



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: February 6, 2009

RE: MSW / 097-27358-00509

FROM: Matthew Stuckey, Branch 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, Suite N 501E, 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.dot12/3/07



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Keith Kenipe
MSW
8258 Zionsville Rd.
Indianapolis, IN 46268

February 6, 2009

Re: Exempt Construction and Operation Status,
097-27358-00509

Dear Mr. Kenipe:

The application from MSW, received on January 12, 2009, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following stationary auto transmission repair and restoration plant located at 8258 Zionsville Rd. is classified as exempt from air pollution permit requirements:

- (a) Welding operations, using copper-based wire and nickel-based wire, with maximum capacity of 498 tons per year.
- (b) Natural gas combustion equipment (space heaters), with total maximum heat input capacity of 6,100 Btu/hr.
- (c) Aqueous parts washing operation consisting of two (2) wash tanks with 1,180 gallons and 590 gallons capacity, and one (1) rinse tank with 600 gallons capacity. In washing tanks ES-9600 5% solution will be used, containing no VOC or HAPs; in rinsing tanks a 1-2% water solution of rust inhibitor ES-5601LF will be used; ES-5601LF contains less than 8% by weight of VOC (glycol ethers).
- (d) 275-gallon above ground storage tank for storing used oil.
- (e) Three (3) abrasive blasting machines with built-in dust collectors and air flow, respectively, 1000, 1000, and 780 actual cubic feet per minute. Manufacturer guaranteed PM emission rate of no more than 0.01 grain per dry standard cubic foot.
- (f) One (1) abrasive blasting machine with built-in dust collector and air flow of 2000 actual cubic feet per minute. Manufacturer guaranteed PM emission rate of no more than 0.03 grain per dry standard cubic foot.
- (g) one (1) degreasing operation, with a maximum usage of 10 gallons of slow drying solvent per month, or 120 gallons per twelve (12) months.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of 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.
2. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.
3. Pursuant to 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the 6,100 Btu/hr natural gas combustion equipment shall be limited to 0.6 pounds per MMBtu heat input.
4. Pursuant to 326 IAC 8-3-1(b)(1)(A), the Aqueous Parts Washing Operation and the Degreasing Operation are subject to 326 IAC 8-3-5 (Cold Cleaner Degreasing Operations with a remote Solvent Reservoir).

The owner or operator of a cold cleaning facility shall:

- (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°C) (one hundred degrees Fahrenheit (100°F));
 - (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.
- (3) Equip the degreaser with a freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater, 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)).
- (4) Provide a permanent, conspicuous label which lists the operating requirements outlined below.
- (5) The owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
 - (A) Close the cover whenever articles are not being handled in the degreaser.
 - (B) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (C) 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 supersedes previous approvals for this source. A copy of the Exemption is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

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. If you have any questions on this matter, please contact Jillian Bertram, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-234-5377 or at 1-800-451-6027 (ext 45377).

Sincerely,



Iryn Callung, Section Chief
Permits Branch
Office of Air Quality

IC JLB

cc: File - Marion County
Marion County Health Department
Indianapolis Office of Environmental Services
Air Compliance Section
Compliance Data Section
Permits Administrative and Development
Billing, Licensing and Training Section

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Description and Location

Source Name: MSW
Source Location: 8258 Zionsville Road, Indianapolis, IN 46268
County: Marion
SIC Code: 3417
Exemption No.: 097-27358-00509
Permit Reviewer: Jillian

On January 12, 2009, the Office of Air Quality (OAQ) received an application from MSW related to the construction and operation of new emission units and the continued operation of an existing stationary auto transmission repair and restoration plant .

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Exemption No. 097-22668-00509, issued on April 17, 2006.
- (b) Exemption No. 097-18103-00509, issued on October 7, 2003.

This Exemption 097-27358-00509 will supersede the previous approvals.

County Attainment Status

The source is located in Marion County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11 th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O ₃	Nonattainment Subpart 1 effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.
¹ Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005.	

