

Mr. Alan R. Horner
Owner
Horner Electric
1521 East Washington Street
Indianapolis, Indiana 46201

Re: T097-12304-00301
Minor Source Modification to:
Part 70 permit No.: T097-7787 -00301

Dear Mr. Horner

Horner Electric was issued a Part 70 permit on June 30, 1999 for an operation of rebuilding electrical industrial apparatus for motors and generators. A letter requesting various changes was received on May 23, 2000. All changes were incorporated into this minor source modification. Pursuant to 326 IAC 2-7-10.5 the following emission unit is approved for construction at the source:

- (a) One (1) Paint Booth, identified as Emission Unit #17 (EU17), equipped with an air atomization spray coating gun, with a maximum capacity of 0.39 gal/hr, using dry filters as control, exhausting at one (1) stack identified as stack #3.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-12.7(d) the emission units constructed under this approval may be placed into operation upon its issuance.

The proposed operating conditions applicable to this emission unit are carried over from an identical emission unit in the previous Part 70 operating permit which this unit replaced. These conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(d)(6) and 326 IAC 2-7-12.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call Mr. Dana Armstrong at (317)-327-2181.

Sincerely,

Mona A. Salem
Chief Operating Officer
Department of Public Works
Indianapolis, Indiana

Attachments:

- (1) Source Modification Pages
- (2) Technical Support Document (TSD)

DRA

cc: Matt Mosier, Compliance, ERMD
Mindy Hahn, IDEM OAM

SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and The Indianapolis Environmental Resources Management Division (ERMD). The information describing the source contained in conditions A.1 through A.3 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 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary manufacturing operation of rebuilding electrical industrial apparatus for motors and generators.

Responsible Official: Alan R. Horner
Source Address: 1521 East Washington Street, Indianapolis, Indiana 46201
Mailing Address: 1521 East Washington Street, Indianapolis, Indiana 46201
Phone Number: (317) 639-4261
SIC Code: 3621
County Location: Marion
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Minor source, under PSD rule
Major source, section 112 of Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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

- (a) One (1) Detrex Batch Vapor Trichloroethylene Degreaser, identified as Emission Unit #4 (EU4), with a solvent/air interface area of greater than 13 feet, exhausting at one (1) vent, identified as vent ID 7, with no control equipment, installed pre-1983.
- (b) One (1) Paint Booth, identified as Emission Unit #17 (EU17), equipped with an air atomization spray coating gun, with a maximum capacity of 0.39 gal/hr, using dry filters as control, exhausting at one (1) stack identified as stack #8. Installed after May 23, 2000.
- (c) One (1) Small Varnish Dip Tank, identified as emission unit #7 (EU7), maximum capacity of 1.0 lb/hr, exhausting at one (1) vent, identified as vent ID 7, with no control equipment, installed in 1987.
- (d) One (1) Large Varnish Dip Tank, identified as emission unit #8 (EU8), maximum capacity of 1.84 lb/hr, exhausting at one (1) vent, identified as vent ID 7, with no control equipment, installed pre-1983.
- (e) One (1) Large VPI Dip Tank, identified as emission unit #9 (EU9), maximum capacity of 2.08 lb/hr, not exhausting at a stack/vent, with no control equipment, installed in 1996.
- (f) One (1) Small VPI Dip Tank, identified as emission unit #10 (EU10), maximum capacity of 1.0 lb/hr, not exhausting at a stack/vent, with no control equipment, installed in 1996.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) One (1) Detrex Batch Vapor Trichloroethylene Degreaser, identified as Emission Unit #4 (EU4), with a daily solvent consumption rate of 12 gallons of trichloroethylene, and with a solvent/air interface area of greater than 13 feet, exhausting at one (1) vent, identified as vent ID 7, with no control equipment, installed pre-1983.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to HAPs [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart T.

D.1.2 Halogenated Solvent Cleaning Machine NESHAP [40 CFR Part 63, Subpart T]

This facility is subject to 40 CFR Part 63, Subpart T, (Halogenated Solvent Cleaning Machine NESHAP), which is incorporated by reference as 326 IAC 20-6-1. A copy of the rule is attached.

- (a) That pursuant to 40 CFR 63.463(a) & (b), the Permittee shall conform to the following design requirements:
- (1) The cleaning machine shall be designed or operated such that it has a reduced room draft as described in 40 CFR 63.463(e)(2)(ii).
 - (2) The Permittee shall demonstrate that the solvent cleaning machine can achieve and maintain an idling emission limit of 0.45 pounds per hour per square foot of solvent/air interface area as determined using the procedures in 40 CFR 63.465(a) and appendix A to 40 CFR 63, Subpart T.
- (b) That pursuant to 40 CFR 63.463 (d), the following work and operational practice requirements for the degreasing operation are applicable:
- (1) Control air disturbances across the cleaning machine opening(s) by placing cover(s) to the solvent cleaning machine during the idling mode and the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) to not be in place.
 - (2) The parts baskets or the parts being cleaned in the cleaning machine shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (3 feet per minute) or less.
 - (3) Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air.
 - (4) Parts shall be oriented so that the solvents drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any solvent cleaning machine unless an equally effective approach has

feet per minute) or less as described in 40 CFR 63.466(d).

