TO: Interested Parties / Applicant

RE: Metal Dynamics, LLC / Registration Revision 097-23684-00580

FROM: Felicia A. Robinson
Administrator

# Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

If you have technical questions regarding the enclosed documents, please contact the 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

December 5, 2006

Mr. Mike Bowling
Plant Manager
Metal Dynamics, LLC
2205 South Holt Road
Indianapolis, Indiana 46241

CERTIFIED MAIL 7000 0600 0023 5186 2736

Re: Registration Revision 097-23684-00580 to
Registered Construction and Operation Status,
097-22690-00580

Dear Mr. Bowling:

Metal Dynamics, LLC was issued Registration 097-22690-00580 on June 26, 2006 for the construction and operation of an automobile shredding and ferrous scrap separation operation to be located at 1800 South Holt Road, Indianapolis, Indiana, 46241. An application was received from Metal Dynamics, LLC on September 21, 2006 requesting to modify the Registration. Pursuant to the provisions of 326 IAC 2-5.5-6(g), the Registration is revised as described in the attached Technical Support Document for a Registration Revision.

All other conditions of the permit shall remain unchanged and in effect. Please find attached a copy of the revised registration.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Mark Caraher, at (317) 327-2272.

Sincerely,

ORIGINAL SIGNED BY

Felicia A. Robinson
Administrator
Office of Environmental Services

Attachments: Revised Registration
Technical Support Document for Registration Revision

FAR/mbc

cc: File
Air Compliance – Matt Mosier
IDEM, OAQ – Mindy Hahn
US EPA Region 5
Marion County Health Dept.



Department of Public Works
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Mr. Mike Bowling
Plant Manager
Metal Dynamics, LLC
2205 South Holt Road
Indianapolis, Indiana 46241

CERTIFIED MAIL 7000 0600 0023 5186 2736

Re: Registration Revision 097-23684-00580 to Registered Construction and Operation Status, 097-22690-00580

Dear Mr. Bowling:

The application from Metal Dynamics, LLC, received on February 22, 2006, has been reviewed. An application from Metal Dynamics, LLC requesting a revision pursuant to 326 IAC 2-5.5-6(g) was received on September 21, 2006. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that the following automobile shredding and ferrous scrap separation operation, to be located at 2205 South Holt Road, Indianapolis, Indiana, 46241 is classified as registered:

(a) One (1) vehicle/metal shredder, model number 130 Heavy, identified as Emission Unit ID 001, to be constructed in 2007, with a maximum capacity of 400 tons per hour, using a Smart Water Injection System as control and as an integral part of the shredding process. Emission Unit ID 001 has no exhaust vent or exhaust stack.

(b) One (1) Z-box cleaning system for metal/fluff separation, identified as Emission Unit ID 002, to be constructed in 2007, with a maximum capacity of 400 tons per hour, using a cyclone as control and as an integral part of the separation process, exhausting 7,000 acfm to stack/vent P002.

(c) Eighteen (18) conveyors, identified as Emission Unit ID 003, to be constructed in 2007, with a maximum capacity to transfer and convey 400 tons per hour.

(d) The following VOC and/or HAP storage containers:

(1) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(e) The following activities each with potential uncontrolled emissions of equal to or less than one (1) pound per day of any regulated air pollutant:

(1) Brazing, soldering, or welding operations and associated equipment.

(2) Hand-held drilling and grinding equipment.

(3) Electrical resistance welding.

(4) Air compressors and pneumatically operated equipment, including hand tools.

(5) Compressor or pump lubrication and seal oil systems.



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(6) Handling of solid steel, including coils and slabs, excluding scrap burning, scarfing, and charging into steel making furnaces and vessels.

(7) Manual loading and unloading operations.

(f) Paved roads and parking lots with public access.

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 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) vehicle/metal shredder, identified as Emission Unit ID 001, the one (1) Z-box cleaning system for metal/fluff separation, identified as Emission Unit ID 002, and each of the eighteen (18) conveyors, identified as Emission Unit ID 003, shall each not exceed the values shown in the following table when operating at the process weight shown:

| Emission Unit | Process Weight (tons per hour) | 326 IAC 6-3-2 Allowable Emissions (pounds per hour) |
|---|---|---|
| Vehicle/metal shredder (001) | 400 | 66.31 |
| Z-box cleaning system for metal/fluff separation (002) | 400 | 66.31 |
| Each of the eighteen (18) conveyors (003) | 400 | 66.31 |

The allowable particulate emission rate was calculated with the following equation:
Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

The Smart Water Injection System for the vehicle/metal shredder, identified as Emission Unit ID 001, and the cyclone for the Z-box cleaning system for metal/fluff separation, identified as Emission Unit ID 002 shall operate at all times when the vehicle/metal shredder process and the Z-box cleaning system for metal/fluff separation process are in operation, in order to comply with 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes).

(c) Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply, shall not exceed 0.551 pounds per hour.

(d) Pursuant to 326 IAC 6-5-3(c) (Submission of Control Plan), any control practice or measure used to determine applicability or exemption of 326 IAC 6-5 shall be incorporated into the source's

operating permit. Metal Dynamics, LLC's shall comply with the provisions of the dust control plan included as Appendix A to this Registered Construction and Operation Status, 097-22690-00580.

(e) Within sixty (60) days after achieving the maximum production rate but no later than one hundred and eighty (180) days after startup of Emission Unit ID 002, the Permittee shall demonstrate compliance with 326 IAC 6-3-2(e)(3) by conducting a stack test for PM emissions from Emission Unit ID 002, utilizing methods as approved by IDEM, OAQ and OES.

