



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: June 10, 2005
RE: Western Reman Industrial / 103-20088-00040
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

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

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 from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER-AM.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
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Sean McGowan
Western Reman Industrial
588 West 75th Street
Peru, Indiana 46970

June 10, 2005

Re: Exempt Construction and Operation Status,
103-20088-00040

Dear Mr. McGowan:

The application from Western Reman Industrial received on September 16, 2004, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, Indiana Department of Environmental Management, Office of Air Quality (IDEM, OAQ) determined that the following locomotive engine component remanufacturing operation, to be located at 588 West 7th Street, Peru, Indiana, is classified as exempt from air pollution permit requirements:

- (a) One (1) dip coating tank, electronically heated, with a maximum usage of 50 gallons of coating per year, used to apply nonvolatile melted plastic coating to engine rod ends.
- (b) One (1) paint booth, identified as PB, constructed in 2004, with a maximum capacity to coat 3 turbocharger housings per day, utilizing HVLP spray guns, and using dry filters for control.
- (c) One (1) glass bead shot blast unit, identified as B15, constructed in 2004, with a blast rate of 1000 pounds of media per hour (lb/hr), using a baghouse, identified as B15, for particulate matter control.
- (d) One (1) steel shot blast unit, identified as G3, constructed in 2004, with a blast rate of 6000 pounds of media per hour (lb/hr), using a baghouse, identified as G3, for particulate matter control.
- (e) One (1) steel shot blast unit, identified as K17, constructed in 2004, with a blast rate of 7600 pounds of media per hour (lb/hr), using a baghouse, identified as K17, for particulate matter control.
- (f) One (1) steel shot blast unit, identified as B9, constructed in 2004, with a blast rate of 7600 pounds of media per hour (lb/hr), using a baghouse, identified as B9, for particulate matter control.
- (g) One (1) steel shot blast unit, identified as E32, constructed in 2004, with a blast rate of 7600 pounds of media per hour (lb/hr), using a baghouse, identified as E32, for particulate matter control.
- (h) Two (2) natural gas-fired Magnus aqueous parts washers, identified as B10 and B11, with a maximum throughput of 0.375 MMBtu/hr each.

- (i) One (1) natural gas-fired Proceco aqueous parts washer, identified as B31, with a maximum throughput of 0.03548 MMBtu/hr.
- (j) Two (2) natural gas-fired Axe aqueous parts washers, identified as E12 and G13, constructed in 2004, with a maximum throughput of 0.3 MMBtu/hr each.
- (k) One (1) natural gas-fired aqueous Jetclean parts washer, identified as K5, with a maximum throughput of 0.375 MMBtu/hr.
- (l) Four (4) cold solvent parts washers, identified as E17, F4, K12 and Turbo Washer, constructed in 2004, with a maximum throughput of less than 145 gallons per year.
- (m) Five (5) cold solvent Magnuflux non-invasive testing units, with a maximum throughput of less than 50 gallons per year.
- (n) Eighteen (18) natural gas-fired space heaters, each with a maximum throughput of 0.17 MMBtu/hr.
- (o) Three (3) Radiant tube heaters, each with a maximum throughput of 0.2 MMBtu/hr.
- (p) One metal inert gas (MIG) welding operation, with a maximum wire consumption of 50 lbs per day.
- (q) Machining where an aqueous cutting coolant continuously floors the machining interface, with a maximum throughput of 100 lbs of parts machined per hour.
- (r) Grinding and machining operations controlled with fabric filters with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including buffing and polishing.

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:
 - (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 15 minutes (sixty (60) readings in a 6-hour period 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) The following are subject to 326 IAC 8-3-2 (Cold Cleaner Operations): the four cold solvent parts washers identified as E17, F4, K12, and Turbo Washer. Pursuant to 326 IAC 8-3-2, the Permittee shall:
 - (1) Equip the cleaner with a cover;
 - (2) Equip the cleaner with a facility for draining cleaned parts;
 - (3) Close the degreaser cover whenever parts are not being handled in the cleaner;
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

- (5) Provide a permanent, conspicuous label summarizing the operation requirements;
- (6) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.
- (c) Pursuant to 326 IAC 8-2-1 (Surface Coating Emission Limitations), any change or modification to the paint booth, identified as PB, or the dip-seal tank, which would increase VOC emissions from either operation to greater than 15 lbs/day, requires prior approval from IDEM, OAQ.
- (d) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), any change or modification to the paint booth, identified as PB, which would increase the coating usage in the booth to greater than 5 gallons per day, requires prior approval from IDEM, OAQ.