- (3) An exceedance has occurred if the requirements of paragraph (c)(2)(B)(i) of this condition have not been met and are not corrected within 15 days of detection. Adjustments or repairs shall be made to the solvent cleaning system or control device to reestablish required levels. The parameters must be remeasured immediately upon adjustment or repair and demonstrated to be within the required limits.
- (4) the owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in 40 CFR63.468.

D.1.3 Degreasing Operations [326 IAC 8-3-6]

Pursuant to 326 IAC 8-3-6 (Open top vapor degreaser operation and control requirements), the owner or operator of an open top vapor degreaser shall ensure that the following control equipment requirements are met:

(a) The owner or operator of an open top vapor degreaser shall ensure that the following control equipment requirements are met:

- (i) Equip the degreaser with a cover that can be opened and closed easily without disturbing the vapor zone.
- (ii) Equip the degreaser with the following switches:
 - (A) A condenser flow switch and thermostat which shuts off sump heat if condenser coolant stops circulating or becomes too warm.
 - (B) A spray safety switch which shuts off spray pump if the vapor level drops more than ten (10) centimeters (four (4) inches).
- (iii) Equip the degreaser with a permanent, conspicuous label which lists the operating requirements.

(vii) Repair solvent leaks immediately or shut down the degreaser if leaks cannot be repaired immediately.

(viii) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

(ix) Prohibit the use of workplace fans near the degreaser opening.

(x) Prohibit visually detectable water in the solvent exiting the water separator.c

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1)]

The Permittee shall determine the idling emission rate of the solvent cleaning machine using Reference Method 307 in appendix A of 40 CFR 63 Subsection T. In addition, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance.

Compliance Monitoring Requirements

D.1.5 Monitoring Procedures [326 IAC 2-7-6(1)]

That pursuant to 40 CFR 63.466 the Permittee shall comply with the following monitoring procedures:

(a) The Permittee shall monitor the hoist speed as described below:

- (1) The Permittee shall determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters divided by the time in minutes.
- (2) The monitoring shall be conducted monthly. If after the first year, no exceedances of the hoist speed are measured, the Permittee may begin monitoring the hoist speed quarterly.
- (3) If the exceedance of the hoist speed occurs during quarterly monitoring, the monitoring frequency returns to the monthly until another year of compliance

without an exceedance is demonstrated.

- (4) If the Permittee can demonstrate to the commissioner's satisfaction in the initial compliance report that the hoist cannot exceed a speed of 3.4 meters per minute (11 feet per minute), the required monitoring frequency is quarterly, including during the first year of compliance.
- (b) The Permittee shall conduct monitoring and record the results, for a reduced room draft, as specified in the following paragraphs:
 - (1) The Permittee shall conduct an initial monitoring test and, thereafter, monthly monitoring tests of the windspeed within the enclosure using the procedure specified below and a monthly visual inspection of the enclosure to determine if it is free of cracks, holes and other defects.
 - (A) Determine the direction of the wind current in the enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located.
 - (B) Record the maximum wind speed.

Recordkeeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.1.6 Recordkeeping Requirements

- (a) The Permittee shall maintain, in written or electronic form, records of the following information specified below, for the life time of the machine,
 - (1) Owners's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.
 - (2) The date of installation of the solvent cleaning machine and all of its control devices. If the exact date of the installation is not known, a letter certifying that the cleaning machine and its control devices were installed prior to, or on, November 29, 1993, or after November 29, 1993, may be substituted.
 - (4) The Permittee shall maintain records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test.
 - (5) Records of the halogenated HAP solvent content for each solvent used in a solvent cleaning machine.
- (b) The Permittee shall maintain, in written or electronic form, records of the following information specified below for a period of 5 years:
 - (1) The results of control device monitoring required under 40 CFR63.466.
 - (2) Information on the actions taken to comply with 40 CFR63.463(e) and (f). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.
 - (3) Estimates of annual solvent consumption for each solvent cleaning machine.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) One (1) Paint Booth, identified as Emission Unit #17 (EU17), equipped with an air atomization spray coating gun, with a maximum capacity of 0.39 gal/hr, using dry filters as control, exhausting at one (1) stack identified as stack #3. Installed after May 23, 2000 permit modification.

