INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant

DATE: March 10, 2006

RE: Hurst Manufacturing / 051-22457-00048

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

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 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, 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
FN-REGIS.dot 1/10/05

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100 North Senate Avenue
Indianapolis, Indiana 46204-2251
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Randall Floyd
Hurst Manufacturing
1551 East Broadway
Princeton, Indiana 47670

March 10, 2006

Re: Registered Operation Status
No.: 051-22457-00048

Dear Mr. Floyd:

The application from Hurst Manufacturing received on December 29, 2005, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following stationary electric motor manufacturing plant located at 1551 East Broadway, Princeton, Indiana 47670, is classified as registered:

(a) One (1) paint booth, identified as PB 101 (previously identified as #73), used for coating metal motor coils, with a maximum usage rate of 0.44 gallons per hour, using air spray guns, with particulate emissions controlled by dry filters, and exhausting at stack #73. This unit was installed in 1994.

(b) One (1) paint booth, identified as PB 100 (previously identified as #74), used for coating metal motor coils, with a maximum usage rate of 0.44 gallons of coating per hour, using air spray guns, with particulate emissions controlled by dry filters, and exhausting at stack #100. This unit was constructed in 1994. **Note:** this booth is being relocated within the plant.

(c) One (1) powder coating booth, identified as PB 102, with a maximum throughout rate of 60 pounds per day, with particulate emissions controlled by a dust collector and exhausting inside the building. This unit was installed in 1980.

(d) One (1) injection molding unit, with a maximum usage rate of 0.0015 pounds of mold release agent per hour. This unit was installed in 1960.

(e) One (1) die-cast operations, used for die-casting zinc cap ends for motors, with a maximum throughput rate of 60 pounds of zinc alloys per hour. This process was installed in 1994.

(f) One (1) metal parts hobbing and stamping process, utilizing an oil-based machining fluid with a maximum usage rate of 1.37 pounds per hour. This process was installed in 1965.

(g) Twelve (12) plunger type containers, located throughout the plant, each with a maximum capacity of one (1) gallon, used to dispense a non-halogenated solvent onto cloths for production cleaning, collectively identified as EU 103, with a maximum throughput rate of 0.92 pounds per hour. This operation was installed in 1980.

(h) One (1) black oxide operations, identified as EU #80, consisting of dip tanks for coating metal parts, with a maximum usage rate of 0.27 gallons per hour. This operation was installed in 1994.

(i) One (1) mop water evaporator unit used for processing used oils, with a maximum process rate of 10 gallons of mop water per hour. Note: The used oils are disposed off-site.

(j) Forty-three (43) natural gas-fired space heaters, with a maximum combined heat input capacity of 4.02 MMBtu per hour. These units were installed in 1994.

(k) One (1) varnishing line, identified as EU 104, with a maximum usage rate of 0.60 gallons per hour, using trickling method for varnish application and exhausting at stack #81. This will be constructed in 2006.

The following conditions shall be applicable:

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

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

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

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating) and Registration CP: 051-4613, issued September 13, 1995, the two (2) paint booths (identified as PB 100 and PB 101) are subject to the provisions of 326 IAC 8-2-9 (Miscellaneous Metal Coating) as follows:

(1) The volatile organic compound (VOC) content of coating delivered to the applicator at paint booth PB 101 shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

(2) 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.

(3) Compliance with the VOC content 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.

(4) The Permittee shall maintain records for the VOC content of each coating material and solvent used less water.

(c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations from Manufacturing Processes), the particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) and 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. Therefore, the powder paint booth (identified as PB 103) shall not exceed 0.551 pounds per hour. The dust collector shall be in operation at all times when the powder paint booth is in operation to comply with this rule.

(d) Pursuant to 326 IAC 8-2-1(a)(4) and 326 IAC 8-2-9, the Permittee shall maintain the records (1) through (3) for the one (1) varnishing line (identified as EU 104) to demonstrate that the actual VOC emissions from the emission unit are less than fifteen (15) pounds per day.

(1) Records of the amount of coating material and solvent used on daily basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used, and solvent usage records shall differentiate between those added to coatings and those used as cleanup solvent;

(2) The daily cleanup solvent usage; and

(3) The total VOC usage for each day.