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

An authorized individual shall provide an annual notice to the Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES) that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.1-2(f)(3). The annual notice shall be submitted to:

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

and

Office of Environmental Service
Compliance Data Group
City of Indianapolis
2700 S. Belmont Avenue
Indianapolis, IN 46221

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

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) and 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

cc: File
Air Compliance – Matt Mosier
IDEM, OAQ – Mindy Hahn
Marion County Health Department

# Registration
# Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3).

| | |
|---|---|
| **Company Name:** | **Metal Dynamics, LLC** |
| **Address:** | **2205 South Holt Road** |
| **City:** | **Indianapolis, Indiana 46241** |
| **Authorized individual:** | **Plant Manager** |
| **Phone #:** | **(317) 240-9300** |
| **Registration #:** | **097-22690-00580** |

I hereby certify that Metal Dynamics, LLC is still in operation and is in compliance with the requirements of Registered Construction and Operation Status **097-22690-00580**.

| |
|---|
| **Name (typed):** |
| **Title:** |
| **Signature:** |
| **Date:** |

# APPENDIX A

(fugitive dust control plan
pursuant to 326 IAC 6-5-1(b))

## FUGITIVE DUST CONTROL PLAN

(1) Name and address of the source.

**Metal Dynamics, LLC**
**2205 South Holt Road**
**Indianapolis, Indiana 46241**

**(2) Name and address of the owner or operator responsible for the execution of the control plan.**

**Metal Dynamics, LLC**
**2205 South Holt Road**
**Indianapolis, Indiana 46241**

(3) Identification of all processes, operations, and areas which have the potential to emit fugitive particulate matter in accordance with 326 IAC 6-5-4.

**Paved Roads**
**Parking Lot**
**Process Area**
**Conveying**
**Truck transportation of shredder fluff**

(4) A map of the source showing aggregate pile areas, access areas around the aggregate pile, unpaved roads, paved roads, parking lots and location of conveyor and transfer points, etc.

**The attached map shows the pattern of truck traffic and the parking lots at the sight. All roads and parking lots are paved.**

**The conveyors and material handling areas are indicated on the attached map. Conveyors associated with auto shredder residue and auto fluff conveying serve to transport thoroughly dampened product. Transfer points and material handling associated with unloading and transport of thoroughly dampened product will utilize minimized drop heights.**

**None of the storage areas are sources of dust or fugitive particulate matter.**

(5) The number and mix of vehicular activity occurring on paved roads, unpaved roads, and parking lots.

**The parking area is reserved for dual axle automobiles only. The truck traffic is associated with deliveries and shipping from semi-trucks and is expected to equal less than 2000 vehicle miles per year with an average vehicle weight of less than 67 tons.**

(6) Type and quantity of material handled.

**The material handled will be auto bodies and mixed scrap. The capacity of process is 400 tons per hour.**

(7) Equipment used to maintain aggregate piles.

**No aggregate piles are associated with this source.**

(8) A description of the measures to be implemented to control fugitive particulate matter emissions resulting from emission points identified in subdivision (3).

**Metal Dynamics, LLC will employ paved roads and parking lots and utilize conveyors to transfer and handle thoroughly dampened material. Metal Dynamics, LLC. uses sweepers, skid steer loaders, wheel loaders, or other equipment to clean all paved surfaces, as needed. Water or dust suppression will be used as needed. Trucks hauling shredder fluff will be tarped.**

(9) A specification of the dust suppressant material, such as oil or chemical including the estimated frequency of application rates and concentrations.

**Metal Dynamics, LLC may use water, or IDEM approved chemical or oil-based dust suppressant as needed. Since Metal Dynamics, LLC provides a vegetative boundary and does not have fugitive emissions from storage piles, and roads and parking lots are paved, and the yard surface is cleaned as needed, it is expected there will be little need for application of dust suppressants. However, Metal Dynamics, LLC may use dust suppressants when necessary to prevent fugitive dust. The type of chemical stabilization, application rate, and concentration to be used is based on the type of surface, temperature, frequency of disturbances, wind conditions, and length of required stabilization. The list of chemical stabilization product types that may be used at Metal Dynamics, LLC. include, but are not be limited to, the following: Fiber-based dust palliatives, Calcium Chloride, Magnesium Chloride, Lignosulfonate, Petroleum resin, or Polymers.**

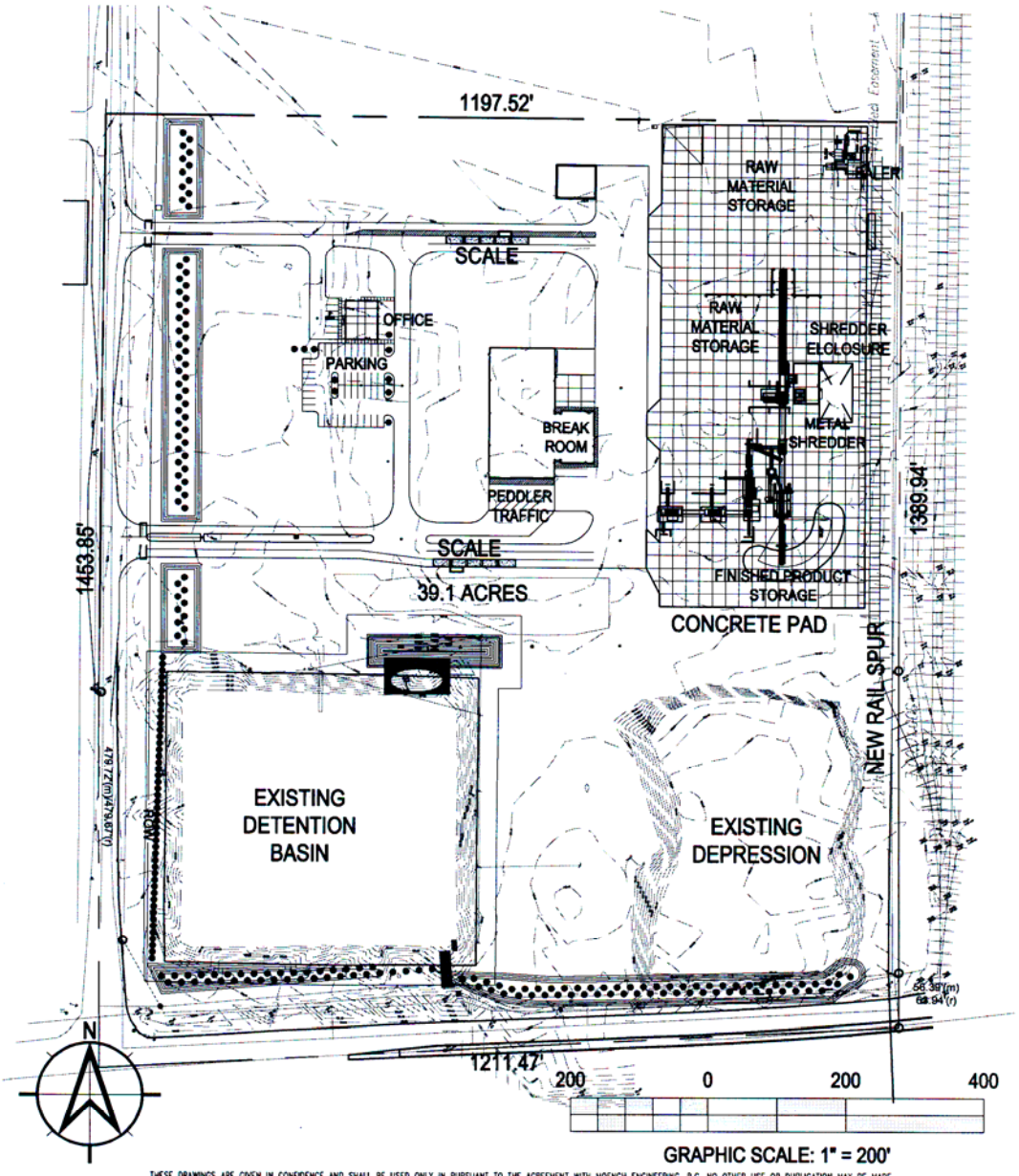
(10) A specification of the particulate matter collection equipment used as a fugitive particulate matter emission control measure.