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-1 (Surface Coating Emission Limitations), the input of VOC from emission unit 17 (EU17) shall be limited to 15 pounds per day, such that 326 IAC 8-2-9 shall not apply.

D.2.2 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the Paint Booth shall not exceed allowable PM emission rate based on the following equation:

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

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission of 0.55 pounds per hour; and} \\ P = \text{process weight rate of less than 100 pounds/hour}$$

Compliance Determination Requirements

D.2.3 Volatile Organic Compounds (VOC)

Compliance with condition D.2.1 shall be demonstrated daily based on coating, cleanup solvent and thinner usage.

D.2.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM and ERMD, compliance with the particulate limit specified in Condition D.2.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.5 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1 ; the Permittee shall maintain records in accordance with (1) and (3) below. Records maintained for (1) and (3) shall be taken daily and shall be complete and sufficient to establish compliance with the the VOC emission limits established in Condition D.2.1.
- (1) The weight of VOC containing material used, including purchase orders and invoices necessary to verify the type and amount used.
 - (2) The VOC content (weight percent) of each material used

**Indiana Department of Environmental Management
Office of Air Management
and
Indianapolis Environmental Resources Management Division**

Technical Support Document (TSD) for a Minor Source Modification

Source Background and Description

| | |
|---------------------------------|---|
| Source Name: | Horner Electric |
| Source Location: | 1521 East Washington Street, Indianapolis, Indiana 46201 |
| County: | Marion |
| SIC Code: | 3621 |
| Operation Permit No.: | T 097-7787-00301, Issued on June 30, 1999 |
| Source Modification No.: | T 097-12304-00301 |
| Permit Reviewer: | DRA |

The Environmental Resources Management Division (ERMD) has reviewed a modification application from Horner Electric relating to the operation of rebuilding electrical industrial apparatus for motors and generators.

History

On June 30, 1999, the source (Horner Electric) was issued a Title V operating permit. The source applied for the following permit changes on May 23, 2000:

- (1) That the method of compliance for the VOC NESHAP used for the vapor degreaser be changed from a control set (pursuant to 40 CFR 63.463(b)(2)(i)) to an idling emission limit (pursuant to 40 CFR 63.463(b)(ii)).
- (2) That the control language that had to do with a "superheated vapor system" be removed, thereby relaxing the compliance requirements.
- (3) That requirements limiting exhaust ventilation rate be removed. No exhaust ventilation exists above the degreaser. Exhaust ventilation is not required, thereby relaxing compliance requirements.
- (4) That equipment descriptions and applicable requirements be modified to include a new paint booth (described as emissions unit 17) and omit equipment descriptions and applicable requirements pertaining to a paint booth which was discontinued (described as emissions unit 6).
- (5) That NESHAP requirements for reporting as required by IDEM be modified in section D.1.7 of the original Title V Permit. Reporting requirements are completely delineated as per the permit model and NESHAP requirements, so this change was deemed not necessary.
- (6) That certain formatting, typographical errors, and one date on an equipment description be changed.

Existing Approvals

The source was issued a Part 70 Operating Permit T 097-7787-00301 on June 30, 1999.

Enforcement Issue

On January 21, 2000, the source was issued a notice of violation for violations found on August 24,

1999 and December 2, 1999. The source has the following enforcement actions pending:

- (1) The source failed to control air disturbances across the top of emissions unit 14, a vapor degreaser. The source had placed a fan in close proximity to the uncovered vapor degreaser. This action was in violation of the requirements in Section D.1.2(b)(1) of the permit which established a reduced room draft as a method of VOC emissions control of the degreaser. This requirement was pursuant to 40 CFR 463(d).
- (2) The source was cited for inadequate record keeping documentation of the degreaser's freeboard ratio, reduced room draft, and temperature monitoring at the center of the superheated vapor zone.
- (3) The source was cited for failure to maintain records of coating usage, cleanup solvent usage, and thinner usage. This inaction was in violation of the requirements in section D.2.4, essential for establishing compliance with the requirements of D.2.1, which was implemented in order that 326 IAC 8-2-9 did not apply.
- (4) The source was cited for construction and operating without a permit, for the small VPI Dip Tank (Emission Unit #10). It was also cited for a recordkeeping violation on the Large VPI Dip Tank (Emission Unit #9) and the Large Varnish Dip Tank (Emission Unit #8). It was unable to provide daily records of the number of parts coated for these units.
- (5) Source was sent a letter on July 11, 2000 stating that OAM did not receive annual National Emissions Standards for Halogenated Solvent Cleaners. They had also not received any of the semi annual exceedance reports.

