CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT

Hendrickson Trailer Suspension Systems
180 Mount Zion Road
Lebanon, Indiana 46052

is hereby authorized to construct

(a) Four (4) welding stations, known as EP-1, each equipped with two robotic welders, equipped with one (1) baghouse for PM control, capacity: 20 pounds of electrode per hour per welder.

(b) One (1) robotic paint spray booth, known as EP-2, equipped with airless spray applicator, equipped with dry filters for overspray control, exhausted through stack S-2, capacity: 20 suspension components per hour.

(c) One (1) natural gas-fired clean/phosphate heater, known as EP-3, rated at 1.5 million British thermal units per hour, exhausting through stack S-3.

(d) One (1) natural gas-fired seal rinse heater, known as EP-4, rated at 1.3 million British thermal units per hour, exhausting through stack S-4.

(e) One (1) natural gas-fired dry-off oven, known as EP-5, rated at 1.6 million British thermal units per hour, exhausting through stack S-5.

(f) One (1) natural gas-fired bake oven, known as EP-6, rated at 2.8 million British thermal units per hour, exhausting through stack S-6.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP 011-8677-00037	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Construction Conditions

General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).

2. That this permit 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.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

4. That pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit 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. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

   (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

   (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

   (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

   (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).

   (e) Pursuant to 326 IAC 2-7-4, the Permittee shall apply for a Title V operating permit within twelve (12) months after the source becomes subject to Title V. This 12-month period starts at the postmarked submission date of the Affidavit of Construction. If the construction is completed in phases, the 12-month period starts at the postmarked submission date of the Affidavit of Construction that triggers the Title V applicability. The operation permit issued shall contain as a minimum the conditions in the Operation Conditions section of this permit.

7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).

2. That the permittee shall 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.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:

   (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.

   (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.

   (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

   The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):

   (a) In the event that ownership of the welding, surface coating, natural gas combustion facilities at an existing permitted fabricated steel trailer suspension components manufacturing source is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.

   (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.

   (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. That pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and 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 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. That pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

Malfunction Condition

7. That 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 Management (OAM) 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 OAM, 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]

Annual Emission Reporting

8. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. A copy of this rule is enclosed. The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

9. That pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

(a) visible emissions shall not exceed an average of 40 percent opacity in 24 consecutive readings.

(b) visible emissions shall not exceed 60 percent opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

10. Particulate Matter (PM) Limitation

(a) That pursuant to 326 IAC 6-3 (Process Operations), the baghouse shall be in operation at all times when welding is in operation, and shall not exceed the allowable particulate matter (PM) emission rate of 12.1 pounds per hour. This limitation will also make 326 IAC 2-2 not applicable.

(b) That pursuant to 326 IAC 6-3 (Process Operations) the dry filters for particulate matter overspray control shall be in operation at all times when the robotic paint spray booth is in operation.

(c) The robotic paint spray booth shall comply with 326 IAC 6-3-2(c) using the following equation:

$E = 4.10P^{0.67}$ where: E = rate of emission in pounds per hour,
P = process weight in tons per hour.

and shall not exceed the allowable particulate matter (PM) emission rate of 12.1 pounds per hour calculated with a process weight of 5.0 tons per hour. This limitation will also make 326 IAC 2-2 not applicable.

(d) Daily inspections shall be performed to verify the placement, integrity and particulate loading of the filters.

(e) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Visible Emission Notations

11. That visible emission notations of the exhaust to the atmosphere from the baghouse shall be performed once per day. A trained employee will record whether emissions are normal or abnormal.

(a) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting start up or shut down time.

(b) In the case of batch or discontinuous operation, readings shall be taken during that part of the operation specified in the facility's specific condition prescribing visible emissions.

(c) 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 and abnormal visible emissions for that specific process.

(d) The Preventive Maintenance Plan for this facility shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Fugitive Dust Emissions

12. That pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

Volatile Organic Compound (VOC) Limitations

13. That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to fabricated steel trailer suspension components shall be limited to:

Coatings	**Limit** (pounds of VOC/gallon of coating less water delivered to the applicator)
Forced Warm Air Dried Coat	3.5
Extreme Performance Coat	3.5

Emission Minimization

14. That pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

Open Burning

15. That 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.

Emergency Reduction Plans

16. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within 180 calendar days from the issuance date of this permit.

