



TO: Interested Parties / Applicant

RE: Quality Steel Treating / E097-24924-00615

FROM: Felicia A. Robinson
Administrator
City of Indianapolis
Office of Environmental Services

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.

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 Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures



Department of Public Works
Office of Environmental Services

2700 Belmont Avenue
Indianapolis, IN 46221

317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw



August 6, 2007

Mr. Bill Slade
General Manager
Quality Steel Treating
3860 Prospect Street
Indianapolis, IN 46203

CERTIFIED MAIL 7007 0710 0005 3965 7272

Re: Exempt Construction and Operation Status
E097-24924-00615

Dear Mr. Slade:

The application from Quality Steel Treating received on June 14, 2007, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3 (Exemptions), it has been determined that the following metal heat treating operation located at 3860 Prospect Street, Indianapolis, Indiana, 46203, is classified as exempt from air pollution permit requirements:

- (a) Eight (8) electric heat treating furnaces for heat treating metal parts, identified as Emission Unit Heat Treating. Emission Unit Heat Treating consists of four (4) vacuum furnaces identified as VF-4, VF-5, VF-6, VF-7, three (3) draw furnaces identified as DF-2, DF-9, DF-10 and one (1) nitriding furnace identified as NF-1. Each heat treating furnace was installed prior to 1997. Each vacuum furnace has a vacuum pump which utilizes a roughing oil which is a volatile organic compound (VOC). Combined maximum roughing oil loss is 36 gallons per year.
- (b) Spot cleaning of miscellaneous metal parts using acetone which is not a volatile organic compound (VOC).
- (c) Two (2) wash tanks for cleaning miscellaneous metal parts identified as Emission Unit Wash Tanks. Emission Unit Wash Tanks was installed in 2006. Emission Unit Wash Tanks consists of one (1) ten (10) gallon tank containing solvent identified as WT-1 and one (1) ten (10) gallon tank identified as WT-2 containing acetone which is not a volatile organic compound (VOC). Maximum annual consumption of solvent is thirty (30) gallons per year.
- (d) One (1) parts washer degreasing tank in the maintenance department not exceeding 145 gallons of solvent per 12 months identified as Emission Unit Parts Washer.
- (e) One (1) MIG welding operation for general maintenance activities identified as Emission Unit MIG Welding. Emission Unit MIG Welding maximum capacity is less than seventy five (75) pounds of welding electrodes per year.
- (f) One (1) TIG welding operation for specialty parts welding activities identified as Emission Unit TIG Welding. Emission Unit TIG Welding maximum capacity is less than fifteen (15) pounds of welding electrodes per year.



Air Quality Hotline: 317-327-4AIR | knozone.com

Department of Public Works
Office of Environmental Services

2700 Belmont Avenue
Indianapolis, IN 46221

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- (g) Two (2) natural gas fired space heaters identified as Emission Unit Space Heaters. Each space heater has a maximum heat input capacity of 100,000 Btu per hour.

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 thirty percent (30%) 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 6-4 (Fugitive Dust Emissions), the Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right of way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).
- (c) Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for Emission Unit Wash Tanks WT-1 and Emission Unit Parts Washer, the owner or operator 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; and
 - (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.
- (d) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for Emission Unit Wash Tanks WT-1 and Emission Unit Parts Washer the owner or operator shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of

mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (A) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (B) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (C) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (i) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (ii) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (iii) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (e) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for Emission Unit Wash Tanks WT-1 and Emission Unit Parts Washer, the Permittee shall ensure that the following operating requirements are met:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

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 Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

ORIGINAL SIGNED BY

Felicia A. Robinson
Administrator

mbc

Enclosure: Technical Support Document
 Notice of Decision

cc: File
 Air Compliance – Matt Mosier
 IDEM, OAQ – Mindy Hahn
 Marion County Health Department
 Kyle Thomas - Cornerstone Environmental

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
and
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES**

Technical Support Document (TSD) for an Exemption

Source Background and Description

| | |
|-------------------------|---|
| Source Name: | Quality Steel Treating |
| Source Location: | 3860 Prospect Street, Indianapolis, IN 46203 |
| County: | Marion |
| SIC Code: | 3398 |
| Exemption No.: | E097-24924-00615 |
| Permit Reviewer: | M. Caraher |

The Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES) have reviewed an application from Quality Steel Treating relating to the operation of a metal heat treating operation under a standard industrial classification (SIC) code of 3398 (establishments primarily engaged in heat treating of metal for the trade).