This registration is the second air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Sanober Durrani, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7810 to speak directly to Ms. Durrani. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251 or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by
Kathy Moore, Section Chief
Permits Branch
Office of Air Quality

ERG/SD

cc: File – Gibson County
Gibson County Health Department
Air Compliance – Derrick Ohning
Southwest Regional Office
Permit Tracking
Compliance Data Section
Office of Enforcement

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	**Hurst Manufacturing**
Address:	**1551 East Broadway**
City:	**Princeton, Indiana 47670**
Authorized individual:	**Greg Davis**
Phone #:	**(812) 385-2564**
Registration #:	**051-22457-00048**

I hereby certify that Hurst Manufacturing is still in operation and is in compliance with the requirements of Registration No.: 051-22457-00048.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	Hurst Manufacturing
Source Location:	1551 East Broadway, Princeton, Indiana 47670
County:	Gibson
SIC Code:	3621
Registration No.:	051-22457-00048
Permit Reviewer:	ERG/SD

The Office of Air Quality (OAQ) has reviewed an application from Hurst Manufacturing, Inc. relating to the construction of a new varnishing line and the operation of the existing stationary electric motor manufacturing plant.

History

Hurst Manufacturing was constructed prior to August 7, 1977 and was issued a Registered Construction and Operation Permit No.: 051-4613 on September 13, 1995. On December 29, 2005, the Permittee submitted an application for construction of a new emission unit (varnishing line) at their existing source and relocation of an existing paint booth (PB100) within the plant. The potential to emit of all criteria pollutants from existing emission units and new proposed emission units are less than twenty-five (25) tons per year. Therefore, the provisions of 326 IAC 2-5.5 apply and a Registration has been drafted. Note: The Permittee did not re-register its source in a timely manner by September 13, 2000. Therefore, the previously registered emission units have been listed under Unpermitted Emission Units section of the TSD.

Unpermitted Emission Units and Pollution Control Equipment

The source consists of previously unpermitted emission units and pollution control devices:

(a) One (1) paint booth, identified as PB 101 (previously identified as #73), used for coating metal motor coils, with a maximum usage rate of 0.44 gallons per hour, using air spray guns, with particulate emissions controlled by dry filters, and exhausting at stack #73. This unit was installed in 1994.

(b) One (1) paint booth, identified as PB 100 (previously identified as #74), used for coating metal motor coils, with a maximum usage rate of 0.44 gallons of coating per hour, using air spray guns, with particulate emissions controlled by dry filters, and exhausting at stack #100. This unit was installed in 1994. **Note:** this booth is being relocated within the plant and was previously used for coating metal motor coils.

(c) One (1) powder coating booth, identified as PB 102, with a maximum throughout rate of 60 pounds per day, with particulate emissions controlled by a dust collector and exhausting inside the building. This unit was installed in 1980.

(d) One (1) injection molding unit, with a maximum usage rate of 0.0015 pounds of mold release agent per hour. This unit was installed in 1960.

(e) One (1) die-cast operation, used for die-casting zinc cap ends for motors, with a maximum throughput rate of 60 pounds of zinc alloys per hour. This process was installed in 1994.

(f) One (1) metal parts hobbing and stamping process, utilizing an oil-based machining fluid with a maximum usage rate of 1.37 pounds per hour. This process was installed in 1965.

(g) Twelve (12) plunger type containers, located throughout the plant, each with a maximum capacity of one (1) gallon, used to dispense a non-halogenated solvent onto cloths for production cleaning, collectively identified as EU 103, with a maximum throughput rate of 0.92 pounds per hour. This operation was installed in 1980.

(h) One (1) black oxide operation, identified as EU #80, consisting of dip tanks for coating metal parts, with a maximum usage rate of 0.27 gallons per hour. This operation was installed in 1994.

(i) One (1) mop water evaporator unit used for processing used oils, with a maximum process rate of 10 gallons of mop water per hour. Note: The used oils are disposed off-site.

(j) Forty-three (43) natural gas-fired space heaters, with a maximum combined heat input capacity of 4.02 MMBtu per hour. These units were installed in 1994.

Permitted Emission Units and Pollution Control Equipment

There are no permitted emission units operating at this source at this time.

Note: The following emission units previously Registered at the source are no longer in operation and have been permanently removed from this site.