(c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM shall supply such a plan.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

Volatile Organic Compounds Record Keeping

17. That pursuant to 326 IAC 2-1-3(i)(8), records of surface coating quantities and organic solvent contents shall be maintained for a minimum period of 36 months and made available upon request of the Office of Air Management (OAM). Any change or modification which may increase potential emissions to greater than 250 tons per year from the equipment covered in this permit shall obtain a PSD permit pursuant to 326 IAC 2-2 before such change may occur.

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967

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 LBS/HR PARTICULATES ?_____, 100 LBS/HR VOC ?_____, 100 LBS/HR SULFUR DIOXIDE ?_____ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ?_____ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

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

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

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

COMPANY: Hendrickson Trailer Suspension Systems PHONE NO. 765 - 482 - 0207

LOCATION: (CITY AND COUNTY) Lebanon / Boone

PERMIT NO. 011-8677 AFS PLANT ID: 011-00037 AFS POINT ID: _____ INSP: _____

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ 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: _____

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. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO2, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

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. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2373)

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

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

_____

_____

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name:	Hendrickson Trailer Suspension Systems
Source Location:	180 Mount Zion Road, Lebanon, Indiana 46052
County:	Boone
Construction Permit No.:	CP 011-8677-00037
SIC Code:	3714
Permit Reviewer:	Mark L. Kramer

The Office of Air Management (OAM) has reviewed an application from Hendrickson Trailer Suspension Systems relating to the construction and operation of welding, surface coating, and natural gas combustion facilities at an existing permitted fabricated steel trailer suspension components manufacturing source, consisting of the following equipment:

(a) Four (4) welding stations, known as EP-1, each equipped with two robotic welders, equipped with one (1) baghouse for PM control, capacity: 20 pounds of electrode per hour per welder.

(b) One (1) robotic paint spray booth, known as EP-2, equipped with airless spray applicator, equipped with dry filters for overspray control, exhausted through stack S-2, capacity: 20 suspension components per hour.

(c) One (1) natural gas-fired clean/phosphate heater, known as EP-3, rated at 1.5 million British thermal units per hour, exhausting through stack S-3.

(d) One (1) natural gas-fired seal rinse heater, known as EP-4, rated at 1.3 million British thermal units per hour, exhausting through stack S-4.

(e) One (1) natural gas-fired dry-off oven, known as EP-5, rated at 1.6 million British thermal units per hour, exhausting through stack S-5.

(f) One (1) natural gas-fired bake oven, known as EP-6, rated at 2.8 million British thermal units per hour, exhausting through stack S-6.

These proposed facilities are scheduled for construction in October 1997 and construction is scheduled to be completed by November with operations beginning thereafter.

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{E}F)
S-2	Paint Booth	36	3.50	10,000	Ambient
S-3	Clean/Phosphate Heater	36	0.67	260	900
S-4	Seal Rinse Heater	36	0.67	260	900
S-5	Dry-off Oven	36	0.83	445	350
S-6	Bake Oven	36	0.83	1,045	350

Recommendation

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

Information, unless otherwise stated, 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 June 11, 1997, with additional information received on July 24, 1997, August 1, 1997 and August 8, 1997.

Emissions Calculations

See pages 1 through 5 of Appendix A (Emissions Calculation Spreadsheets) for detailed calculations. PM emissions from welding were calculated in two ways. The worst case emissions from welding shown on page 4 of 5 will be utilized throughout this document.

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	**Allowable Emissions** (tons/yr)	**Potential Emissions** (tons/yr)
Particulate Matter (PM)	106	213
Particulate Matter (PM_{10})	106	213
Sulfur Dioxide (SO_2)	0.019	0.019
Volatile Organic Compounds (VOC)	169	169
Carbon Monoxide (CO)	0.662	0.662
Nitrogen Oxides (NO_x)	3.15	3.15
Single Hazardous Air Pollutant (HAP)	51.8	51.8
Combination of HAPs	91.3	91.3

(a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3. See attached spreadsheets for detailed calculations.

(b) The allowable emissions based on the rules cited are less than the potential emissions, therefore, the allowable emissions are used for the permitting determination.

(c) Allowable emissions (as defined in the Indiana Rule) of volatile organic compounds and PM_{10} are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

(d) Allowable emissions (as defined in the Indiana Rule) of a single hazardous air pollutant (HAP) are greater than 10 tons per year and the allowable emissions of any combination of the HAPs are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, a construction permit is required.