This exemption is the first air approval issued to this source.

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.

Original signed by

Nysa L. James, Section Chief
Permits Branch
Office of Air Quality

ERG/TDP

cc: File – Miami County
Miami County Health Department
Air Compliance – Dave Rice
Permit Tracking
Compliance Data Section
Program Planning and Policy – Scott Delaney

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

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	Western Reman Industrial
Source Location:	588 West 7 th Street, Peru, Indiana 46970
County:	Miami
SIC Code:	3743
Operation Permit No.:	103-20088-00040
Permit Reviewer:	ERG/TPD

The Office of Air Quality (OAQ) has reviewed an application from Western Reman Industrial relating to the construction and operation of a locomotive engine component remanufacturing operation.

Unpermitted Emission Units and Pollution Control Equipment

The source consists of the following unpermitted emission units:

- (a) One (1) dip coating tank, electronically heated, with a maximum usage of 50 gallons of coating per year, used to apply nonvolatile melted plastic coating to engine rod ends.
- (b) One (1) paint booth, identified as PB, constructed in 2004, with a maximum capacity to coat 3 turbocharger housings per day, utilizing HVLP spray guns, and using dry filters for control.
- (c) One (1) glass bead shot blast unit, identified as B15, constructed in 2004, with a blast rate of 1000 pounds of media per hour (lb/hr), using a baghouse, identified as B15, for particulate matter control.
- (d) One (1) steel shot blast unit, identified as G3, constructed in 2004, with a blast rate of 6000 pounds of media per hour (lb/hr), using a baghouse, identified as G3, for particulate matter control.
- (e) One (1) steel shot blast unit, identified as K17, constructed in 2004, with a blast rate of 7600 pounds of media per hour (lb/hr), using a baghouse, identified as K17, for particulate matter control.
- (f) One (1) steel shot blast unit, identified as B9, constructed in 2004, with a blast rate of 7600 pounds of media per hour (lb/hr), using a baghouse, identified as B9, for particulate matter control.
- (g) One (1) steel shot blast unit, identified as E32, constructed in 2004, with a blast rate of 7600 pounds of media per hour (lb/hr), using a baghouse, identified as E32, for particulate matter control.
- (h) Two (2) natural gas-fired Magnus aqueous parts washers, identified as B10 and B11, with a maximum throughput of 0.375 MMBtu/hr each.
- (i) One (1) natural gas-fired Proceco aqueous parts washer, identified as B31, with a maximum throughput of 0.03548 MMBtu/hr.

- (j) Two (2) natural gas-fired Axe aqueous parts washers, identified as E12 and G13, constructed in 2004, with a maximum throughput of 0.3 MMBtu/hr each.
- (k) One (1) natural gas-fired aqueous Jetclean parts washer, identified as K5, with a maximum throughput of 0.375 MMBtu/hr.
- (l) Four (4) cold solvent parts washers, identified as E17, F4, K12, and Turbo Washer, constructed in 2004, with a maximum throughput of less than 145 gallons per year.
- (m) Five (5) cold solvent Magnflux non-invasive testing units, with a maximum throughput of less than 50 gallons per year.
- (n) Eighteen (18) natural gas-fired space heaters, each with a maximum throughput of 0.17 MMBtu/hr.
- (o) Three (3) Radiant tube heaters, each with a maximum throughput of 0.2 MMBtu/hr.
- (p) One metal inert gas (MIG) welding operation, with a maximum wire consumption of 50 lbs per day.
- (q) Machining where an aqueous cutting coolant continuously floors the machining interface, with a maximum throughput of 100 lbs of parts machined per hour.
- (r) Grinding and machining operations controlled with fabric filters with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including buffing and polishing.

Existing Approvals

The source has no previous operating approvals.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the baghouses B15, G3, K17, B9, and E32 be considered as an integral part of the shotblasters B15, G3, K17, B9 and E32.