**Sweepers, skid steer loaders, wheel loaders, or other equipment are employed as needed to clean all paved surfaces.**

(11) A schedule of compliance with the provisions of the control plan. Such schedule shall specify the amount of time the source requires to award any necessary contracts, commence and complete construction, installation, or modification of the fugitive particulate matter emission control measures.

**The source will maintain compliance with the control plan at all times during operation of fugitive emission processes.**

**Records shall be kept and maintained which document all control measures and activities to be implemented in accordance with the approved control plan. Said records shall be available upon the request of the commissioner, and shall be retained for three (3) years.**






**METAL DYNAMICS**
**SOUTH HOLT ROAD**
**INDIANAPOLIS, INDIANA 46241**

SITE PLAN

Drawn By: jells
Checked By: BEM
Project No. 05091
Date: 07/05/06

Woench Engineering
3896 Clarks Creek Road
Suite 4100
Plainfield, Indiana 46168
Phone (317) 837-2787
Fax (317) 837-7266

Sheet Number: X1

# Indiana Department of Environmental Management
# Office of Air Quality
# and
# Indianapolis Office of Environmental Services

## Technical Support Document (TSD) for a Registration Revision

### Source Description and Location

**Source Name:** **Metal Dynamics, LLC**
**Source Location:** **2205 South Holt Road, Indianapolis, Indiana 46241**
**County:** **Marion**
**SIC Code:** **5093**
**Registration No.:** **097-22690-00580**
**Registration Issuance Date:** **June 26, 2006**
**Registration Revision No.:** **097-23684-00580**
**Permit Reviewer:** **M. Caraher**

### Existing Approvals

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

(a) Registration 097-22690-00580 issued on June 26, 2006.

See Revision Changes section of this Technical Support Document for all conditions from previous approvals that are either revised by this Registration Revision or were not incorporated into this Registration Revision.

### County Attainment Status

The source is located in Marion County.

| Pollutant | Status |
|---|---|
| PM2.5 | nonattainment |
| PM10 | attainment |
| $SO_2$ | maintenance attainment |
| $NO_2$ | 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 surrogate for PM2.5 emissions, pursuant to the Non-attainment 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, $SO_2$, $NO_2$, 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) 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.

(e) 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.

## Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

| Pollutant | Potential to Emit (tons/yr) |
|---|---|
| PM | 24.63 |
| PM10 | 19.99 |
| $SO_2$ | 0.00 |
| VOC | 0.89 |
| CO | 0.00 |
| $NO_x$ | 0.00 |

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM, PM10, $SO_2$, VOC, CO and $NO_X$ are each less than 25 tons per year. The potential to emit PM and PM10 are each greater than 5 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5.

(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.

(c) These emissions are based upon Registration 097-22690-00580 issued on June 26, 2006.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed revision after consideration of all enforceable limits established in the effective permits:

| HAPs | Potential to Emit (tons/yr) |
|---|---|
| Benzene (highest single HAP) | 0.26 |
| Total | 0.95 |

(a) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

## Actual Emissions

No previous emission data has been received from the source.

## Description of the Revision

Metal Dynamics, LLC is an automobile shredding and ferrous scrap separation source operating under a Standard Industrial Classification (SIC) Code of 5093, establishments primarily engaged in breaking up, sorting, and the wholesale distribution of scrap materials. Metal Dynamics, LLC is not a portable source or operation.

The Registration is being modified through a Registration Revision. This Revision is being performed pursuant to 326 IAC 2-5.5-6(g) because Metal Dynamics, LLC is modifying existing permitted emission units. The modification will increase the maximum capacity of the shredder, Z-box cleaning system and conveying capacity from 150 tons per hour to 400 tons per hour. As a result, the hourly allowable emissions pursuant to 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes) will increase. In addition, the exhaust gas flow rate on the Z-box cleaning system for metal/fluff separation process is being decreased from 15,000 acfm to 7,000 acfm. In addition, the eighteen (18) conveyors are not covered. IDEM, OAQ and OES determined in the initial Registration for this source that coverage status was not relevant in emissions calculations, in establishing compliance with 326 IAC 6-3-2(e)(3), or in the initial dust control plan for the source in order to demonstrate compliance with 326 IAC 6-4 and 326 IAC 6-5. Therefore, all references to the conveyors being covered is deleted from Condition (b). Therefore, pursuant to 326 IAC 2-5.5-6(g), the modification qualifies as a Registration Revision

On July 24, 2006, Metal Dynamics appealed Condition (e) of Registration 097-22690-00580 which was issued on June 26, 2006. The appeal requested that the particulate stack testing requirement in Condition (e) for the one (1) vehicle/metal shredder, identified as Emission Unit ID 001, be deleted as an applicable requirement for this source. The appeal resolution is assigned the application tracking number of 097-23412-00580 and is combined in this issuance. The particulate stack testing requirement in Condition (e) for the one (1) vehicle/metal shredder, identified as Emission Unit ID 001, is being deleted as an applicable requirement for this source (see discussion in the Testing Requirements section of this TSD). Therefore, pursuant to 326 IAC 2-5.5-6(g), the deletion of a previous Registration requirement condition qualifies as a Registration Revision.