Issues pertaining to January 21 notice of violation are currently unresolved. Issue Number five (5) is separate from January 21 notice of violation, and is also unresolved.

Stack Summary (as pertains to modifications only)

| Stack ID | Operation | Height (feet) | Diameter (feet) | Flow Rate (acfm) | Temperature (°F) |
|----------|-----------|---------------|-----------------|------------------|------------------|
| 8 | | 25 | 2.833 | 18000 | 70 |

(New stack is for the new paint booth. The old stack for previous paint booth (stack 3) will be removed at a later date. All other stack data remains unchanged from previous permit application)

Recommendation

The staff recommends to the Commissioner that a Minor Source Modification be issued for construction approval of the new paint booth (EU17) in parallel with a Significant Permit Modification to incorporate this Minor Source Modification as well as all of the other changes. This recommendation is based on the following facts and conditions:

- (1) Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.
- (2) An application for the purposes of this review was received on May 23, 2000
- (3) Construction of new paint booth is being implemented as a Minor Source Modification which will be incorporated by a Significant Permit Modification. Title 1 modifications as in 326 IAC 2-7-10.5(d)(6) are being implemented by this source modification.

Emission Calculations Changes

See Appendix A, pages 1 through 3 of 8 for detailed emissions calculations based on new paint booth data. All other calculations of the original permit remain the same. Calculations were

repaginated and updated, and source wide potential to emit was summed up on page 8.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

| Pollutant | Potential Emissions (tons/year) |
|-----------------|---------------------------------|
| PM | 16.84 |
| PM-10 | 1.68 |
| SO ₂ | less than 1 |
| VOC | 46.15 |
| CO | less than 1 |
| NO _x | less than 1 |

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration

| HAP's | Potential Emissions (tons/year) |
|------------------------|---------------------------------|
| Trichloroethylene | 27.67 |
| Toluene | 0.78 |
| Xylene | 0.78 |
| Methyl ethyl Ketone | 0.76 |
| Methyl Isobutyl Ketone | 0.08 |
| Total HAP | 30.07 |

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1999 OAM emission data.

| Pollutant | Actual Emissions (tons/year) |
|------------------------------|------------------------------|
| PM | less than 1 |
| PM-10 | less than 1 |
| SO ₂ | less than 1 |
| VOC | 20.29 |
| CO | less than 1 |
| NO _x | less than 1 |
| HAP (Trichloroethylene) | 18.97 |
| HAP (Toluene) | 0.231 |
| HAP (Xylene) | 0.132 |
| HAP (Methyl ethyl ketone) | 0.378 |
| HAP (Methyl isobutyl ketone) | 0.082 |

Limited Potential to Emit

The table below summarizes the limited potential to emit of only those pollutants which are limited

by this permit.

| Process/facility | Limited Potential to Emit (tons per year) | | | | | | |
|---|--|-------|-----------------|---------|----|-----------------|---------|
| | PM | PM-10 | SO ₂ | VOC | CO | NO _x | HAPs |
| Paint Booth (EU17) | | | | 2.7 (1) | | | |
| Large VPI Dip Tank (EU9) | | | | 2.8 (1) | | | |
| Small VPI Dip Tank (EU10) | | | | 2.8 (1) | | | |
| Trichloroethylene Batch Vapor Degreaser (EU4) | | | | | | | >25 (2) |

- (1) Potential to emit based on limiting VOC emissions to less than 15 lbs/day such that 326 IAC 8-2-9 shall not apply because all facilities were existing in Marion County as of or after July 1st, 1990.
- (2) Facility emits greater than 25 tons per year such that it is a Major source per section 112 of Clean Air Act.

Justification for Modification

This Part 70 Source is being issued a Part 70 Minor Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5.

County Attainment Status

The source is located in Marion County.

| Pollutant | Status |
|-----------------|------------|
| PM-10 | attainment |
| SO ₂ | attainment |
| NO ₂ | attainment |
| Ozone | attainment |
| CO | attainment |
| Lead | attainment |

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

The batch vapor degreaser, identified as EU#4, is subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 63 Subpart T) since it uses trichloroethylene as the cleaning agent. This batch vapor degreaser was installed prior to 11/29/93; thus, the source shall be in compliance with this subpart no later than 12/2/97. The source chooses to change it's method of compliance with Subpart T from 40 CFR 63.463(b)(i) to 40 CFR 63.463(b)(2)(ii) and all consequent applicable requirements. The source is currently in compliance with the aforementioned requirements.

State Rule Applicability - Entire Source

There are no new source wide state rule applicability requirements

State Rule Applicability - Individual Facilities

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

The VOC input for the paint booth (EU#17) shall not exceed 15 pounds per day to stay under 15 pounds per day VOC output.