(a) One (1) metal arc gas welding station;

(b) One (1) wave soldering bath; and

(c) One (1) paint booth (Varnish dip tank), identified as EU #80.

New Emission Units and Pollution Control Equipment

The following emission unit will be constructed at this source:

(k) One (1) varnishing line, identified as EU 104, with a maximum usage rate of 0.60 gallons per hour, using trickling method for varnish application and exhausting at stack #81. This unit will be constructed in 2006.

Existing Approvals

The source has been operating under the previous Registered Construction and Operating Status No. 051-4613-00034, issued September 13, 1995. **Note:** IDEM, OAQ has clarified that the source was issued a wrong plant identification number. The correct plant ID is 00048.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

IDEM is aware that the source did not apply for a Registration in a timely manner. IDEM is reviewing this matter and will take appropriate action.

Recommendation

The staff recommends to the Commissioner that the operation 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 December 29, 2005, with additional information received on February 11, 2006 and February 23, 2006.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 13).

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit 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, the department, or the appropriate local air pollution control agency."

The following table reflects the existing source potential to emit. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit:

Pollutant	Potential to Emit (tons/year)
PM	12.9
PM10	13.0
SO_2	0.01
VOC	24.2
CO	1.45
NO_x	1.73

Pollutant	Potential to Emit (tons/year)
Benzene	3.63E-05
Dicholorobenzene	2.07E-05
Formaldehyde	1.30E-03
Hexane	3.11E-02
Toluene	1.26
Elthylbenzene	0.05
Xylene	0.34
Glycol Ethers	0.95
Total	2.63

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants is less than twenty-five (25) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM, PM10, and VOC are greater than the levels listed in 326 IAC 2-1.1-3(d)(1). A registration will be issued.

(b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) a combination of HAPs is less than twenty-five (25) tons per year.

(c) Fugitive Emissions
Since this type of operation is not in one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2, the fugitive particulate matter (PM) and volatile organic

compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Gibson County.

Pollutant	Status
PM-10	Attainment
PM 2.5	Attainment
SO_2	Attainment
NO_2	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) The source is located in Patoka Township in Gibson County, which has been classified as unclassifiable or 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. See the State Rule Applicability – Entire Source section.

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

(c) Gibson County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	12.9
PM10	13.0
SO_2	0.01
VOC	24.2
CO	1.45
NO_x	1.73
Single HAP	<10
Combination HAPs	<25

(a) This existing source is not a major stationary source because no regulated pollutant (under PSD) is emitted at a rate of 250 tons per year or greater and it is not in one (1) of thetwenty-eight (28) listed source categories.

(b) These emissions were based on the potential to emit calculations for the source as shown in Appendix A.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPs is less than 25 tons per year.

This is the second air approval issued to this source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this Registration for this source.

(b) The requirements of 40 CFR Part 63, Subpart MMMM - National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products are not included in this Registration for this source because the source is not a major source of HAPs as defined in 40 CFR 63, Subpart A.

(c) The requirements of 40 CFR Part 63, Subpart T - National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning (326 IAC 14) are not included in this Registration for this source because the source utilizes only non-halogenated solvents

(d) This requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63.1500, Subpart RRR for Secondary Aluminum Production are not included in this Registration for this source because the source does not melt aluminum. It uses zinc alloys in their die-casting operations.

(e) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 20, and 40 CFR Part 61, 63) included in this Registration for this source.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

Hurst Manufacturing was constructed prior to August 7, 1977 and it is not in one (1) of the twenty-eight (28) source categories. The potential to emit of each criteria pollutants at the time of construction and after each subsequent modification, never exceeded the 250 tons per year PSD threshold. Therefore, the provisions of 326 IAC 2-2 do not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in Gibson County and is not required to operate under the Part 70 Permit Program. Therefore, the provisions of 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

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

(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.

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

The operation of this stationary electric motor manufacturing plant will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, the provisions of 326 IAC 2-4.1 do not apply.

State Rule Applicability – Paint Booths (PB 100 and PB 101)

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

The two (2) paint booths (identified as PB 100 and PB101) are not subject to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because these facilities each use less than five (5) gallons of coating per day.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The potential VOC emissions from each of the two (2) paint booths (identified as PB 100 and PB 101) are less than twenty five (25) tons per year. Therefore, the provisions of 326 IAC 8-1-6 do not apply.