County Attainment Status

(a) Volatile organic compounds (VOC) and oxides of nitrogen 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. Boone County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_X emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Boone County has been classified as attainment or unclassifiable for the rest of the criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Emissions (tons/yr)
PM	37.9
PM_{10}	37.9
SO_2	0.03
VOC	44.4
CO	1.7
NO_x	6.7

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions were based on the Technical Support Document (TSD) for Construction Permit No. CP-011-6704-00037.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (tons/yr)	PM_{10} (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO_X (tons/yr)
Proposed Modification	17.2	17.2	0.019	169	0.662	3.15
PSD Threshold Level	250	250	250	250	250	250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source with its proposed modifications is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) two criteria pollutants; volatile organic compounds (VOC) and PM_{10} are greater than or equal to 100 tons per year,

(b) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, and

(c) any combination of HAPs is greater than or equal to 25 tons per year.

This existing source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source becomes subject to Title V.

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 applicable to this facility.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

These facilities are subject to 326 IAC 2-6 (Emission Reporting), because these facilities have the potential to emit more than 100 tons per year of volatile organic compounds (VOC) and PM_{10} in Boone County. Pursuant to this rule, the owner/ operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 6-3-2 (Particulate Emission Limitations)

(a) Spraying

The spray operations are subject to 326 IAC 6-3-2(c). The 326 IAC 6-3-2 equation is as follows: $E = 4.10\ P^{0.67}$, where P equals process weight in tons per hour for process weights

up to and including sixty thousand (60,000) pounds per hour and E equals the allowable emission rate in pounds per hour. 326 IAC 6-3-2 Process Operations limit the particulate matter to $E= 4.10\ P^{0.67}$ or 12.1 pounds per hour (52.8 tons per year) for a process weight of 5.00 tons per hour. Since this PM emission limit of 52.8 tons per year is greater than the potential PM emission rate of 16.6 tons per year, the spray operations comply with this rule.

(b) Welding

The welding operations are also subject to 326 IAC 6-3-2(c). 326 IAC 6-3-2 Process Operations limit the particulate matter to $E = 4.10\ P^{0.67}$ or 12.1 pounds per hour (52.8 tons per year) for a process weight of 5.00 tons per hour. Since this PM emission limit of 52.8 tons per year is greater than the potential PM emission rate of 0.221 tons per year, the welding operations comply with this rule.

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

(a) The spray operations are subject to 326 IAC 8-2-9. This rule limits the discharge into the atmosphere of any volatile organic compounds to three and five-tenths (3.5) pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings. The materials used to coat metal comply with this rule as shown on page 1 of 5 of Appendix A.

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

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) This proposed modification will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the Clean Air Act. The concentrations of these air toxics were modeled and found to be (in worst case possible) as follows: The concentrations of these air toxics were compared to the Permissible Exposure Limits (PEL) developed by the Occupational Safety and Health Administration (OSHA). The Office of Air Management (OAM) has regulatory authority over these substances (326 IAC 2-1-3.4, New Source Toxic Control).

(b) 326 IAC 2-1-3.4 (New Source Toxic Control) does not apply to these facilities because the facilities being added, by themselves, cannot construct a final or intermediate product. Therefore, this rule does not apply to this proposed modification.

Air Toxic Emissions

Pollutant	**Rate** (lbs/hr)	**Rate @ 8,760 hr/yr** (tons/yr)	**Rate @ 5,000 hr/yr** (tons/yr)	**Modeled Concentration** ($\mu g/m^3$)	**OSHA PEL** ($\mu g/m^3$)	**% OSHA PEL**
Toluene	11.84	51.8	29.6	1,325	375,000	0.35
MEK	0.04	0.162	0.10	4.45	500,000	0.0009
MIBK	8.95	39.1	22.4	1,005	205,000	0.49
Methanol	0.003	0.012	0.008	0.27	260,000	0.0001
Xylene	0.01	0.043	0.025	0.889	435,000	0.0002
Ethyl Benzene	0.01	0.043	0.025	0.889	435,000	0.0002
1,1,1 Trichloro-ethane	0.001	0.004	0.003	0.089	1,200,000	0.000007
Methylene Chloride	0.001	0.004	0.003	0.089	1,740,000	0.000005
Perchloro-ethylene	0.001	0.004	0.003	0.089	170,000	0.00005
Manganese	0.001	0.004	0.003	0.889	1,000	0.089
TOTAL		91.3	52.2			

Methodology: Rate ton/yr = (rate lb/hr) x (hr/yr of operation) x (1 ton/2,000 lb)