326 IAC 8-3-6 (Open Top Vapor Degreaser Operations and Control Requirements)

There are no additional control requirements, and all requirements pertaining to the "superheated vapor system" control have been discontinued. The source shall now demonstrate compliance with 40 CFR 63.463(b)(2)(ii) by maintaining an idling emission rate of 0.045 pounds per hour per square foot of solvent air interface.

Compliance Requirements

The source is now required to initially determine an idling emission rate of the solvent cleaning machine using Reference Method 307 in appendix A of 40 CFR 63, Subsection T. The source performed this initial test on January 6, 1998. In addition, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. The source is also required to maintain records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test.

Conclusion

The operation of rebuilding electrical industrial apparatus for motors and generators shall be subject to the conditions of Part 70 Permit No. T097-7787-00301 except those revised by the attached Part 70 Permit Modifications No. T097-xxxxx-00301 and Source Modification T 097-12304-00301.

Permit changes

Section A: Source Summary

A.2 Emission Unit and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]

- A.2(e) One (1) Large VPI Dip Tank, identified as emission unit #9 (EU9), maximum capacity of 2.08 lb/hr, not exhausting at a stack/vent, with no control equipment, installed in ~~1987~~**1996**.
- A.2(b) One (1) Paint Booth, identified as Emission Unit ~~#6 (EU6)~~, **#17 (EU17)** equipped with an air atomization spray coating gun, with a maximum capacity of 0.39 gal/hr, using dry filters as control, exhausting at one (1) stack identified as stack ~~#3~~**#8**. Installed ~~pre-1983~~: **After May 23, 2000**.

Section D.1

D.1.2 Halogenated Sovent Cleaning Machine NESHAP [40 CFR Part 63, Subpart T]

- D.1.2(a)(2) ~~The cleaning machine shall be employed with a control combination of freeboard ratio of 1.0, reduced room draft, and superheated vapor.~~
The Permittee shall demonstrate that the solvent cleaning machine can achieve and maintain an idling emission limit of 0.45 pounds per hour per square foot of solvent/air interface area as determined using the procedures in 40 CFR 63.465(a) and appendix A to 40 CFR 63, Subpart T.
- D.1.2(c) That pursuant to 40 CFR 63.463 (e), the Permittee shall comply with the following requirements:

- (1) The Permittee shall conduct monitoring of each control device used to comply with §63. 463 as provided in 40 CFR 63. 466, monitoring procedures.
- (2) Determine during each monitoring period if the control device used to comply with the above standards meets the following requirements:
 - (B) When using a reduced room draft the Permittee shall:
 - (i) ensure that the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at anytime as measured using the procedures in 40 CFR63.466(d).
 - (ii) establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less as described in 40 CFR63.466 (d).
 - ~~(F) When using a superheated vapor system the Permittee shall:~~
 - ~~(i) ensure that the temperature of the solvent vapor at the center of the superheated vapor zone is at least 10EF above the solvent's boiling point.~~
 - ~~(ii) ensure that the manufacturer's specifications for determining the minimum proper dwell time within the superheated vapor system is followed.~~
 - ~~(iii) ensure that parts remain within the superheated vapor for at least the minimum proper dwell time.~~
- (3) An exceedance has occurred if :
 - ~~(A) the requirements of paragraphs (c)(2)(B)(ii), (c)(2)(F)(ii), (c)(2)(F)(iii), of this condition are not met; and~~
 - (B) the requirements of paragraphs (c)(2)(B)(i), and (c)(2)(F)(i) of this condition have not been met and are not corrected within 15 days of detection. Adjustments or repairs shall be made to the solvent cleaning system or control device to reestablish required levels. The parameters must be remeasured immediately upon adjustment or repair and demonstrated to be within the required limits.
- (4) the owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in 40 CFR63.468.

D.1.3 Degreasing Operations [326 IAC 8-3-6]

- D.1.3(b)(ix) ~~Prohibit the exhaust ventilation rate from exceeding twenty (20) cubic meters per minute per square meter (sixty-five (65) cubic feet per minute per square foot) of degreaser open area unless a greater ventilation rate is necessary to meet Occupational Safety and Health Administration requirements.~~

D.1.4 Testing Requirements [326 IAC 2-7-6(1)]

- D.1.4 The Permittee is not required to test this facility by this permit or by 40 CFR Part 63;

~~40 CFR 63.465 Test Methods. However,~~ **The Permittee shall determine the idling emission rate of the solvent cleaning machine using Reference Method 307 in appendix A of 40 CFR 63 Subsection T. In addition,** IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance.