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

Pursuant to Registration CP: 051-4613, issued September 13, 1995, the two (2) paint booths (identified as PB 100 and PB 101) are subject to the provisions of 326 IAC 8-2-9 (Miscellaneous Metal Coating) as follows:

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at paint booth PB 101 shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

(b) 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.

(c) Compliance with the VOC content 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.

(d) The Permittee shall maintain records for the VOC content of each coating material and solvent used less water.

(e) Based on the MSDS submitted by the source and calculations made (see Appendix A, page 13), the two (2) paint booths are in compliance with this rule.

State Rule Applicability – Powder Paint Booth (PB 103)

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

Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) and 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 no apply shall not exceed 0.551 pounds per hour. Therefore, the powder paint booth (identified as PB103) shall not exceed 0.551 pounds per hour.

The dust collector shall be in operation at all times the powder paint booth (PB103) is in operation, in order to comply with this rule.

State Rule Applicability – Black Oxide Operations, Injection Molding, Hobbing & Stamping

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

The black oxide operations, injection molding, and hobbing & stamping are not subject to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because these operations do not emit particulate emissions.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The potential VOC emissions from black oxide operations, injection molding, and hobbing & stamping are each less than twenty five (25) tons per year. Therefore, the provisions of 326 IAC 8-1-6 do not apply.

State Rule Applicability – Varnishing Line (EU 104)

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

The one (1) varnishing line (identified as EU 104) is not subject to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because this line uses less than five (5) gallons of varnish per day.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The potential VOC emissions from the one (1) varnishing line (identified as EU 104) are less than twenty five (25) tons per year. Therefore, the provisions of 326 IAC 8-1-6 do not apply.

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

The one (1) varnishing line (identified as EU 104) is not subject to the provisions of 326 IAC 8-2-9 (Miscellaneous Metal Coating) because the actual VOC emissions from this line are less than fifteen (15) pounds per day. [326 IAC 8-2-1(a)(4)]

The Permittee shall maintain the records (a) through (c) for the one (1) varnishing line (identified as EU 104) as shown.

(a) Records of the amount of coating material and solvent used on daily basis. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used, and solvent usage records shall differentiate between those added to coatings and those used as cleanup solvent;

(b) The daily cleanup solvent usage; and

(c) The total VOC usage for each day.

State Rule Applicability – Die-Casting Process

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

The one (1) die-casting process using zinc alloys is not subject to the provisions of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because according to 326 IAC 6-3-1(b)(14) manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pounds per hour are exempt from the provisions of this rule.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The provisions of 326 IAC 8-1-6 do not apply to the one (1) die-casting process using zinc alloys because it does not result in VOC emissions.

State Rule Applicability – Solvent Cleaning

326 IAC 8-6 (Organic Solvent Emission Limitations)

The plunger containers, installed in 1980, are not subject to the provisions of 326 IAC 8-6 because this source is not located in Lake or Marion Counties and has a potential to emit of VOC less than one hundred (100) tons per year.

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

The plunger containers are not subject to the requirements of 326 IAC 8-3-2 (Cold Cleaner Operations). The containers do not spray, brush, flush, or immerse an article for the purpose of cleaning or degreasing the article. The containers dispense solvent onto cloths for cleaning of product.

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

The plunger containers are not subject to the provisions of 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control). The containers do not spray, brush, flush, or immerse an article for the purpose of cleaning or degreasing the article. The containers dispense solvent onto cloths for cleaning of product.

State Rule Applicability – Natural Gas-Fired Space Heaters

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

The natural gas-fired space heaters are not subject to the provisions of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because according to 326 IAC 6-3-1(b)(14) manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pounds per hour are exempt from the provisions of this rule.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The natural gas-fired space heaters are not subject to the provisions of 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) because these units are not indirect heating units.

Conclusion

The operation of this stationary electric motor manufacturing plant shall be subject to the conditions of Registration No.: 051-22457-00048.