- (a) **Ozone Standards**
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 standards. Marion County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) **PM2.5**
Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. On May 8th, 2008, U.S. EPA promulgated specific New Source Review rules for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.
- (c) **Other Criteria Pollutants**
Marion County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-1.1-3 (Exemptions) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by MSW on January 12, 2009, relating to the addition of one degreasing operation.

The source consists of the following existing emission unit(s):

- (a) Welding operations, using copper-based wire and nickel-based wire, with maximum capacity of 498 tons per year.
- (b) Natural gas combustion equipment (space heaters), with total maximum heat input capacity of 6,100 Btu/hr.
- (c) Aqueous parts washing operation consisting of two (2) wash tanks with 1,180 gallons and 590 gallons capacity, and one (1) rinse tank with 600 gallons capacity. In washing tanks ES-9600 5% solution will be used, containing no VOC or HAPs; in rinsing tanks a 1-2% water solution of rust inhibitor ES-5601LF will be used; ES-5601LF contains less than 8% by weight of VOC (glycol ethers).
- (d) 275-gallon above ground storage tank for storing used oil.
- (e) Three (3) abrasive blasting machines with built-in dust collectors and air flow, respectively, 1000, 1000, and 780 actual cubic feet per minute. Manufacturer guaranteed PM emission rate of no more than 0.01 grain per dry standard cubic foot.

- (f) One (1) abrasive blasting machine with built-in dust collector and air flow of 2000 actual cubic feet per minute. Manufacturer guaranteed PM emission rate of no more than 0.03 grain per dry standard cubic foot.

The following is a list of the new emission unit:

- (a) one (1) degreasing operation, with a maximum usage of 10 gallons of slow drying solvent per month, or 120 gallons per twelve (12) months.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Exemption

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)								
	PM	PM10 *	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Welding	0.996	0.996	0.996	0	0	0	0	0.236	0.225 - Nickel
Space Heaters	negl.	negl.	negl.	0.001	0.003	negl.	0.002	negl.	negl.- hexane
Aqueous Parts Solution	0	0	0	0	0	0.007	0	0.007	0.007 - glycol ethers
Storage Tank	0	0	0	0	0	0.063	0	0	0
Abrasive Blasting Machines	3.296	3.269	3.269	0	0	0	0	0	0
Degreasing	0	0	0	0	0	0.257	0	0	0
Total PTE of Entire Source	4.292	4.292	4.292	0.001	0.003	0.327	0.002	0.236	0.225 (nickel)
Exemptions Levels	5	5	5	10	10	5 or 10	25	25	10
Registration Levels	25	25	25	25	25	25	100	25	10
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".									

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all regulated criteria 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 (Exemptions).

- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 40 CFR 60, Subpart Kb (326 IAC 12), are not included in the permit, since the volume of the storage tank is less than 75m³.
- (b) There are no New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning, 40 CFR 63.4, Subpart T (326 IAC 20-6), are not included in the permit, since the aqueous parts washing operation and the degreasing operation do not use any of the listed solvents.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories, 40 CFR 63.11, Subpart XXXXXX, are not included in the permit because the source's SIC code (3714) is not included in the EPA source category list for the nine metal fabrication and finishing source categories. Although the source engages in welding operations emitting chromium, it does not qualify as one of the nine source categories, rendering this rule not applicable.
- (f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (g) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

- (a) 326 IAC 2-1.1-3 (Exemptions)
Exemption applicability is discussed under the Permit Level Determination – Exemption section above.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (c) 326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

- (d) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (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.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.
- (f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.
- (h) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

Welding Operation

- (a) 326 IAC 6-3-2(e)(1) (Particulate Emissions Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(12), The welding operation is not subject to this rule because the PM potential emissions are less than five hundred fifty-one thousandths (0.551) pound per hour.
- This supersedes the existing requirement in Exemption 097-22668-00509 for the welding operation limiting the PM emissions to 0.0568 lb/hr.
- (b) 326 IAC 6.5-1-2 (Particulate Emissions Limitations for Sources located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, and Vigo Counties.
This rule does not apply because the potential to emit particulate matter for the entire source is less than 100 tons per year and the actual particulate emissions of the source are less than ten (10) tons per year.

Space Heaters

- (a) 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)
Particulate emissions from the 6,100 Btu/hr natural gas combustion equipment shall be limited to 0.6 pounds per MMBtu heat input.