D.1.5 Compliance Monitoring Requirements [326 IAC 2-7-6(1)]

D.1.5 That pursuant to 40 CFR 63.466 the Permittee shall comply with the following monitoring procedures:

~~(a) The Permittee shall conduct monitoring and record the results on a weekly basis for the control devices, as appropriate, specified in paragraph(s) below:~~

~~(1) The Permittee shall use a thermometer or thermocouple to measure the temperature at the center of the superheated solvent vapor zone while the solvent cleaning machine is in the idling mode.~~

~~(4) The Permittee shall conduct monitoring and record the results on a monthly basis for the control devices, as appropriate, specified in paragraph below:~~

~~(e) (a) The Permittee shall monitor the hoist speed as described below:~~

(1) The Permittee shall determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters divided by the time in minutes.

(2) The monitoring shall be conducted monthly. If after the first year, no exceedances of the hoist speed are measured, the Permittee may begin monitoring the hoist speed quarterly.

(3) If the exceedance of the hoist speed occurs during quarterly monitoring, the monitoring frequency returns to the monthly until another year of compliance without an exceedance is demonstrated.

(4) If the Permittee can demonstrate to the commissioner's satisfaction in the initial compliance report that the hoist cannot exceed a speed of 3.4 meters per minute (11 feet per minute), the required monitoring frequency is quarterly, including during the first year of compliance.

~~(e) (b) The Permittee shall conduct monitoring and record the results, for a reduced room draft, as specified in the following paragraphs:~~

(1) The Permittee shall conduct an initial monitoring test and, thereafter, monthly monitoring tests of the windspeed within the enclosure using the procedure specified below and a monthly visual inspection of the enclosure to determine if it is free of cracks, holes and other defects.

(A) Determine the direction of the wind current in the

enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located.

- (B) Record the maximum wind speed.

Recordkeeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.6 Recordkeeping Requirements

- D.1.6(a)(4) **The Permittee shall maintain records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test.**

Changes Made in Section D.2

D.2 (Facility Description Box)

Facility Description [326 IAC 2-7-5(15)]

- (a) One (1) Paint Booth, identified as Emission Unit ~~#6 (EU6)~~ **Emission Unit #17 (EU17)**, equipped with an air atomization spray coating gun, with a maximum capacity of 0.39 gal/hr, using dry filters as control, exhausting at one (1) stack identified as stack #3. ~~Installed pre-1983~~ **Installed after May 23, 2000 permit modification.**

- D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-1 (Surface Coating Emission Limitations), the input of VOC from emission unit ~~617(EU6)~~**(EU17)** shall be limited to 15 pounds per day such that 326 IAC 8-2-9 shall not apply.

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

**Company Name: Horner Electric
Address City IN Zip: 1521 East Washington Street, Indianapolis, Indiana 46201
Permit No.: T097-7787-00301
Vent ID: Emission Unit #6 (EU6)
Reviewer: K Leone
Date: December 1998**

SIC: 3621

Potential to Emit (PTE)

| Material | 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 |
|-------------------------------|------------------|-----------------------------------|----------------|-------------------|----------------|---------------------------|-----------------------|---------------------|---|----------------------------------|-------------------------------|------------------------------|-----------------------------|------------------------------|--------------------|---------------------|
| #126 Heresite EP-6300 Coating | 9.20 | 53.5% | 0.0% | 53.5% | 0.0% | 48.0% | 0.0970 | 4.00 | 4.92 | 4.92 | 1.91 | 45.83 | 8.36 | 1.82 | 10.25 | 75% |
| #135 Elite Water Based Primer | 9.60 | 55.0% | 57.0% | 55.0% | 57.0% | 67.0% | 0.0970 | 4.00 | 5.03 | 5.28 | 2.05 | 49.17 | 8.97 | 1.84 | 7.88 | 75% |
| #102 Heresite S-330 Solvent | 6.71 | 100.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0970 | 4.00 | 5.85 | 6.71 | 2.60 | 62.48 | 11.40 | 0.00 | FRR | 75% |

Flat case coating, maximum units per hour and 8,760 hours/yr.

(1) Data from Mfr's sheet

2.60 62.48 11.40 1.68

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

Transfer efficiency was estimated at 75% for flat surface work and electrostatic air atomized, per "Air Pollution Engineering Manual" (AP-40), Table 2, page 362, 1992 edition.