Exempt Emission Units and Pollution Control Equipment

The source consists of the following exempt emission units:

- (a) Eight (8) electric heat treating furnaces for heat treating metal parts, identified as Emission Unit Heat Treating. Emission Unit Heat Treating consists of four (4) vacuum furnaces identified as VF-4, VF-5, VF-6, VF-7, three (3) draw furnaces identified as DF-2, DF-9, DF-10 and one (1) nitriding furnace identified as NF-1. Each heat treating furnace was installed prior to 1997. Each vacuum furnace has a vacuum pump which utilizes a roughing oil which is a volatile organic compound (VOC). Combined maximum roughing oil loss is 36 gallons per year.
- (b) Spot cleaning of miscellaneous metal parts using acetone which is not a volatile organic compound (VOC).
- (c) Two (2) wash tanks for cleaning miscellaneous metal parts identified as Emission Unit Wash Tanks. Emission Unit Wash Tanks was installed in 2006. Emission Unit Wash Tanks consists of one (1) ten (10) gallon tank containing solvent identified as WT-1 and one (1) ten (10) gallon tank identified as WT-2 containing acetone which is not a volatile organic compound (VOC). Maximum annual consumption of solvent is thirty (30) gallons per year.
- (d) One (1) parts washer degreasing tank in the maintenance department not exceeding 145 gallons of solvent per 12 months identified as Emission Unit Parts Washer.
- (e) One (1) MIG welding operation for general maintenance activities identified as Emission Unit MIG Welding. Emission Unit MIG Welding maximum capacity is less than seventy five (75) pounds of welding electrodes per year.
- (f) One (1) TIG welding operation for specialty parts welding activities identified as Emission Unit TIG Welding. Emission Unit TIG Welding maximum capacity is less than fifteen (15) pounds of welding electrodes per year.

- (g) Two (2) natural gas fired space heaters identified as Emission Unit Space Heaters. Each space heater has a maximum heat input capacity of 100,000 Btu per hour.

Existing Approvals

There are no previous approvals for this source.

Enforcement Issue

There are no enforcement actions pending for this source.

Recommendation

The staff recommends to the Administrator 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 June 14, 2007. Additional information was received on July 10, 2007. An OES plant tour was conducted on July 12, 2007.

Emission Calculations

See Appendix A (pages 1 through 7) of this document for detailed emission calculations.

Potential to Emit of the Source

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/yr) |
|-----------------|-----------------------------|
| PM | 0.00 |
| PM10 | 0.01 |
| SO ₂ | 0.00 |
| VOC | 0.71 |
| CO | 0.07 |
| NO _x | 0.09 |

| HAPs | Potential to Emit (tons/yr) |
|--------|-----------------------------|
| Hexane | 1.58E-03 |
| Total | 1.65E-03 |

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM and PM10 are each less than five (5) tons per year. The potential to emit (as defined in 326 IAC 2-7-1(29)) of SO₂, CO and NO_x are each less than ten (10) tons per year. The potential to emit VOC is less than ten (10) tons per year and the source is not required to use pollution control equipment to comply with 326 IAC 8 (Volatile Organic Compound Rules). The potential to emit Lead or Lead compounds is less than two-tenths (0.2) tons per year. Therefore, pursuant to 326 IAC 2-1.1-3 (Exemptions), an Exemption will be issued to this source.

- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, pursuant to 326 IAC 2-1.1-3 (Exemptions), an Exemption will be issued to this source.
- (a) **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 Marion County.

| Pollutant | Status |
|-----------------|------------------------|
| PM2.5 | nonattainment |
| PM10 | attainment |
| SO ₂ | maintenance attainment |
| NO _x | attainment |
| 8-hour Ozone | basic nonattainment |
| CO | attainment |
| Lead | attainment |

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions, pursuant to the Nonattainment New Source Review requirements. See the State Rule Applicability for the source section.
- (c) Marion County has been classified as attainment or unclassifiable in Indiana for PM10, SO₂, NO_x, CO, and Lead. 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.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (e) **Fugitive Emissions**
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 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.

Source Status

New Source PSD and Emission Offset Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

| Pollutant | Potential to Emit (tons/yr) |
|-----------------|-----------------------------|
| PM | 0.00 |
| PM10 | 0.01 |
| SO ₂ | 0.00 |
| VOC | 0.71 |
| CO | 0.07 |
| NO _x | 0.09 |

- (a) This new source is not a major stationary source under 326 IAC 2-2 because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.
- (b) This new source is not a major stationary under 326 IAC 2-3 source because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater and it is not in one of the 28 listed source categories.
- (c) These emissions were based on the application submitted by the source on June 14, 2007.