Appendix A: Emission Calculations
Natural Gas Combustion Only (MMBtu/hour < 100)
Forty-three (43) Space Heaters

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Heat Input Capacity (MMBtu/hour)		Potential Throughput (MMscf/year)
4.02	(43 units only)	34.6

	Pollutant					
	*** PM**	*** PM10**	**SO_2**	**** NO_x**	**VOC**	**CO**
Emission Factor (lb/MMscf)	1.90	7.60	0.60	100	5.50	84.0
Potential To Emit (tons/year)	0.03	0.13	0.01	1.73	0.10	1.45

* PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM and PM10 combined.
**Emission factor for NOx (Uncontrolled) = 100 lb/MMscf.
Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, and 1.4-2, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

All Emission factors are based on normal firing.

METHODOLOGY
Potential throughput (MMscf/year) = Heat input capacity (MMBtu/hour) * 8760 hours/year * 1 MMscf/1020 MMBtu
PTE (tons/year) = Potential throughput (MMscf/year) * Emission factor (lb/MMscf) * 1 ton/2000 lbs

See next page for HAPs emissions calculations.

Appendix A: Emission Calculations
Natural Gas Combustion Only (MMBtu/hour < 100)
Forty-three (43) Space Heaters

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

HAPs - Organics

	Benzene	**Dichlorobenzene**	**Formaldehyde**	**Hexane**	**Toluene**
Emission Factor (lb/MMscf)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential To Emit (tons/year)	3.63E-05	2.07E-05	1.30E-03	3.11E-02	5.88E-05

HAPs - Metals

	Lead	**Cadmuim**	**Chromium**	**Manganese**	**Nickel**
Emission Factor (lb/MMscf)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential To Emit (tons/year)	8.64E-06	1.90E-05	2.42E-05	6.57E-06	3.63E-05

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors provided above are from AP-42, Chapter 1.4, Table 1.4-3 and 1.4-4 (July, 1998).
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Emission Unit	Booth ID	Material	VOC Content (lb/gal)	Weight % Non-Volatiles (solids)	Max. Usage Rate (gal/hour)	PTE of VOC (lb/hour)	PTE of VOC (tons/year)	PTE of PM/PM10 (ton/year)	* Transfer Efficiency
Two (2) Paint Booths	PB 100	Black Polane T Black Enamel	2.71	63.0%	0.29	0.80	3.49	1.10	50%
	PB 100	Polane Plus Catalyst	2.56	63.0%	0.07	0.18	0.78	0.25	50%
	PB 100	Polane T66 Reducer	7.25	0.00%	0.07	0.53	2.30	0.00	50%
	PB 101	Polane T66 Reducer	7.25	0.00%	0.07	0.53	2.30	0.00	50%
	PB 101	* Grainger Gray Fast Dry	0.75	43.0%	0.37	0.28	1.22	0.52	50%
						2.30	**10.1**	**1.87**	

Actual VOC (lbs/day) for PB 100 = **11.6**
Actual VOC (lbs/day) for PB 101 = **6.18**

* The VOC content for grainger gray fast dry includes both water and solvent.
Material is sprayed manually using air spray guns
For 326 IAC 8-2-9 compliance calculations, see page 13 of 13 TSD, Appendix A.

METHODOLOGY
PTE of VOC (lb/hour) = VOC content (lb/gal) * Maximum usage rate (gal/hour)
PTE of VOC (tons/year) = VOC content (lb/gal) * Maximum usage rate (gal/hour) * 8760 hours/year * 1 ton/2000 lbs
PTE of PM/PM10 (tons/year) = VOC content (lb/gal) * Maximum usage rate (gal/hour) * Weight % non-volatiles (solids) * (1-Transfer efficiency %) * 8760 hours/year * 1 ton/2000 lbs
Actual VOC Emissions (lbs/day) = PTE of VOC (lbs/hour) * Actual hours of operation (2000 hours/year) * 1year/260 Days of operation