surcoat.wk4 9/95

Appendix A: Emissions Calculations

HAP Emission Calculations

From Surface Coating Operations

Company Name: Horner Electric
Address City IN Zip: 1521 East Washington Street, Indianapolis, Indiana 46201
Permit No.: T097-7787-00301
Vent ID: Emission Unit #6 (EU6)
Reviewer: K Leone
Date: December 1998

| Material | Density (Lb/Gal) | Gal of Mat (gal/unit) | Maximum (unit/hour) | Weight % 2-Butoxyethanol (glycol ether) | Weight % Methyl Ethyl Ketone | Weight % Glycol Ethers | Weight % Toluene | Weight % Xylene | Weight % Methyl Isobutyl Ketone | Weight % Benzene | Weight % Ethylbenzene | 2-Butoxyethonal (ton/yr) (glycol ether) | Methyl Ethyl Ketone (ton/yr) | Glycol Ethers (ton/yr) | Toluene (ton/yr) | Xylene (ton/yr) | Methyl Isobutyl Ketone (ton/yr) | Benzene (ton/yr) | Ethylbenzene (ton/yr) | Total Potential per coating (tons/yr) |
|-----------------|------------------|-----------------------|---------------------|---|------------------------------|------------------------|------------------|-----------------|---------------------------------|------------------|-----------------------|---|------------------------------|------------------------|------------------|-----------------|---------------------------------|------------------|-----------------------|---------------------------------------|
| #126 Heresite E | 9.2 | 0.0970 | 4.00 | 0.0% | 5.0% | 0.0% | 5.0% | 5.0% | 5.0% | 0.0% | 0.0% | 0.00 | 0.78 | 0.00 | 0.78 | 0.78 | 0.78 | 0.00 | 0.00 | 3.13 |
| #135 Elite Wate | 9.6 | 0.0970 | 4.00 | 0.0% | 5.0% | 0.0% | 2.0% | 2.0% | 5.0% | 0.0% | 0.0% | 0.00 | 0.82 | 0.00 | 0.33 | 0.33 | 0.82 | 0.00 | 0.00 | 2.28 |
| #102 Heresite S | 6.71 | 0.0970 | 4.00 | 0.0% | 0.0% | 0.0% | 2.0% | 1.0% | 0.0% | 0.0% | 0.0% | 0.00 | 0.00 | 0.00 | 0.23 | 0.11 | 0.00 | 0.00 | 0.00 | 0.34 |

0.00 0.76 0.00 **0.78** **0.78** 0.08 0.00 0.00 **3.13**

* Determine Potential HAPs at Limited PTE: 249 tons VOC/yr x yr/292.31 tons VOC x 32.6 ton HAP = 27.77 tons HAP
 State Potential Emissions based upon worst case HAP loading and 8,760 hr/yr.

METHODOLOGY

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

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

Company Name: Horner Electric
Address City IN Zip: 1521 East Washington Street, Indianapolis, Indiana 46201
Permit No.: T097-7787-00301
Vent ID: Emission Unit #6 (EU6)
Reviewer: K Leone
Date: December 1998

| | PM | PM-10 | SO2 | NOx | CO | VOC | HAPS Single | HAPS Combination |
|------------------------|-------------|-------------|----------|----------|----------|--------------|----------------|---------------------|
| Paint Booth EU-17 | 1.68 | 1.68 | 0 | 0 | 0 | 11.40 | 0.78 | 3.13 |
| Insignificant | 0.00 | 0.00 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| Total Emissions | 1.68 | 1.68 | 0 | 0 | 0 | 11.40 | 0.78 | 3.13 |

Abrasive Blasting

Company Name: Horner Electric
Address City IN Zip: 1521 East Washington Street Indianapolis, Indiana 46201
Reviewer: Kevin Leone
Date: December 1998

Table 1 - Emission Factors for Abrasives

| Abrasive | Emission Factor | |
|------------|------------------|--------------|
| | PM / lb abrasive | PM10 / lb PM |
| Sand | 0.041 | 0.70 |
| Grit | 0.010 | 0.70 |
| Steel Shot | 0.004 | 0.86 |
| Other | 0.010 | |

Table 2 - Density of Abrasives (lb/ft3)

| Abrasive | Density (lb/ft3) |
|-----------|------------------|
| Al oxides | 160 |
| Sand | 99 |
| Steel | 487 |

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

| Internal diameter | Nozzle Pressure (psig) | | | | | | | |
|-------------------|------------------------|------|------|------|------|------|------|------|
| | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| 1/8 | 28 | 35 | 42 | 49 | 55 | 63 | 70 | 77 |
| 3/16 | 65 | 80 | 94 | 107 | 122 | 135 | 149 | 165 |
| 1/4 | 109 | 138 | 168 | 195 | 221 | 255 | 280 | 309 |
| 5/16 | 205 | 247 | 292 | 354 | 377 | 420 | 462 | 507 |
| 3/8 | 285 | 355 | 417 | 477 | 540 | 600 | 657 | 720 |
| 7/16 | 385 | 472 | 560 | 645 | 755 | 820 | 905 | 940 |
| 1/2 | 503 | 615 | 725 | 835 | 945 | 1050 | 1160 | 1265 |
| 5/8 | 820 | 990 | 1170 | 1336 | 1510 | 1680 | 1850 | 2030 |
| 3/4 | 1140 | 1420 | 1670 | 1915 | 2160 | 2400 | 2630 | 2880 |
| 1 | 2030 | 2460 | 2900 | 3340 | 3780 | 4200 | 4640 | 5060 |