Aqueous Parts Cleaning and Degreasing Operations

(a) 326 IAC 8-3 (Organic Solvent Degreasing Operations)

The existing aqueous parts washing cleaning will still be subject to this requirement. The new degreasing operation will also be subject to this requirement.

Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreasing Operations with a remote Solvent Reservoir)

The owner or operator of a cold cleaning facility shall:

- (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°C) (one hundred degrees Fahrenheit (100°F));
 - (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.
- (3) Equip the degreaser with a freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater, 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)).
- (4) Provide a permanent, conspicuous label which lists the operating requirements outlined below.
- (5) The owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
 - (A) Close the cover whenever articles are not being handled in the degreaser.
 - (B) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (C) 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.

Storage Tank

- (a) 326 IAC 8-1-6 (General VOC Reduction Requirements)
Pursuant to 326 IAC 8-1-6, the storage tank is not subject to this rule because the VOC emissions

are less than twenty-five (25) tons/yr.

Abrasive Blasting Machines

- (a) 326 IAC 6-3-2(e)(1) (Particulate Emissions Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(12), the abrasive blasting machines are not subject to this rule because the PM potential emissions are less than five hundred fifty-one thousandths (0.551) pound per hour.

Conclusion and Recommendation

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 January 12, 2009.

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 097-27358-00509. The staff recommends to the Commissioner that this Exemption be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Jillian Bertram at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5377 toll free at 1-800-451-6027 extension 4-5377.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

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

Company Name: MSW
Address City IN Zip: 9258 Zionsville Road, Indianapolis, IN 46268
Permit Number: 097-27358-00509
Reviewer: Jillian Bertram
Date: 1/20/2009

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

0.01

0.1

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	28.5	100	5.5	84
				**see below		
Potential Emission in tons/yr	0.0001	0.0002	0.0008	0.0027	0.0001	0.0022

*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

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

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
 MM BTU/HR <100
 HAPs Emissions**

**Company Name: MSW
 Address City IN Zip: 9258 Zionsville Road, Indianapolis, IN 46268
 Permit Number: 097-27358-00509
 Reviewer: Jillian Bertram
 Date: 1/20/2009**

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	0.0000	0.0000	0.0000	0.0000	0.0000

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	0.0000	0.0000	0.0000	0.0000	0.0000

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
Welding and Thermal Cutting**

**Company Name: MSW
Address City IN Zip: 9258 Zionsville Road, Indianapolis, IN 46268
Exemption Number: 097-27358-00509
Reviewer: Jillian Bertram
Date: 1/20/2009**

PM/ PM10									
Usage	Emission Factor	Cr Emission Factor	Mn Emission Factor	Ni Emission Factor	PM/PM10	Cr	Mn	Ni	
(tons/yr)	(lb/lb)	(lb/10000 lb)	(lb/10000 lb)	(lb/10000 lb)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
498	0.002	0.01	0.22	4.51	0.996	0.000	0.011	0.225	

Methodology

Emissions Factors from AP 42 12-19.1 and AP 42 12-19.2 for ERNiCu

PM/PM10 (tons/yr) = Usage (tons/yr) * (2000 lb/1 ton) * PM/PM10 Emission Factor (lb/lb) * (1 ton/2000lb)

Cr (tons/yr) = Usage (tons/yr) * (2000 lb/1 ton) * Cr Emission Factor (lb/10000 lb) * (1 ton/ 2000 lb)

Mn (tons/yr) = Usage (tons/yr) * (2000 lb/1 ton) * Mn Emission Factor (lb/10000 lb) * (1 ton/ 2000 lb)

Ni (tons/yr) = Usage (tons/yr) * (2000 lb/1 ton) * Ni Emission Factor (lb/10000 lb) * (1 ton/ 2000 lb)

**Appendix A: Emissions Calculations
Aqueous Parts Solution**

Company Name: MSW
Address City IN Zip: 9258 Zionsville Road, Indianapolis, IN 46268
Permit Number: 097-27358-00509
Reviewer: Jillian Bertram
Date: 1/20/2009