Air Toxic Stack/s

Stack ID	**Height** (feet)	**Diameter** (feet)	**Flow Rate** (acfm)	**Temperature** (EF)
S-2	36	3.5	10,000	ambient

Conclusion

The construction of these welding, surface coating and natural gas combustion facilities will be subject to the conditions of the attached proposed **Construction Permit No. CP 011-8677-00037.**

Appendix A: Emission Calculations
Baghouse Operations

Company Name: Hendrickson Trailer Suspension Systems
Address City IN Zip: 180 Mount Zion Road, Lebanon, IN 46052
CP: 011-8677
Plt ID: 011-00037
Reviewer: Mark L. Kramer
Date: June 11, 1997

Control Efficiency
95.00%

Pollutant	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Total Filter Area (sq. ft.)	Air to Cloth Ratio (acfm/sq. ft.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
PM	0.000245	12192.0	1.97	1.01	4.42	0.050	0.221
PM10	0.000245	12192.0	1.97	1.01	4.42	0.050	0.221
Manganese	0.000245	12192.0	1.97	0.020	0.088	0.001	0.004

Methodology

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Allowable Rate of Emissions

Process Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)	Allowable Emissions (tons/yr)
10000	5.00	12.1	52.8

Methodology

Allowable Emissions = 4.10(Process Weight Rate)^0.67

Appendix A: Emission Calculations
Natural Gas Combustion Only
MM Btu/hr 0.3 - < 10
Commercial Boiler

Company Name: **Hendrickson Trailer Suspension Systems**
Address City IN Zip: **180 Mount Zion Road, Lebanon, IN 46052**
CP: **011-8677**
Plt ID: **011-00037**
Reviewer: **Mark L. Kramer**
Date: **June 11, 1997**

EP-3: One 1.5 MMBtu/hr Clean/Phosphate Heater
EP-4: One 1.3 MMBtu/hr Seal Rinse Heater
EP-5: One 1.6 MMBtu/hr Dry-off Oven
EP-6: One 2.8 MMBtu/hr Bake Oven

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
7.2	63.1

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	12.0	12.0	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.378	0.378	0.019	3.15	0.167	0.662

Methodology

MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: uncontrolled = 100, Low NOx Burner = 17, Flue gas recirculation = 36
Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

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

Company Name: Hendrickson Trailer Suspension Systems
Address City IN Zip: 180 Mount Zion Road, Lebanon, IN 46052
CP: 011-8677
Plt ID: 011-00037
Reviewer: Mark L. Kramer
Date: June 11, 1997

Material	Density (lb/gal)	Weight % Volatile (H20 & 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 tons per year	lb VOC /gal solids	Transfer Efficiency
EP-2 Black Paint	12.09	28.60%	0.0%	28.6%	0.0%	48.90%	0.55	20.0	3.46	3.46	38.04	912.84	166.59	207.95	7.07	50%
Cleaning Solvents																
Lacquer Thinner (6782)	6.9	100.00%	0.0%	100.0%	0.0%	0.00%	0.00068	20.00	6.90	6.90	0.09	2.25	0.41	0.00	N/A	100%
Lacquer Thinner (15240)	6.45	100.00%	0.0%	100.0%	0.0%	0.00%	0.00270	20.00	6.45	6.45	0.35	8.36	1.53	0.00	N/A	100%
State Potential Emissions			**Add worst case coating to all solvents**							**TOTAL:**	**38.5**	**923**	**169**	**208**		

Control Technology Emissions (Combustion)															
						Emission Factors						Emissions			
Type	Number	Capacity	Gas usage	PM	PM10	SO2	NOx	VOC	CO	PM	PM10	SO2	NOx	VOC	CO
		MMBtu/hr	MMCF/yr	lb/MMCF	lb/MMCF	lb/MMCF	lb/MMCF	lb/MMCF	lb/MMCF	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr
Catalytic			0.0	3.0	3.0	0.6	100.0	5.3	35.0	0.0	0.0	0.0	0.0	0.0	0.0
Thermal			0.0	3.0	3.0	0.6	140.0	2.8	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Total			0.0							0.0	0.0	0.0	0.0	0.0	0.0
									Control Efficiency		Controlled	Controlled	Controlled	Controlled	
									VOC	PM	VOC pounds	VOC pounds	VOC	Particulate	
										0.92	per hour	per day	tons/yr	tons/yr	
Controlled Emissions due to Surface Coating Operations and Controls										**Controlled Total:**	**38.5**	**923**	**169**	**16.6**	