Appendix A: Emissions Calculations

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Emission Unit	Booth ID	Material	Density (lb/gal)	Max. Usage Rate (gal/hour)	Weight % Ethylbenzene	Weight % Toluene	Weight % Xylene	Weight % Glycol Ethers	PTE of Ethylbenzene (tons/year)	PTE of Toluene (tons/year)	PTE of Xylene (tons/year)	PTE of Glycol Ethers (tons/year)
Two (2) Paint Booths	PB 100	Black Polane T Black Enamel	13.1	0.29	0.30%	2.00%	2.00%	0.00%	0.05	0.34	0.34	0.00
	PB 100	Polane Plus Catalyst	9.32	0.07	0.00%	0.20%	0.00%	0.00%	0.00	0.01	0.00	0.00
	PB 100	Polane T66 Reducer	7.25	0.07	0.00%	20.0%	0.00%	0.00%	0.00	0.46	0.00	0.00
	PB 101	Polane T66 Reducer	7.25	0.07	0.00%	20.0%	0.00%	0.00%	0.00	0.46	0.00	0.00
	PB 101	Grainger Gray Fast Dry	9.44	0.37	0.00%	0.00%	0.00%	6.21%	0.00	0.00	0.00	0.95
									0.05	**1.26**	**0.34**	**0.95**

Highest Single HAP: Toluene (tons/year) = **1.26**
Combined HAPs (tons/year) = **2.60**

METHODOLOGY

PTE of HAPs (tons/year) = Density (lb/gal) * Maximum usage rate (gal/hour) * Weight % HAP * 8760 hours/year * 1 ton/2000 lbs

Appendix A: Emissions Calculations

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

A. Potential to emit in tons per year estimated by using the amount of dust collected

Emission Unit	Booth ID	** Dust Collected (lbs/hour)	PTE of PM/PM10 Before Control (lbs/hour)	PTE of PM/PM10 Before Control (tons/year)
Powder Paint Booth	PB 102	2.25	2.50	11.0

Assume all dust collected is equal to PM, and all PM emissions are equal to PM10 emisisons.
** The Dust collected data has been provided by the Permittee
Control efficiency (Dust Collector) = 90 percent

METHODOLOGY
Before Control PTE of PM/PM10 (lbs/hour) = Dust collected (lbs/hour) * 1/Control efficiency (%)
Before Control PTE of PM/PM10 (tons/year) = Before Control PTE of PM/PM10 (lbs/hour) * 8760 hours/year * 1 ton/2000 lbs

Appendix A: Emissions Calculations

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Emission Unit	Booth ID	Material	Actual Usage Rate (gal/year)	Density (lb/gal)	Maximum Usage Rate (lbs/hour)	Weight % VOC	PTE of VOC (tons/year)
Solvent Based Cleaning	EU 103	Isopropyl Alcohol	223	6.55	0.716	100%	3.14
		Acetone	58.0	6.55	0.186	0%	0.00
		Nitromethane	4.00	9.46	0.019	100%	0.081
						SUM	**3.22**

METHODOLOGY

Maximum Usage Rate (lbs/hour) = Actual Usage Rate (gal/year) * 1/Actual Operating Hours (2,040 hours/year) * Density (lb/gal)
PTE of VOC (tons/year) = Maximum Usage Rate (lbs/hour) * Weight % VOC * 8760 hours/year * 1 ton/2000 lbs.

Appendix A: Emissions Calculations

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Emission Unit	Material	Actual Usage Rate (gal/year)	Density (lb/gal)	Maximum Usage Rate (lbs/hour)	Weight % VOC	PTE of VOC (tons/year)
Hobbing/Stamping	Dortan	1653	7.25	5.87	10%	2.57
					SUM	**2.57**

An oil based machining fluid is constantly flooded in the machines while the metal parts are hobbed and stamped in the production area.

METHODOLOGY
Maximum Usage Rate (lbs/hour) = Actual Usage Rate (gal/year) * 1/Actual Operating Hours (2,040 hours/year) * Density (lb/gal)
PTE of VOC (tons/year) = Maximum Usage Rate (lbs/hour) * Weight % VOC * 8760 hours/year * 1 ton/2000 lbs.

Appendix A: Emissions Calculations

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Process	No. of Machines	Material Used	Max. Usage Rate (lbs/hour)	Weight % VOC	PTE of VOC (tons/year)
Injection Molding	1.0	Mold Release	0.0015	98%	**0.0064**

There are no HAPs contained in the mold release agent used in the one injection molding unit at this plant.

METHODOLOGY
PTE of VOC (tons/year) = Maximum usage rate (lbs/hour) * Weight % VOC * 8760 hours/year * 1 ton/2000 lbs.