Unit	Capacity (gal)	Change Rate (times/yr)	% Less Water	% VOC	VOC (gal/yr)	Density (lb/gal)	HAP/VOC (tons/yr)	
Tank 1	1180	12	5%	0.00%	0		0	
Tank 2	590	12	5%	0.00%	0		0	
Tank 3	600	12	2%	10%	14.4	1.02	0.01	
Total								0.007

Methodolgy

HAP Emissions = VOC Emissions, VOCs emitted are glycol ethers

Based on mass-balance approach

%less water, %VOC, and Density (lb/gal) from MSDS sheets

VOC (gal/yr) = Capacity (gal) * Change Rate (times/yr) * % Less Water * % VOC

HAP/VOC (tons/yr) = VOC (gal/yr) * Density (lb/gal) * (1 ton/2000 lbs)

**Appendix A: Emissions Calculations
Storage Tank**

Company Name: MSW
Address City IN Zip: 9258 Zionsville Road, Indianapolis, IN 46268
Permit Number: 097-27358-00509
Reviewer: Jillian Bertram
Date: 1/20/2009

Unit	Capacity (gal)	VOC (tons/yr)
Storage Tank	275	0.063

Methodology

Emission value from Tanks 4.0

**Appendix A: Emissions Calculations
Abrasive Blasting Machines**

Company Name: MSW
Address City IN Zip: 9258 Zionsville Road, Indianapolis, IN 46268
Permit Number: 097-27358-00509
Reviewer: Jillian Bertram
Date: 1/20/2009

Unit	Air flow (dscf/min)	Grain loading rate (grains/dscf)	PM/PM10 (tons/yr)	Controlled PM/PM10 (tons/yr)
Unit #1	1000	0.01	0.38	0.38
Unit #2	1000	0.01	0.38	0.38
Unit #3	780	0.01	0.29	0.29
Unit #4	2000	0.03	2.25	0.23
Total			3.30	1.27

Methodology

PM/PM10 (tons/yr) = Air flow (dscf/min) * Grain loading rate (grains/dscf) * (1 lb/7000 grains) * (1 ton/2000 lbs) * (60 min/1 hr) * (8760 hr/1day)

Controlled PM/PM10 = PM/PM10 (tons/yr) * (1-90%)

**Appendix A: Emissions Calculations
Millipore Degreasing Unit**

Company Name: MSW

Address City IN Zip: 9258 Zionsville Road, Indianapolis, IN 46268

Permit Number: 097-27358-00509

Reviewer: Jillian Bertram

Date: 1/20/2009

Solvent Usage (gal/yr)	% VOC	VOC (gal/yr)	Density (lb/gal)	VOC (tons/yr)
120	75%	90	5.7	0.2565

Methodology

% VOC and Density (lb/gal) from MSDS sheet

VOC (gal/yr) = Solvent Usage (gal/yr) * % VOC

VOC (tons/yr) = VOC (gal/yr) * Density (lb/gal) * (1 ton/ 2000 lbs)

Appendix A: Emissions Calculations
Source-wide Emissions Summary

Company Name: MSW
Address City IN Zip: 9258 Zionsville Road, Indianapolis, IN 46268
Permit Number: 097-27358-00509
Reviewer: Jillian Bertram
Date: 1/20/2009

Process	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	CO (tons/yr)	VOC (tons/yr)	Single Worst HAP (tons/yr)	Total HAP (tons/yr)
Welding	0.996	0.996	0.000	0.000	0.000	0.000	0.22 - Ni	0.236
Space Heaters	negl.	negl.	0.001	0.003	0.002	negl.	negl. - hexane	negl.
Aqueous Parts Solution	0.000	0.000	0.000	0.000	0.000	0.007	0.007 - Glycol Ethers	0.007
Storage Tank	0.000	0.000	0.000	0.000	0.000	0.063	0.000	0.000
Abrasive Blasting Machines	3.296	2.253	0.000	0.000	0.000	0.000	0.000	0.000
Millipore	0.000	0.000	0.000	0.000	0.000	0.257	0.000	0.000
Total	4.292	3.249	0.001	0.003	0.002	0.327	0.22 - nickel	0.243