The Indiana Department of Environmental Management (IDEM) Office of Air Quality (OAQ) and the Indianapolis Office of Environmental Services (OES) have reviewed an application from Metal Dynamics, LLC submitted on September 21, 2006 relating to the revision of an existing Registration. The following is a list of the revised emission unit(s) and pollution control device(s) at the source:

(a) One (1) vehicle/metal shredder, model number 130 Heavy, identified as Emission Unit ID 001, to be constructed in 2007, with a maximum capacity of 400 tons per hour, using a Smart Water Injection System as control and as an integral part of the shredding process. Emission Unit ID 001 has no exhaust vent or exhaust stack.

(b) One (1) Z-box cleaning system for metal/fluff separation, identified as Emission Unit ID 002, to be constructed in 2007, with a maximum capacity of 400 tons per hour, using a cyclone as control and as an integral part of the separation process, exhausting 7,000 acfm to stack/vent P002.

(c) Eighteen (18) conveyors, identified as Emission Unit ID 003, to be constructed in 2007, with a maximum capacity to transfer and convey 400 tons per hour.

(d) The following VOC and/or HAP storage containers:

(1) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(e) The following activities each with potential uncontrolled emissions of equal to or less than one (1) pound per day of any regulated air pollutant:

(1) Brazing, soldering, or welding operations and associated equipment.

(2) Hand-held drilling and grinding equipment.

(3) Electrical resistance welding.

(4) Air compressors and pneumatically operated equipment, including hand tools.

(5) Compressor or pump lubrication and seal oil systems.

(6) Handling of solid steel, including coils and slabs, excluding scrap burning, scarfing, and charging into steel making furnaces and vessels.

(7) Manual loading and unloading operations.

(f) Paved roads and parking lots with public access.

**Air Pollution Control Justification as an Integral Part of the Process**

(a) For Registration No. 097-22690-00580, the company submitted the following justification such that the Smart Water Injection System shall be considered as an integral part of the vehicle/metal shredder process identified as Emission Unit ID 001:

The materials input to the vehicle/metal shredder process consist primarily of automobile bodies. These junk vehicle bodies typically contain flammable materials including “fluff” which consists of nonmetallic car parts, i.e. dashboards, upholstery, carpeting, etc. The high speed action of the rotary hammermill in the shredder creates high instananeous temperatures in the shredder. The simultaneous presence of flammable materials and ignition sources may result in fires and explosions. Fires and explosions present a significant risk unless measures are taken to specifically reduce fires and explosions. Much of the effectiveness of the Smart Water Injection System relates to the control of oxygen and temperature in the shredding chamber. The constant operation of the Smart Water Injection System prevents fires and explosions. Fires and explosions, if allowed to occur, would damage the shredding machine and would also result in shutdowns of the process. Therefore, the Smart Water Injection System serves a primary purpose other than pollution control.

(b) For Registration No. 097-22690-00580, the company submitted the following justification such that the cyclone for the Z-box cleaning system for metal/fluff separation shall be considered as an integral part of the process identified as Emission Unit ID 002:

The cyclone for the the Z-box cleaning system for metal/fluff separation process sorts and separates, by use of air currents, shredded ferrous and non-ferrous materials. Its use enables high quality sorting of the input materials in a one pass through operation. Without the air current, shredded material is not sorted. Without the use of a cyclone for sorting and separation, a poor quality sorting process would exist. Therefore, operation of the cyclone serves a primary purpose other than pollution control.

IDEM, OAQ, and OES have evaluated the justifications and agree that the Smart Water Injection System for the vehicle/metal shredder process and the cyclone for the Z-box cleaning system for metal/fluff separation will each be considered, respectively, as an integral part of Emission Unit ID

001 and Emission Unit ID 002. Therefore, the permitting level will be determined using the potential to emit after the use of the Smart Water Injection System on the vehicle/metal shredder process and after the cyclone for the Z-box cleaning system for metal/fluff separation. Operating conditions in the proposed permit will specify that this equipment shall operate at all times when the vehicle/metal shredder process and the Z-box cleaning system for metal/fluff separation are in operation.

## Enforcement Issues

There are no pending enforcement actions related to this Revision or to this source.

## Stack Summary

The following is a list of the revised stack summary for emission units and control devices at the source:

| Stack ID | Operation | Height (ft) | Diameter (ft) | Flow Rate (acfm) | Temperature ($^oF$) |
|---|---|---|---|---|---|
| P002 | Z-box/Cylcone | 25 | 0.875 | 7,000 | ambient |

## Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 6).

## Permit Level Determination for the Source and the Revision

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

The following table is used to determine the appropriate permit level under 326 IAC 2. This table reflects the PTE with integral controls following the revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

| Pollutant | Potential To Emit (tons/year) |
|---|---|
| PM | 24.95 |
| PM10 | 15.83 |
| $SO_2$ | 0.00 |
| VOC | 0.89 |
| CO | 0.00 |
| $NO_x$ | 0.00 |

| HAPs | Potential to Emit (tons/yr) |
|---|---|
| Benzene (highest single HAP) | 0.70 |
| Total | 2.53 |

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM, PM10, $SO_2$, VOC, CO and $NO_X$ are each less than 25 tons per year. The potential to emit PM and PM10 are each greater than 5 tons per year. Therefore, the source is still subject to the provisions of 326 IAC 2-5.5. A Registration Revision pursuant to 326 IAC 2-5.5-6(g) will be issued.