- (a) The baghouses create a pressure drop that is essential to regulating the flow rate and velocity of air through the shotblasters. The pressure drop in the dust collectors and the air velocity must be in the proper range so that the classifier separates the three types of particles - shot, sand, and dust.
- (b) The pressure drop must be created by a device that removes dust from the airstream. Otherwise, the blower on the outlet side of the dust collector would be rapidly eroded. The blower must be on the outlet side of the dust collector and shotblaster so that the blast chamber is operating under negative pressure. The dust collector is required to extract the dust from the chamber.
- (c) Proper air flow through the blast chamber is also essential for removing dust and broken spent media from the workpiece being cleaned. If the pressure drop through the baghouse is out of range, the shotblaster would not properly perform its primary purpose, cleaning castings. Product quality and efficiency would suffer.

IDEM, OAQ has evaluated the justifications and agreed that the baghouses B15, G3, K17, B9, and E32 will be considered as an integral part of the shotblasters B15, G3, K17, B9, and E32. Therefore, the permitting level will be determined using the potential to emit after the baghouses. Operating conditions in the proposed permit will specify that the baghouses B15, G3, K17, B9, and E32 shall operate at all times when the shotblasters B15, G3, K17, B9, and E32 are in operation.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
PB	Paint booth	10	2	2000	ambient
B15, G3, K17, B9, E32	Shot blasters	10	2	2000	ambient
B10, B11, B31, E12, G13, K5	Natural gas fired parts washers	30	0.5	2000	150
Heating	Space heaters & Radiant tube heat	30	0.5	2000	150

Recommendation

The staff recommends to the Commissioner that the construction and 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 September 16, 2004, with additional information received on March 23, 2005.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 11).

Potential to Emit of the Vapor Combustion Unit

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.”

Pollutant	Potential to Emit (tons/year)
PM	3.15
PM10	3.15
SO ₂	0.01
VOC	1.39
CO	1.91
NO _x	2.27

HAPs	Potential to Emit (tons/year)
Total	Negligible

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.

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

County Attainment Status

The source is located in Miami County.

Pollutant	Status
PM10	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

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

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new 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 first 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 exemption.
(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs), (326 IAC 14, 326 IAC 20, 40 CFR 61, or 40 CFR 63) included in this exemption.

State Rule Applicability – Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Miami County is not required to operate under a Part 70 Permit. Therefore, 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 the permit:

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

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

The operation of this locomotive engine component manufacturing facility will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

State Rule Applicability - Shot Blasters

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

The glass bead blast unit, identified as B15, and the steel shot blast units, identified as B9, G3, K17, and E32, are not subject to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), pursuant to 326 IAC 6-3-1(b)(14), because these operations have potential emissions less than five-hundred fifty-one thousandths (0.551) pound per hour.

The baghouses for particulate control shall be in operation and control emissions from the glass bead and steel shot blast units B15, G3, B9, K17, and E32 at all times that the shotblasters are in operation.

State Rule Applicability - Paint Booth and Dip Coating Tank

326 IAC 8-2-9 (Surface Coating Emission Limitations)

This source does not have the potential to emit of VOC greater than 15 pounds per day; therefore, the paint booth and the dip-seal tank are not subject to 326 IAC 8-2-9. However, any change or modification to the paint booth, identified as PB, or the dip-seal tank, which would increase actual VOC emissions from either operation to greater than 15 lbs/day requires prior approval from IDEM, OAQ.

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

The paint booth, identified as PB, is not subject to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), pursuant to 326 IAC 6-3-1(b)(15). The paint booth utilizes less than five (5) gallons of coating per day. The dip coating tank is not subject to 326 IAC 6-3 pursuant to 326 IAC 6-3-1(b)(5). However, any change or modification to the paint booth, identified as PB, which would increase the coating usage in the booth to greater than 5 gallons per day, requires prior approval from IDEM, OAQ.

State Rule Applicability - Parts washers

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

The four cold solvent parts washers identified as E17, F4, K12, and Turbo Washer are subject to 326 IAC 8-3-2 (Cold Cleaner Operations) because the solvent used for degreasing is heated at a temperature below the solvent boiling point temperature, and the parts washers were constructed after January 1, 1980. Pursuant to 326 IAC 8-3-2, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;

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

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

The four cold solvent parts washers identified as E17, F4, K12, and Turbo Washer are not subject to 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control) because the cold solvent parts washers utilize remote solvent reservoirs.