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

State Rule Applicability – Entire Source

326 IAC 2-1.1-5 (Non-attainment New Source Review)

This source is not major under nonattainment NSR because it has the potential to emit less than 100 tons of PM10 (as a surrogate for PM2.5). Therefore, the Nonattainment New Source Review requirements are not applicable.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) and 326 IAC 2-3 (Emission Offset)

This source is not a major stationary source because no attainment regulated pollutant emissions are equal to or greater than two hundred fifty (250) tons per year, this source is not one of the 28 listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and no nonattainment regulated

pollutant emissions are equal to or greater than one hundred (100) tons per year. There have been no modifications or revisions to this source that were major modifications pursuant to 326 IAC 2-2 or 326 IAC 2-3. Therefore, 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) and 326 IAC 2-3 (Emission Offset) are each not applicable to the source.

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

This metal heat treating operation has the potential to emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply to this source.

326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1(a)(1), (2), and (3), this source is not subject to 326 IAC 2-6 (Emission Reporting) because as an Exemption, it is not required to have an operating permit under 326 IAC 2-7, it does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year, and it is not located in Lake or Porter Counties.

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 thirty percent (30%) 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 6-4 (Fugitive Dust Emissions)

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

326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County) and 326 IAC 6.5-6 (Marion County)

This source has the potential to emit particulate of less than one hundred (100) tons per year and has actual emissions less than ten (10) tons per year. Quality Steel Treating is not specifically identified in 326 IAC 6.5-6 (Marion County). Therefore, 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County) and 326 IAC 6.5-6 (Marion County) do not apply to this source.

326 IAC 8 (Volatile Organic Compound Rules)

See discussion under State Rule Applicability – Individual Facilities of this Technical Support Document.

326 IAC 8-1-6 (General Volatile Organic Compound Reduction Requirements)

This source commenced construction and operation before January 1, 1980. Neither the source nor any specific emission unit at this source has the potential to emit twenty five (25) tons per year or more of volatile organic compounds (VOC). Therefore, this source is not subject to 326 IAC 8-1-6 (General Provisions Relating to VOC Rules: General Reduction Requirements for New Facilities).

326 IAC 11 (Emission Limitations for Specific Types of Operations)

This metal heat treating operation does not perform any specific type of operation identified in 326 IAC 11 (Emission Limitations for Specific Types of Operations). Therefore, this source is not subject to 326 IAC 11 (Emission Limitations for Specific Types of Operations).

326 IAC 12 (New Source Performance Standards)

See discussion under Federal Rule Applicability – Entire Source of this Technical Support Document.

326 IAC 14 (Emission Standards for Hazardous Air Pollutants)

There are no provisions under 326 IAC 14 (Emission Standards for Hazardous Air Pollutants) and 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants) applicable to any specific emission unit or operation at this source. Therefore, this source is not subject to the provisions of 326 IAC 14 (Emission Standards for Hazardous Air Pollutants) and 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

326 IAC 20 (Hazardous Air Pollutants)

This source is not a major source of hazardous air pollutants (HAP) and does not perform operations specifically identified in 326 IAC 20. Therefore, this source is not subject to 326 IAC 20 (Hazardous Air Pollutants) and 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants).

State Rule Applicability – Individual Facilities

Heat Treating Furnaces and Space Heaters

326 IAC 6-2 (Particulate Rules)

The eight (8) heat treating furnaces and the two (2) natural gas fired space heaters are each not subject to the provisions of 326 IAC 6-2 (Particulate Rules) because each furnace and space heater is not an indirect heating unit. Indirect heating units are units that combust fuel to produce useable heat that is to be transferred through a heat conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contracted by, and adds no substance to the products of combustion. Therefore, each of these furnaces and space heating units is not subject to 326 IAC 6-2 (Particulate Rules).

Welding

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

The welding operations at this source have potential particulate emissions less than 0.551 pounds per hour (see Appendix A page 6 of 7). In addition, welding operations using less than 625 pounds of rod or wire consumed per day (see Appendix A page 6 of 7) are specifically exempt from the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes). Therefore, 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) does not apply to the welding operations.