(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/or 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, the source is not subject to the provisions of 326 IAC 2-7.

(c) 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.

The following table shows the net difference in PTE with integral controls of the source before and after the revision and the net difference in emissions. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

| Pollutant | PTE Before Revision (tons/year) | PTE After Revision (tons/year) | Net Difference (tons/year) | Major Source Threshold (tons/year) |
|---|---|---|---|---|
| PM | 24.63 | 24.95 | 0.32 | 100 |
| PM10 | 19.99 | 15.83 | - 4.16 | 100 |
| $SO_2$ | 0.00 | 0.00 | 0.00 | 100 |
| VOC | 0.89 | 0.89 | 0.00 | 100 |
| CO | 0.00 | 0.00 | 0.00 | 100 |
| $NO_X$ | 0.00 | 0.00 | 0.00 | 100 |
| HAPs (highest single / combination) | 0.26 / 0.95 | 0.70 / 2.53 | 0.44 / 1.58 | 10 / 25 |

(a) This modification to an existing minor stationary source is not major because the emissions increase following the revision is less than the major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(b) This modification to an existing minor stationary source is not major because the emissions increase following the revision is less than the major source thresholds. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

(c) Marion County has been designated as nonattainment for PM 2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM2.5 Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM2.5 major NSR regulations, states should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. A major source in a nonattainment area is a source that emits or has the potential to emit one hundred (100) tons per year of any nonattainment regulated pollutant. Metal Dynamics, LLC has the potential to emit of PM10 below one hundred (100) tons per year. Therefore, assuming that PM10 emissions represent PM2.5 emissions, 326 IAC 2-3 does not apply for PM2.5.

**Part 70 Permit Determination**

326 IAC 2-7 (Part 70 Permit Program)
This source is still not subject to the Part 70 Permit requirements because the potential to emit

(PTE) of:
(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons per year.

This is the second air approval issued to this source.

## Federal Rule Applicability Determination

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

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

## State Rule Applicability Determination – 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 Non-attainment New Source Review requirements are not applicable.

326 IAC 1-7 (Stack Height Provisions)

This source does not have potential or actual PM or $SO_2$ emissions greater than twenty (25) tons per year. Therefore, the source is not subject to 326 IAC 1-7 (Stack Height Provisions).

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 attainment or nonattainment regulated pollutant emissions are equal to or greater than one hundred (100) tons per year. This source is to commence construction and operation in 2006. As a result, 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)

This source is to commence construction after July 27, 1997 but does not have the potential to emit any individual single hazardous air pollutant (HAP) equal to or greater than ten (10) tons per year nor does this source have the potential to emit HAP of equal to or greater than twenty-five (25) tons per year for any combination of HAP. Therefore, this source is not subject to 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants).

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 a Registration, 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. However, pursuant to 326 IAC 2-6-1(b), as a permitted source in Indiana, it is subject to 326 IAC 2-6-5 (Additional Information Requests).

326 IAC 4-2 (Incinerators)

This source does not have an incinerator. Therefore, this source is not subject to 326 IAC 4-2 (Incinerators).

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 6.5-1-2 (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 actual emissions of less than ten (10) tons per year. Metal Dynamics, LLC 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) each do not apply to this source.

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

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

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 (Fugitive Particulate Matter Emissions)

Pursuant to 326 IAC 6-5-1(b), any new source of fugitive particulate matter emissions, requiring a permit as set forth in 326 IAC 2, which has not received all the necessary preconstruction approvals before December 13, 1985, shall submit a dust control plan in all permit applications submitted to the commissioner. Pursuant to 326 IAC 6-5-3(c), any control practice or measure used to determine applicability or exemption of 326 IAC 6-5 shall be incorporated into the source's operating permit. Metal Dynamics, LLC submitted a dust control plan on April 18, 2006. Metal Dynamics, LLC updated the dust control plan on September 21, 2006 with an updated site plan. This updated site plan replaces the original plan and is included in Appendix A of the Registration Revision 097-23684-00580. In addition, the eighteen (18) conveyors are not covered. IDEM, OAQ and OES determined in the initial Registration for this source that coverage status was not relevant in emissions calculations, in establishing compliance with 326 IAC 6-3-2(e)(3), or in the initial dust control plan for the source in order to demonstrate compliance with 326 IAC 6-4 and 326 IAC 6-5. Therefore, all references to the conveyors being covered is deleted from Condition (b) of the Registration and in the dust control plan included as Appendix A. Metal Dynamics, LLC's shall comply with the provisions of the dust control plan included as Appendix A to Registration Revision 097-23684-00580.

326 IAC 7 (Sulfur Dioxide Rules)

Neither the source or any specific emission unit at this source has the potential to emit twenty five (25) tons per year or ten (10) pounds per hour of sulfur dioxide ($SO_2$). Therefore, this source is not subject to 326 IAC 7 (Sulfur Dioxide Rules).

326 IAC 7-4-2 (Marion County Sulfur Dioxide Emission Limitations)

Neither the source or any specific emission unit at this source is specifically identified in 326 IAC 7-4-2. Therefore, 326 IAC 7-4-2 (Marion County Sulfur Dioxide Emission Limitations) does not apply to this source.

326 IAC 8 (Volatile Organic Compound Rules)

There are no provisions under 326 IAC 8 (Volatile Organic Compound Rules) applicable to any specific emission unit or operation at this source. This source is to commence construction after January 1, 1980 but neither the source nor any emission unit has the potential to emit twenty five (25) tons per year or more of Volatile Organic Compounds. Therefore, this source is not subject to 326 IAC 8 (Volatile Organic Compound Rules).

326 IAC 9 (Carbon Monoxide Emission Rules)

There are no provisions under 326 IAC 9 (Carbon Monixide Emission Rules) applicable to any specific emission unit or operation at this source. Therefore, this source is not subject to 326 IAC 9 (Carbon Monoxide Emission Rules).