State Rule Applicability - Welding, Grinding, and Machining Operations

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

The welding operation is not subject to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), pursuant to 326 IAC 6-3-1(b)(9), because less than six-hundred twenty-five (625) pounds of wire or rod are consumed per day.

The grinding and buffing operations, and the handheld metalworking equipment, are not subject to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), pursuant to 326 IAC 6-3-1(b)(14), because these operations have potential emissions less than five-hundred fifty-one thousandths (0.551) pound per hour.

Conclusion

The construction and operation of this locomotive engine component remanufacturing operation shall be subject to the conditions of the Exemption No. 103-20088-00040.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
From 18 Space Heaters and 3 Radiant Tubes**

Company Name: Western Reman Industrial
Address City IN Zip: 588 West 7th Street, Peru, Indiana 46970
Permit Number: 20088
Pit ID: 103-00040
Reviewer: ERG/TDP
Date: March 23, 2005

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

3.7

32.1

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Potential Emission in tons/yr	7.6	7.6	0.6	100.0	5.5	84.0
	0.12	0.12	0.0	1.6	0.09	1.3

*PM and PM10 emission factor are filterable and condensable PM and PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100 lb/MMCF.

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

All emission factors are based on normal firing.

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
 Natural Gas Combustion Only
 Natural Gas Combustion Only
 From 18 Space Heaters and 3 Radiant Tubes
 HAPs Emissions**

**Company Name: Western Reman Industrial
 Address City IN Zip: 588 West 7th Street, Peru, Indiana 46970
 Permit Number: 20088
 Pit ID: 103-00040
 Reviewer: ERG/TDP
 Date: March 23, 2005**

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	3.366E-05	1.924E-05	1.202E-03	2.886E-02	5.450E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	8.015E-06	1.763E-05	2.244E-05	6.092E-06	3.366E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
From 7 Gas-Fired Aqueous Part Washers**

Company Name: Western Reman Industrial
Address City IN Zip: 588 West 7th Street, Peru, Indiana 46970
Permit Number: 20088
Pit ID: 103-00040
Reviewer: ERG/TDP
Date: March 23, 2005

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

1.5

13.4

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Potential Emission in tons/yr	7.6	7.6	0.6	100.0	5.5	84.0
	0.05	0.05	0.004	0.7	0.04	0.6

*PM and PM10 emission factor are filterable and condensable PM and PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100 lb/MMCF.

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

All emission factors are based on normal firing.

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
From 7 Part Washers
HAPs Emissions**

Company Name: Western Reman Industrial
Address City IN Zip: 588 West 7th Street, Peru, Indiana 46970
Permit Number: 20088
Pit ID: 103-00040
Reviewer: ERG/TDP
Date: March 23, 2005

	HAPs - Organics				
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.410E-05	8.055E-06	5.034E-04	1.208E-02	2.282E-05

	HAPs - Metals				
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	3.356E-06	7.383E-06	9.397E-06	2.551E-06	1.410E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations

VOC Emissions

From the 4 Cold Solvent Part Washers (E17, F4, K12, and Turbo Washer)

Company Name: Western Reman Industrial

Address: 588 West 7th Street, Peru, Indiana 46970

Permit No.: 20088

Plant ID: 103-00040

Reviewer: ERG/TDP

Date: March 23, 2005

1. Process Description:

Max. Solvent Usage: 145 gal/yr
Solvent Density: 6.54 lbs/gal
VOC content: 100%
HAP content: 0%

2. Potential Uncontrolled VOC Emissions:

Annual VOC emissions = 145 gal/yr x 6.54 lbs/gal x 1/2000 (ton/lb) =

0.47 tons/yr

Appendix A: Emission Calculations

VOC Emissions

From the 5 Cold Solvent Testing Units (E1, E16, K9, K18, and Turbo Magnaflux)

Company Name: Western Reman Industrial

Address: 588 West 7th Street, Peru, Indiana 46970

Permit No.: 20088

Plant ID: 103-00040

Reviewer: ERG/TDP

Date: March 23, 2005

1. Process Discription:

Max. Solvent Usage: 50 gal/yr
Solvent Density: 5.4 lbs/gal
VOC content: 100%
HAP content: 0%