Wash Tanks (WT-1) and Parts Washer

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

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the owner or operator 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; and
- (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(a) (Cold Cleaner Degreaser Operation and Control)

Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility, existing as of July 1, 1990, shall ensure that the following control equipment requirements are met:

- (a) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (1) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF));
 - (2) The solvent is agitated; or
 - (3) The solvent is heated.
- (b) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (1) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (2) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (3) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^oC) (one hundred twenty degrees Fahrenheit (120^oF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (c) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the Permittee shall ensure that the following operating requirements are met:

- (1) Close the cover whenever articles are not being handled in the degreaser.
- (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
- (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Conclusion

The construction and operation of this metal heat treating operation shall be subject to the conditions of Exemption E097-24924-00615.

Appendix A: Emission Calculations

Company Name: Quality Steel Treating
Address City IN Zip: 3860 Prospect Street, Indianapolis, IN 46203
Permit No.: E097-24924-00615
Reviewer: M. Caraher
Date: June 25, 2007

Vaccum Furnace VOC & HAP losses

| Chemical | Gallons | density | Pounds | wt %VOC | lbs VOC loss | wt %HAP | lbs HAP loss | tons VOC/year | tons HAP/year |
|------------------------------|----------------|----------------|---------------|----------------|---------------------|----------------|---------------------|----------------------|----------------------|
| CMP 51 Mechanical Pump Fluid | 36.00 | 7.34 | 264.24 | 100.00% | 264.24 | 0.00% | 0.00 | 0.13 | 0.00 |

Methodology:

No water exists in the material. Therefore, lbs VOC/gal = lbs VOC/gal less water
lbs VOC loss = gallons chemical used x density of material x wt % VOC
lbs HAP loss = gallons chemical x density of material x wt % HAP

Appendix A: Emission Calculations

Company Name: Quality Steel Treating
Address City IN Zip: 3860 Prospect Street, Indianapolis, IN 46203
Permit No.: E097-24924-00615
Reviewer: M. Caraher
Date: June 25, 2007

Wash Tank VOC & HAP losses in WT-1

| Chemical | Gallons | density | Pounds | wt %VOC | lbs VOC loss | wt %HAP | lbs HAP loss | tons VOC/year | tons HAP/year |
|---------------------|---------|---------|--------|---------|--------------|---------|--------------|---------------|---------------|
| Hydrite 142 Solvent | 30.00 | 6.58 | 197.40 | 100.00% | 197.40 | 0.00% | 0.00 | 0.10 | 0.00 |

Methodology:

No water exists in the material. Therefore, lbs VOC/gal = lbs VOC/gal less water
lbs VOC loss = gallons chemical used x density of material x wt % VOC
lbs HAP loss = gallons chemical x density of material x wt % HAP

Appendix A: Emission Calculations

Company Name: Quality Steel Treating
Address City IN Zip: 3860 Prospect Street, Indianapolis, IN 46203
Permit No.: E097-24924-00615
Reviewer: M. Caraher
Date: June 25, 2007

Maintenance Dept Degreasing Tank VOC & HAP losses

| Chemical | Gallons | density | Pounds | wt %VOC | lbs VOC loss | wt %HAP | lbs HAP loss | tons VOC/year | tons HAP/year |
|---------------------|----------------|----------------|---------------|----------------|---------------------|----------------|---------------------|----------------------|----------------------|
| Hydrite 142 Solvent | 145.00 | 6.58 | 954.10 | 100.00% | 954.10 | 0.00% | 0.00 | 0.48 | 0.00 |

Methodology:

No water exists in the material. Therefore, lbs VOC/gal = lbs VOC/gal less water

lbs VOC loss = gallons chemical used x density of material x wt % VOC

lbs HAP loss = gallons chemical x density of material x wt % HAP

Appendix A: Emission Calculations

Space Heating

Company Name: Quality Steel Treating
Address City IN Zip: 3860 Prospect Street, Indianapolis, IN 46203
Permit No.: E097-24924-00615
Reviewer: M. Caraher
Date: June 25, 2007

Space Heating Emissions

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

0.20

1.75

| Emission Factor in lb/MMCF | Pollutant | | | | | |
|-------------------------------|-----------|-------|------|----------------------|------|------|
| | PM* | PM10* | SO2 | NOx | VOC | CO |
| | 1.9 | 7.6 | 0.6 | 100.0 **see below | 5.5 | 84.0 |
| Potential Emission in tons/yr | 0.00 | 0.01 | 0.00 | 0.09 | 0.00 | 0.07 |
| Potential Emission in lbs/hr | 0.000 | | | | | |

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

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 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)

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

See next page for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Space Heating

Company Name: Quality Steel Treating
Address City IN Zip: 3860 Prospect Street, Indianapolis, IN 46203
Permit No.: E097-24924-00615
Reviewer: M. Caraher
Date: June 25, 2007

| 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 | 1.840E-06 | 1.051E-06 | 6.570E-05 | 1.577E-03 | 2.978E-06 | Combined HAPs 1.648E-03 |
| 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 | 4.380E-07 | 9.636E-07 | 1.226E-06 | 3.329E-07 | 1.840E-06 | 4.800E-06 1.653E-03 |

Methodology is the same as previous page.