326 IAC 10 (Nitrogen Oxide Rules)

There are no provisions under 326 IAC 10 (Nitrogen Oxide Rules) applicable to any specific emission unit or operation at this source. This source has not opted in to 326 IAC 10 (Nitrogen Oxide Rules). Therefore, this source is not subject to 326 IAC 10 (Nitrogen Oxide Rules).

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

This automobile shredding and ferrous scrap separation source 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 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 15 (Lead Rules)

Metal Dynamics, LLC is not specifically identified in 326 IAC 15 (Lead Rules) and there are no provisions under 326 IAC 15 (Lead Rules) applicable to any specific emission unit or operation at this source. Therefore, this source is not subject to 326 IAC 15 (Lead Rules).

326 IAC 17 (Public Records; Confidential Information; Confidentiality Agreements)

This source has not filed or claimed any application, source or permit information as confidential, pursuant to 326 IAC 17-1-6 (Public Records: Confidentiality Claims).

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).

326 IAC 21 (Acid Deposition Control)

Metal Dynamics, LLC is not subject to the Acid Rain Program Provisions of Title IV of the 1990 Clean Air Act Amendments as listed in 40 CFR Part 72 through 78 and are, therefore, not subject to 326 IAC 21 (Acid Deposition Control).

**State Rule Applicability Determination – Individual Facilities**

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

Pursuant to 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) vehicle/metal shredder, identified as Emission Unit ID 001, the one (1) Z-box cleaning system for metal/fluff separation, identified as Emission Unit ID 002, and each of the eighteen (18) conveyors, identified as Emission Unit ID 003, shall each not exceed the values shown in the following table when operating at the process weight shown:

| Emission Unit | Process Weight (tons per hour) | 326 IAC 6-3-2 Allowable Emissions (pounds per hour) |
|---|---|---|
| Vehicle/metal shredder (001) | 400 | 66.31 |
| Z-box cleaning system for metal/fluff separation (002) | 400 | 66.31 |
| Each of the eighteen (18) conveyors (003) | 400 | 66.31 |

The allowable particulate emission rate was calculated with the following equation:
Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

The Smart Water Injection System for the vehicle/metal shredder, identified as Emission Unit ID 001, and the cyclone for the Z-box cleaning system for metal/fluff separation, identified as Emission Unit ID 002 shall operate at all times when the vehicle/metal shredder process and the Z-box cleaning system for metal/fluff separation process are in operation, in order to comply with 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes).

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

Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply, shall not exceed 0.551 pounds per hour.

**Testing Requirements**

There are no AP-42 emission factors for vehicle/metal shredding or Z-box cleaning systems for metal fluff separation processes. In the permit application, Metal Dynamics, LLC requested the use of alternative emission factors in determining the potential to emit for the vehicle/metal shredder process, identified as Emission Unit ID 001, and the Z-box cleaning system for metal/fluff separation process, identified as Emission Unit ID 002. These alternative emission factors are also to be used in determining compliance with applicable emission limitations and standards. IDEM, OAQ and OES have determined that the vehicle/metal shredder and the metal/fluff separation process are each subject to the applicable particulate emission limitation in 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes).

The criteria and hazardous air pollutant emission factors presented in Appendix D of the Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook", for vehicle/metal shredding and fluff separation utilizing Z-boxes are being utilized in this Registered Construction and Operation Status, 097-22690-00580, to determine the potential to emit of the source, the permitting level of the source (pursuant to 326 IAC 2), and compliance with applicable emission limitations and standards.

The one (1) vehicle/metal shredder, identified as Emission Unit ID 001, does not have a stack exhaust and cannot be tested in its current configuration. In addition, stack testing of similar units configured for testing and emission factors for similar units indicate particulate emission rates well below the allowable particulate emission limitation in 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes). Therefore, there is no stack test requirement for the one (1) vehicle/metal shredder, identified as Emission Unit ID 001, at this time. However, this determination does not preclude IDEM, OAQ and/or OES from requiring future stack testing.

In order to verify compliance with the applicable particulate emission limit in 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes) for the Z-box metal/fluff separation process, identified as Emission Unit ID 002, compliance stack testing shall be performed on Emission Unit ID 002. Within sixty (60) days after achieving the maximum production rate but no later than one hundred and eighty (180) days after startup of Emission Unit ID 002, the Permittee shall demonstrate compliance with 326 IAC 6-3-2(e)(3) by conducting a stack test for PM emissions from Emission Unit ID 002, utilizing methods as approved by IDEM, OAQ and OES.

## Revision Changes

Metal Dynamics, LLC, was issued Registration 097-22690-00580 on June 26, 2006. The changes listed below have been made to Registration 097-22690-00580 by this Registration Revision 097-23684-00580. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change 1

Per Metal Dynamics, LLC request, the owner/operator mailing address has changed. Per the U.S. Postal Service and Metal Dynamics, LLC, the source location address has changed for this source location which has not changed. Therefore, the mail address and source location address are revised as follows:

Mail address:

Metal Dynamics, LLC
~~2500 Paulina Street~~
**2205 South Holt Road**
~~Chicago, IL 60680~~
**Indianapolis, IN 46241**

Source address:

Metal Dynamics, LLC
~~1800~~ **2205** South Holt Road
Indianapolis, IN 46241

Change 2

The model number of the shredder, Emission Unit ID 001, changed as well as the maximum capacity of the shredder, Z-box cleaning system, Emission Unit ID 002, conveyors, Emission Unit ID 003. In addition, the exhaust gas flow rate on the Z-box cleaning system has been decreased. None of these units will commence construction in 2006. As a result, the construction date is changed to 2007. Therefore, the description of three permitted emission units and pollution control devices is changed as follows:

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) vehicle/metal shredder, model number **130 Heavy** ~~98-104~~, identified as Emission Unit ID 001, **to be** constructed in **2007** ~~2006~~, with a maximum capacity of **400** ~~150~~ tons per hour, using a Smart Water Injection System as control and as an integral part of the shredding process. Emission Unit ID 001 has no exhaust vent or exhaust stack.