Appendix A: Emissions Calculations

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Process	Material Used	Density (lb/gal)	Max. Usage Rate (gal/hour)	Weight % VOC	PTE of VOC (tons/year)
Black Oxide Operations	Pen Dip A	6.76	0.05	100%	1.60
	No Bleed	7.26	0.05	100%	1.59
	Uni Kleen 1008	NA	0.05	0.0%	NA
	Aricid B	17.5	0.05	0.0%	0.00
	Pentrate Ultra	17.8	0.05	0.0%	0.00
				SUM	**3.19**

METHODOLOGY

PTE of VOC (tons/year) = Density (lb/gal) * Maximum usage rate (gal/hour) * Weight % VOC * 8760 hours/year * 1 ton/2000 lbs.

Appendix A: Emissions Calculations

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Process	Material	Max. Throughput Rate (lbs/hour)	Emission Factor PM/PM10 (lb/ton)	PTE of PM/PM10 (tons/year)
Die Cast	Zinc Alloys	60.0	0.015	0.0020

Assume all PM emissions are equal to PM10
Emission factor is from FIRE, Casting SSC # 3-04-008-73.

METHODOLOGY
PTE of PM/PM10 (tons/year) = Maximum throughput rate (lbs/hour) * Emission factor (lb/ton) * 1 ton/2000 lbs * 8760 hours/year * 1 ton/2000 lbs.

Appendix A: Emissions Calculations

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Process	Unit ID	Material	Max. Throughput (units/hour)	Max. Usage (gal/unit)	VOC Content (lb/gal)	PTE of VOC (tons/year)	PTE of VOC (lbs/hour)
Varnishing Line	EU 104	8183 SW Polyester Resin	60.0	0.01	1.90	4.99	1.14
						4.99	**1.14**

Acutal Emissions of VOC (lbs/day) = 8.77

Varnish is applied via trickling method. The material used in this line does not contain any HAPs.

METHODOLOGY

PTE of VOC (tons/year) = Maximum throughput (units/hour) * Maximum usage rate (gal/unit) * VOC content (lb/gal) * 8760 hours/year * 1 ton/2000 lbs.
Actual VOC Emissions (lbs/day) = PTE of VOC (lbs/hour) * Actual hours of operation (2000 hours/year) * 1year/260 Days of operation

Appendix A: Emissions Calculations
Summary

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Emission Unit/Process	PM	PM10	SO_2	NOx	VOC	CO	HAPs
46 Space Heaters	0.03	0.13	0.01	1.73	0.10	1.45	3.25E-02
Modified Paint Booth 100	1.35	1.35			6.58		
Paint Booth 101	0.52	0.52			3.52		2.60
Powder Paint Booth 102	11.0	11.0					0.00
Solvent Based Cleaning Unit 103					3.22		0.00
Hobbing/Stamping Machine					2.57		0.00
Injection Molding					0.01		0.00
Black Oxide Operations					3.19		0.00
Die Casting Process	1.97E-03	1.97E-03			0.00		
New Varnishing Line 104					4.99		0.00
	12.9	**13.0**	**0.01**	**1.73**	**24.2**	**1.45**	**2.63**

Appendix A: Emissions Calculations
Compliance with 326 IAC 8-2-9

Company Name: Hurst Manufacturing
Address: 1551 East Broadway, Princeton, Indiana 47670
Registration: 051-22457
Plt ID: 051-00048
Reviewer: ERG/SD
Date: March 6, 2006

Emission Unit	Booth ID	Materia	Density (lb/gal)	* Weight % VOC	Volume % Water	lbs VOC/ gal of Coating less Water	326 IAC 8-2-9 Limit (lb VOC per gal of coating less water)
Two (2) Paint Booths	PB 100	Black Polane T Black Enamel	13.1	7.39%	64%	2.69	3.50
	PB 100	Polane Plus Catalyst	9.32	7.39%	57.3%	1.61	
	PB 100	Polane T66 Reducer	7.25	7.39%	41.0%	0.91	
	PB 101	Polane T66 Reducer	7.25	7.39%	41.0%	0.91	
	PB 101	Grainger Gray Fast Dry	9.44	9.00%	49.0%	1.67	

* Worst Case Weight % VOC

METHODOLOGY
Pound VOC per Gallon of Coating less Water = Density (lb/gal) * Weight % VOC * 1/(1- Volume % Water)