METHODOLOGY

Allowable PM: **12.1** **lbs/hr**
52.8 **tons/yr**

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

HAP Emission Calculations

Company Name: Hendrickson Trailer Suspension Systems
Plant Location: 180 Mount Zion Road, Lebanon, IN 46052
County: Boone
CP#: 011-8677
Plt ID#: 011-00037
Permit Reviewer: Mark L. Kramer
Date: June 11, 1997

Material	Density (lb/gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Weight % Toluene	Weight % MEK	Weight % MIBK	Weight % Methanol	Weight % Xylene	Toluene Emissions (tons/yr)	MEK Emissions (tons/yr)	MIBK Emissions (tons/yr)	Methanol Emissions (tons/yr)	Xylene Emissions (tons/yr)
EP-2 Black Paint	12.09	0.55	20.00	8.80%	0.00%	6.70%	0.00%	0.00%	51.26	0.00	39.03	0.00	0.00
Cleaning Solvents													
Lacquer Thinner (6782)	6.9	0.00068	20.00	62.70%	39.30%	29.50%	2.90%	10.40%	0.26	0.16	0.12	0.01	0.04
Lacquer Thinner (15240)	6.45	0.00270	20.00	20.00%	0.00%	0.00%	0.00%	0.00%	0.31	0.00	0.00	0.00	0.00
							SUBTOTALS:	**(tons/yr):**	**51.8**	**0.162**	**39.1**	**0.012**	**0.043**
								(lb/hr):	**11.8**	**0.037**	**8.95**	**0.003**	**0.010**
Total State Potential Emissions								**(g/sec):**	**1.49**	**0.005**	**1.13**	**0.0003**	**0.001**

Material	Density (lb/gal)	Gal of Mat (gal/unit)	Maximum (unit/hour)		Weight % Ethylbenzene	Weight % 1,1,1- Trichloroethane	Weight % Methylene Chloride	Weight % Perchloroethylene		Ethylbenzene Emissions (tons/yr)	1,1,1- Trichloroethane Emissions (tons/yr)	Methylene Chloride Emissions (tons/yr)	Perchloroethylene Emissions (tons/yr)
EP-2 Black Paint	12.09	0.55	20.00		0.00%	0.00%	0.00%	0.00%		0.00	0.00	0.00	0.00
Cleaning Solvents													
Lacquer Thinner (6782)	6.9	0.00068	20.00		10.40%	1.00%	1.00%	1.00%		0.0427	0.0041	0.0041	0.0041
Lacquer Thinner (15240)	6.45	0.00270	20.00		0.00%	0.00%	0.00%	0.00%		0.00	0.00	0.00	0.00
								SUBTOTALS:	**(tons/yr):**	**0.043**	**0.004**	**0.004**	**0.004**
									(lb/hr):	**0.010**	**0.001**	**0.001**	**0.001**
Total State Potential Emissions									**(g/sec):**	**0.001**	**0.0001**	**0.0001**	**0.0001**

TOTAL HAPs (tons/yr): **91.24**

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
From Welding Operations

Company Name: **Hendrickson Trailer Suspension Systems**
Address City IN Zip: **180 Mount Zion Road, Lebanon, IN 46052**
CP: **011-8677**
Plt ID: **011-00037**
Reviewer: **Mark L. Kramer**
Date: **June 11, 1997**

Type of Welding	Number of Units	Electrode Type	Maximum Electrode Consumption per Unit (lbs/hr)	Emission Factors (lb pollutant/lb electrode consumed)		Potential Emissions (tons/year)	
				PM	Manganese **	PM	Manganese
Metal Inert Gas (MIG)	8.0	Carbon Steel	20.00	0.006	0.0001	3.85	0.077
					Total Potential Emissions (tons/yr):	**3.85**	**0.077**
					PM Control Efficiency:	**95%**	
					Total Potential to Emit After Controls:	**0.193**	**(tons/yr)**

** The percent Mn in the wire is taken from the MSDS.

Methodology
Emissions (tons/yr) = Number of Units * Maximum Electrode Consumption per Unit * Emission Factor (lb pollutant/lb electrode consumed) * 8760 (hrs/yr) * (1 ton/2000 lbs)
Emission Factors are from the SARA 313 Reporting Guide.

Allowable Rate of Emissions

Process Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)	Allowable Emissions (tons/yr)
10000	5.00	12.1	52.8

Methodology
Allowable Emissions = 4.10*(Process Weight Rate)^0.67