(b) One (1) Z-box cleaning system for metal/fluff separation, identified as Emission Unit ID 002, **to be** constructed in **2007** ~~2006~~, with a maximum capacity of **400** ~~150~~ tons per hour,

using a cyclone as control and as an integral part of the separation process, exhausting **7,000** ~~15,000~~ acfm to stack/vent P002.

(c) Eighteen (18) conveyors, identified as Emission Unit ID 003, **to be** constructed in **2007** ~~2006~~, with a maximum capacity to transfer and convey **400** ~~150~~ tons per hour.

Change 3

The eighteen (18) conveyors are not covered. IDEM, OAQ and OES determined in the initial Registration for this source that coverage status was not relevant in emissions calculations, in establishing compliance with 326 IAC 6-3-2(e)(3), or in the initial dust control plan for the source in order to demonstrate compliance with 326 IAC 6-4 and 326 IAC 6-5. Therefore, all references to the conveyors being covered is deleted from Condition (b). Because the maximum capacity of the shredder, Z-box cleaing system and conveyors increased, the allowable PM emissions, pursuant to 326 IAC 6-3-2(e)(3), have been changed as follows in Condition (b):

(b) Pursuant to 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) vehicle/metal shredder, identified as Emission Unit ID 001, the one (1) Z-box cleaning system for metal/fluff separation, identified as Emission Unit ID 002, and each of the eighteen (18) ~~covered~~ conveyors, identified as Emission Unit ID 003, shall each not exceed the values shown in the following table when operating at the process weight shown:

| Emission Unit | Process Weight (tons per hour) | 326 IAC 6-3-2 Allowable Emissions (pounds per hour) |
|---|---|---|
| Vehicle/metal shredder (001) | **400** ~~150~~ | **66.31** ~~55.44~~ |
| Z-box cleaning system for metal/fluff separation (002) | **400** ~~150~~ | **66.31** ~~55.44~~ |
| Each of the eighteen (18) ~~covered~~ conveyors (003) | **400** ~~150~~ | **66.31** ~~55.44~~ |

The allowable particulate emission rate was calculated with the following equation: Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The Smart Water Injection System for the vehicle/metal shredder, identified as Emission Unit ID 001, and the cyclone for the Z-box cleaning system for metal/fluff separation, identified as Emission Unit ID 002 shall operate at all times when the vehicle/metal shredder process and the Z-box cleaning system for metal/fluff separation process are in operation, in order to comply with 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes).

Change 4

The source location address and the Autorized Individual telephone number has been revised in the Registration Annual Notification form as follows:

| | |
|---|---|
| Company Name: | Metal Dynamics, LLC |
| Address: | **2205** ~~1800~~ South Holt Road |
| City: | Indianapolis, Indiana 46241 |
| Authorized Individual: | Plant Manager |
| Phone #: | **(317) 240-9300** ~~(973) 344-2696~~ |
| Registration #: | 097-22690-00580 |

Change 5

Metal Dynamics, LLC will not be using Bobcats to clean paved surfaces. The surfaces will be cleaned by sweepers, skid steer loaders, wheel loaders, or other equipment as needed. In addition, the truck traffic associated with deliveries and shipping from semi-trucks is expected to equal less than 2000 vehicle miles per year not 1600 vehicle miles per year. Fugitive Dust Control Plan language is updated to reflect that the conveyors serve to transport thoroughly dampened product. These changes effect the Fugitive Dust Control Plan as follows:

APPENDIX A
(fugitive dust control plan
pursuant to 326 IAC 6-5-1(b))

FUGITIVE DUST CONTROL PLAN

(1) Name and address of the source.

Metal Dynamics, LLC
**2205** ~~1800~~ South Holt Road
Indianapolis, Indiana 46241

(2) Name and address of the owner or operator responsible for the execution of the control plan.

Metal Dynamics, LLC
~~2500 South Paulina Street~~
**2205 South Holt Road**
~~Chicago, IL 60680~~
**Indianapolis, Indiana 46241**

(3) Identification of all processes, operations, and areas which have the potential to emit fugitive particulate matter in accordance with 326 IAC 6-5-4.

Paved Roads
Parking Lot
Process Area
Conveying
Truck transportation of shredder fluff

(4) A map of the source showing aggregate pile areas, access areas around the aggregate pile, unpaved roads, paved roads, parking lots and location of conveyor and transfer points, etc.

The attached map shows the pattern of truck traffic and the parking lots at the sight. All roads and parking lots are paved.

The conveyors and material handling areas are indicated on the attached map. Conveyors associated with auto shredder residue and auto fluff conveying~~,~~ **serve to** transport **thoroughly dampened** ~~damp~~ product**.** ~~and various conveyors are enclosed.~~ Transfer points and material handling associated with unloading~~,~~ **and** transport **of thoroughly dampened** ~~damp~~ product ~~and~~ **will** utilize minimized drop heights.

None of the storage areas are sources of dust or fugitive particulate matter.

(5) The number and mix of vehicular activity occurring on paved roads, unpaved roads, and parking lots.

The parking area is reserved for dual axle automobiles only. The truck traffic is associated with deliveries and shipping from semi-trucks and is expected to equal less than **2000** ~~1600~~ vehicle miles per year with an average vehicle weight of less than 67 tons.

(6) Type and quantity of material handled.

The material handled will be auto bodies and mixed scrap. The capacity of process is **400** ~~150~~ tons per hour.

(7) Equipment used to maintain aggregate piles.

No aggregate piles are associated with this source.

(8) A description of the measures to be implemented to control fugitive particulate matter emissions resulting from emission points identified in subdivision (3).

Metal Dynamics, LLC will employ paved roads and parking lots~~,~~ **and** utilize ~~enclosed~~ conveyors~~,~~ **to** ~~and~~ transfer~~s~~ and handle~~s~~ **thoroughly dampened** material. Metal Dynamics, LLC. uses sweepers, **skid steer loaders, wheel loaders**, ~~bobcats, loaders~~ or other equipment ~~on a~~ to clean all paved surfaces, as needed. Water or dust suppression will be used ~~at~~ as needed. Trucks hauling shredder fluff will be tarped.

