion units, page 2 of 16)

\* \* \* \* \*

### CURING OPERATIONS

Process: Heat Treat with Endothermic Heat Treat Ovens T500 & T900, Ipsen Generator (Natural Gas Usage) & Electric Grieve Curing Oven  
Estimation Method: Fire 6.23 Emission Factors & Mass Balance  
Maximum Process Throughput:  
    T500, T900 & Ipsen: 8.76 mmft<sup>3</sup> per year (total)  
    Electric Grieve Oven: 650 pounds metal parts per batch (90 minute cycle)  
Source of Emissions: AP-42; Mass Balance  
Pollutants Generated By Process: PM, PM10, SOx, NOx, VOC, CO  
Pollution Control Equipment: none

#### Heat Treat Ovens T500 & T900, and Ipsen Generator (1-03-006-03)

(see attached spreadsheet for natural gas fired combustion units, page 2 of 16)

#### Electric Grieve Curing Oven

This is an electric oven with no combustion emissions. According to the MSDS provided by the source, the applied epoxy resin in use by the source contains no volatiles.

### PACKAGING OPERATIONS

Process: Five Instapak Spray Stations  
Estimation Method: Mass Balance  
Maximum Process Throughput:  
    Instapak Component "A" = 0.025 gallons per hour (total)  
    Instapak Component "B" = 0.025 gallons per hour (total)  
    Instapak Port Cleaner = 4 gallons per year (total)  
Source of Emissions: Material Safety Data Sheets  
Pollutants Generated By Process: VOC and HAP (MDI)

Pollution Control Equipment: None

Instapak Component "A"

Quantity of VOC emitted = (Maximum Capacity)(percent VOC)(Density)(1 ton/2,000 pounds)  
(8,760 hours/year)

Quantity of VOC emitted = (0.025 gal/hr)(0.45)(10.3 lb/gal)(1 ton/2,000 pounds)(8,760 hours/year)  
= 0.5075 tons/year

Quantity of HAP emitted = (Maximum Capacity)(Percent HAP)(Density)(1 ton/2,000 pounds)  
(8,760 hours/year)

Quantity of HAP emitted = (0.025 gal/hr)(0.45)(10.3 lb/gal)(1 ton/2,000 pounds)(8,760 hours/year)  
= 0.5075 tons/year

(Note: even though the MDI contained in the applied foam will polymerize, this computation assumes that all MDI is emitted.)

Instapak Component "B"

According to the MSDS supplied by the source, Instapak Component "B" does not contain any HAPS or criteria pollutants.

Instapak Port Cleaner

Quantity of VOC emitted = (Maximum Capacity)(percent VOC)(Density)(1 ton/2,000 pounds)  
(8,760 hours/year)

Quantity of VOC emitted = (0.00045 gal/hr)(0.96)(9.4 lb/gal)(1 ton/2,000 pounds)(8,760  
hours/year) = 0.0178 tons/year

**MEDIA BLASTER**

PM Uncontrolled = pounds per year/pounds per ton = tons per year x emission factor = pounds per  
year/2000

$$3,285,000/2000=1642.51 \times 54 = 886995/2000 = 44.3475 \text{ tons/year}$$

PM Controlled = 90% control efficiency  
10% x 44.3475 = 4.43475

PM 10 Uncontrolled = pounds per year/pounds per ton = tons per year x emission factor = pounds per  
year/2000

$$3,285,000/2000=1642.51 \times 26 = 42705.26/2000 = 21.3525 \text{ tons/year}$$

PM 10 Controlled = 90% control efficiency  
10% x 21.3525 = 2.13525