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)
 FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =
 D = Density of abrasive (lb/ft3) From Table 2 =
 D1 = Density of sand (lb/ft3) =
 ID = Actual nozzle internal diameter (in) =
 ID1 = Nozzle internal diameter (in) from Table 3 =

| |
|------|
| 221 |
| 155 |
| 99 |
| 0.25 |
| 0.25 |

Flow Rate (FR) (lb/hr) = 346.010 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =
 FR = Flow Rate (lb/hr) =
 w = fraction of time of wet blasting =
 N = number of nozzles =

| |
|---------|
| 0.010 |
| 346.010 |
| 0 % |
| 1 |

| | |
|---------------------------------|---------------------|
| Uncontrolled Emissions = | 3.46 lb/hr |
| | 15.16 ton/yr |

METHODOLOGY

Emission Factors from Stappa Alapco, Section 3 "Abrasive Blasting"

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

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

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

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

EU4 - Degreaser

| Degreaser | | Usage gal/day | Density lb/gal | Precent VOC by Wt. | Potential VOC Emissions | |
|-------------------|--|------------------|-------------------|-----------------------|----------------------------|---------|
| Substance | | | | | lbs/day | tons/yr |
| Trichloroethylene | | 12 | 12.18 | 100.00% | 146.16 | 26.67 |

EU 7 - Varnish Tank #1

| | lb VOC/gallon | gallons/year | lb VOC/year | ton VOC/year | ton HAP/year |
|---------------|---------------|--------------|---------------|--------------|--------------|
| Thermopoxy | 4.42 | 220 | 972 | 0.49 | |
| Xylene | 7.18 | 57 | 272.8 | 0.14 | 0.14 |
| Totals | | 277 | 1244.8 | 0.63 | 0.14 |

EU 8 - Varnish Tank #2

| | lb VOC/gallon | gallons/year | lb VOC/year | ton VOC/year | ton HAP/year |
|---------------|---------------|--------------|-------------|--------------|--------------|
| Sterling | 3.59 | 110 | 395 | 0.2 | |
| Xylene | 7.18 | 19 | 136 | 0.07 | 0.07 |
| Totals | | 129 | 531 | 0.27 | 0.07 |

| | | | | | |
|------|---|-----|--------|-----|------|
| Both | 0 | 406 | 1775.8 | 0.9 | 0.21 |
|------|---|-----|--------|-----|------|

EU 9 - VPI Tank #1

| | lb VOC/gallon | gallons/year | lb VOC/year | ton VOC/year |
|---------------|---------------|--------------|-------------|--------------|
| 709A | 3.8 | 1,930 | 7334 | 3.6 |
| Totals | | 1,930 | 7334 | 3.6 |

EU 10 - VPI Tank #2

| | lb VOC/gallon | gallons/year | lb VOC/year | ton VOC/year |
|---------------|---------------|--------------|-------------|--------------|
| 709A | 3.8 | 1,930 | 7334 | 3.6 |
| Totals | | 1,930 | 7334 | 3.6 |

both 0 3860 14668 7.2

Stack gas conversions

| S/V ID | Stack flow rate in scfm or cfm | Stack gas temp | acfm |
|--------|-----------------------------------|----------------|----------|
| 1 | 300 | 1100 | 883.0189 |
| 2 | 390 | 1500 | 1442.264 |
| 3 | 100 | 70 | 100 |
| 4 | 500 | 450 | 858.4906 |
| 5 | 750 | 500 | 1358.491 |
| 6 | 200 | 500 | 362.2642 |
| 7 | 19300 | 70 | 19300 |
| 8 | 18000 | 70 | 18000 |

add columns as necessary

Sourcewide PTE

| | PM | PM-10 | SO2 | NOx | CO | VOC | HAPS Single | HAPS Combination |
|---------------|-------|-------|------|------|------|-------|----------------|---------------------|
| Paint Booth | 1.68 | 1.68 | 0.00 | 0.00 | 0.00 | 11.40 | 0.78 | 3.13 |
| Sandblaster | 15.16 | | | | | | | |
| Degreaser | | | | | | 26.67 | 26.67 | 26.67 |
| Varnish Tanks | | | | | | 0.9 | 0.21 | |
| VPI Tanks | | | | | | 7.2 | | |
| Total | 16.84 | 1.68 | 0.00 | 0.00 | 0.00 | 46.18 | 27.67 | 29.80 |