2. Potential Uncontrolled VOC Emissions:

Annual VOC emissions = 50 gal/yr x 5.4 lbs/gal x 1/2000 (ton/lb) =

0.14 tons/yr

**Appendix A: Emission Calculations
VOC Emissions
From the Dipseal Tank**

**Company Name: Western Reman Industrial
Address: 588 West 7th Street, Peru, Indiana 46970
Permit No.: 20088
Plant ID: 103-00040
Reviewer: ERG/TDP
Date: March 23, 2005**

1. Process Discription:

Max. Solvent Usage: 50 gal/yr
Solvent Density: 7.5 lbs/gal
VOC content: 9%
HAP content: 0%

2. Potential Uncontrolled VOC Emissions:

Annual VOC emissions = 50 gal/yr x 8.0 lbs/gal x 9% VOC x 1/2000 (ton/lb) = **0.02 tons/yr**

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

Company Name: Western Reman Industrial
Address : 588 West 7th Street, Peru, Indiana 46970
Permit Number: 20088
Plt ID: 103-00040
Reviewer: ERG/TDP
Date: March 23, 2005

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Transfer Efficiency
Dupont Tufcote ADHS Auede Gray Enamel	9.85	32.48%	0.0%	32.48%	0.0%	55.49%	0.50	0.125	3.20	3.20	0.20	4.80	0.88	0.64	65%

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)

**Appendix A: Emission Calculations
PM/PM10 Emissions
From Four (4) Abrasive Blasting Units**

Company Name: Western Reman Industrial
Address : 588 West 7th Street, Peru, Indiana 46970
Permit Number: 20088
Plt ID: 103-00040
Reviewer: ERG/TDP
Date: March 23, 2005

Process Description: (Because all 5 abrasive blasters are batch machines and must be loaded and unloaded manually, they are not capable of being operated continuously.)

PM Control Equipment: Baghouses are integral to control.
 Outlet Grain Loading: 0.005 grains/acf, worse case for all blasters
 Air Flow Rate: 2,000 acf/m, worse case for all blasters

1. Potential to Emit After Control:

Assume All the PM10 emissions equal PM emissions.

Hourly PM/PM10 Emissions	= 0.005 (gr/acf) x 2,000 (acf/min) x 60 (min/hr) x 1/7000 (lb/gr) x 5 units =	0.43 lbs/hr
Annual PM/PM10 emissions	= 0.09 lbs/hr x 8760 hr/yr x 1/2000 (ton/lb) =	1.88 tons/yr

**Appendix A: Emissions Calculations
Welding Operations**

Company Name: Western Reman Industrial
Address : 588 West 7th Street, Peru, Indiana 46970
Permit Number: 20088
Plt ID: 103-00040
Reviewer: ERG/TDP
Date: March 23, 2005

Process	Number of Stations	Max. Electrode Consumption (lbs/hr)	*EMISSION FACTORS (lb pollutant/lb electrode)				POTENTIAL TO EMIT (lbs/hr)			
			PM/PM10	Mn	Ni	Cr	PM/PM10	Mn	Ni	Cr
Metal Inert Gas (MIG) Welding	1	2.1	0.0241	0.000034		0.00001	5.02E-02	7.08E-05	0.00E+00	2.08E-05

PM/PM10 (tons/yr) = 0.22
HAPs (tons/yr) = 4.02E-04

*Emission factors are from AP-42, Chapter 12.19, SCC 3-09-050 (January 1995), and are default values for carbon steel unless a specific electrode type is noted in the Process column.

Methodology

Potential to Emit (lbs/hr) = Number of Stations * (Max. Electrode Consumption (lbs/hr) * Emission Factor (lbs pollutant/lb electrode))

**Appendix A: Emission Calculations
Summary of Emissions**

Company Name: Western Reman Industrial

Address: 588 West 7th Street, Peru, Indiana 46970

Permit No.: 20088

Plant ID: 103-00040

Reviewer: ERG/TDP

Date: March 23, 2005

Unit	PM*	PM10*	SO2	NOx	VOC	CO	HAPs
Space heaters	0.12	0.12	0.01	1.60	0.09	1.35	
Part Washers	0.05	0.05	0.004	0.67	0.04	0.56	
Paint Booth	0.88	0.88			0.64		
Shot Blasters	1.88	1.88					
Degreasing					0.47		
Cold Solvent Testing					0.14		
Dipseal Tank					0.02		
Welding	0.22	0.22					0.00
Total:	3.15	3.15	0.01	2.27	1.39	1.91	0.00