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

Company Name: Quality Steel Treating
 Address City IN Zip: 3860 Prospect Street, Indianapolis, IN 46203
 Permit No.: E097-24924-00615
 Reviewer: M. Caraher
 Date: July 10, 2007

Welding Emissions

| PROCESS | Number of Stations | Max. electrode consumption per station (lbs/hr) | EMISSION FACTORS* (lb pollutant/lb electrode) | | | | EMISSIONS (lbs/hr) | | | | HAPS (lbs/hr) | |
|--|--------------------|---|--|---|--------|--------|-----------------------|-----------------------|-------|-------|------------------|------------------|
| | | | PM = PM10 | Mn | Ni | Cr | PM = PM10 | Mn | Ni | Cr | | |
| WELDING | | | | | | | | | | | | |
| Submerged Arc | 0 | | | 0.036 | 0.011 | | | 0.000 | 0.000 | 0.000 | 0 | 0.000 |
| Metal Inert Gas (MIG)(carbon steel) | 1 | 0.0086 | | 0.0055 | 0.0005 | | | 0.00005 | 0.000 | 0.000 | 0 | 0.000 |
| Stick (E7018 electrode) | 0 | | | 0.0211 | 0.0009 | | | 0.000 | 0.000 | 0.000 | 0 | 0.000 |
| Tungsten Inert Gas (TIG)(carbon steel) | 0 | 0.0017 | | 0.0055 | 0.0005 | | | 0.00000 | 0.000 | 0.000 | 0 | 0.000 |
| Oxyacetylene(carbon steel) | 0 | | | 0.0055 | 0.0005 | | | 0.000 | 0.000 | 0.000 | 0 | 0.000 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| FLAME CUTTING | Number of Stations | Max. Metal Thickness Cut (in.) | Max. Metal Cutting Rate (in./minute) | EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)** | | | | EMISSIONS (lbs/hr) | | | | HAPS (lbs/hr) |
| | | | | PM = PM10 | Mn | Ni | Cr | PM = PM10 | Mn | Ni | Cr | |
| | | | | | | | | | | | | |
| Oxyacetylene | 0 | | | 0.1622 | 0.0005 | 0.0001 | 0.0003 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Oxymethane | 0 | | | 0.0815 | 0.0002 | | 0.0002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Plasma** | 0 | | | 0.0039 | | | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| EMISSION TOTALS | | | | | | | | | | | | |
| Potential Emissions lbs/hr | | | | | | | | 0.00 | | | | 0.00 |
| Potential Emissions lbs/day | | | | | | | | 0.00 | | | | 0.00 |
| Potential Emissions tons/year | | | | | | | | 0.00 | | | | 0.00 |

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore,

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lb:

**Appendix A: Emission Calculations
Source Wide Emissions Summary**

Company Name: Quality Steel Treating
Address City IN Zip: 3860 Prospect Street, Indianapolis, IN 46203
Permit No.: E097-24924-00615
Reviewer: M. Caraher
Date: July 10, 2007

| Plant Wide Emissions Summary (tons per year) | | | | | | | Highest Single | Combination |
|---|-------------|-------------|-----------------------|-----------------------|-------------|-------------|-------------------|-----------------|
| | PM | PM10 | NO_x | SO₂ | VOC | CO | HAP | HAP |
| Vacuum Furnaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 |
| Wash Tank W-1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 |
| Degreasing | 0.00 | 0.00 | 0.00 | 0.00 | 0.48 | 0.00 | 0.00 | 0.00 |
| Space Heating | 0.00 | 0.01 | 0.09 | 0.00 | 0.00 | 0.07 | 1.58E-03 | 1.65E-03 |
| Welding | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Potential to Emit | 0.00 | 0.01 | 0.09 | 0.00 | 0.71 | 0.07 | 1.58E-03 | 1.65E-03 |