(9) A specification of the dust suppressant material, such as oil or chemical including the estimated frequency of application rates and concentrations.

Metal Dynamics, LLC may use water, or IDEM approved chemical or oil-based dust suppressant as needed. Since Metal Dynamics, LLC provides a vegetative boundary and does not have fugitive emissions from storage piles, and roads and parking lots are paved, and the yard surface is cleaned as needed, it is expected there will be little need for application of dust suppressants. However, Metal Dynamics, LLC may use dust suppressants when necessary to prevent fugitive dust. The type of chemical stabilization, application rate, and concentration to be used is based on the type of surface, temperature, frequency of disturbances, wind conditions, and length of required stabilization. The list of chemical stabilization product types that may be used at Metal Dynamics, LLC. include, but are not be limited to, the following: Fiber-based dust palliatives, Calcium Chloride, Magnesium Chloride, Lignosulfonate, Petroleum resin, or Polymers.

(10) A specification of the particulate matter collection equipment used as a fugitive particulate matter emission control measure.

Sweepers, **skid steer loaders, wheel loaders**, ~~bobcats, loaders~~ or other equipment are employed as needed to clean all paved surfaces.

(11) A schedule of compliance with the provisions of the control plan. Such schedule shall specify the amount of time the source requires to award any necessary contracts, commence and complete construction, installation, or modification of the fugitive particulate matter emission control measures.

The source will maintain compliance with the control plan at all times during operation of fugitive emission processes.

Records shall be kept and maintained which document all control measures and activities to be implemented in accordance with the approved control plan. Said records shall be available upon the request of the commissioner, and shall be retained for three (3) years.

Change 6

Metal Dynamics, LLC updated the original site plan that was included in Appendix A of Registration 097-22690-00580. The updated site plan replaces the original plan and is included in Appendix A of the Registration Revision 097-23684-00580.

Change 7

On July 24, 2006, Metal Dynamics appealed Condition (e) of Registration 097-22690-00580 which was issued on June 26, 2006. The appeal resolution is assigned the application tracking number of 097-23412-00580 and is combined in this issuance. During a meeting regarding the appeal, which was held on October 25, 2006 with IDEM, OAQ and OES, Metal Dynamics LLC presented information describing the current configuration of Emission Unit ID 001, the one (1) vehicle/metal shredder. In addition, Metal Dynamics, LLC stated stack testing of similar units configured for testing and emission factors for similar units indicate particulate emission rates well below the allowable particulate emission limitation in 326 IAC 6-3-2(e)(3) (Particulate Emission Limitations for Manufacturing Processes). IDEM, OAQ, OES and IDEM, Compliance Data Section have reviewed the information presented during the October 25, 2006 meeting and concur that there should be no stack test requirement for the one (1) vehicle/metal shredder, identified as Emission Unit ID 001, at this time. However, this determination does not preclude IDEM, OAQ and/or OES from requiring future stack testing. As a result of this determination, operating condition (e) of Registered Construction and Operation Status 097-22690-00580 is revised as follows:

(e) Within sixty (60) days after achieving the maximum production rate but no later than one hundred and eighty (180) days after startup of ~~Emission Unit ID 001 and~~ Emission Unit ID 002, ~~respectively,~~ the Permittee shall demonstrate compliance with 326 IAC 6-3-2(e)(3) by conducting a stack test for PM emissions from ~~Emission Unit ID 001 and~~ Emission Unit ID 002, utilizing methods as approved by IDEM, OAQ and OES.

## Conclusion

The construction and operation of this automobile shredding and ferrous scrap separation source shall be subject to the conditions of the Registration Revision 097-23684-00580.

**Appendix A: Emission Calculations**
**Metal/Fluff Shredding**

| | |
|---|---|
| **Company Name:** | **Metal Dynamics, LLC** |
| **Address City IN Zip:** | **2205 South Holt Road, Indianapolis, Indiana 46241** |
| **Registration No.:** | **097-22690-00580** |
| **Registration Issuance Date:** | **June 26, 2006** |
| **Registration Revision No.:** | **097-23684-00580** |
| **Reviewer:** | **M. Caraher** |
| **Date:** | **October 11, 2006** |

| Emission Unit ID | Maximum Capacity (tons/hour) | PM/PM10 Emission Factor (lbs/ton) | PM/PM10 PTE (lbs/hour) | PM/PM10 PTE (tons/yr) |
|---|---|---|---|---|
| 001 | 400 | 0.00257 | 1.03 | 4.50 |

**Notes:**

There are no AP-42 emission factors for metal shredding or fluff shredding.
Assume PM10 emissions = PM emissions.
All material input to the vehicle/metal shredder is wetted in the shredder with the Smart Water Injection System.
The emission factor submitted by Metal Dynamics was assumed to be the emission rate prior to
the use of the Smart Water Injection System which Metal Dynamics claimed as integral to the operation of the
vehicle/metal shredder. Therefore, the potential to emit must be determined after the use of the
Smart Water Injection System.
The PM/PM10 emission factor, after water injection, is from the Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook"
Appendx D, Table D-10.F.

**Methodology:**

PTE of PM/PM10 (lbs/hour) = Maximum Capacity (tons/hour) x Emission Factor (lbs/ton)
PTE of PM/PM10 (tons/year) = Maximum Capacity (tons/hour) x Emission Factor (lbs/ton) x 8760 hours/year x ton/2000 lbs

**Appendix A: Emission Calculations**
**Z-box fluff separation**

**Company Name:** Metal Dynamics, LLC
**Address City IN Zip:** 2205 South Holt Road, Indianapolis, Indiana 46241
**Registration No.:** 097-22690-00580
**Registration Issuance Date:** June 26, 2006
**Registration Revision No.:** 097-23684-00580
**Reviewer:** M. Caraher
**Date:** October 11, 2006

| Emission Unit ID | Maximum Capacity (tons/hour) | Design PTE (grains/dscf) | Maximum Exhaust (dscfm) | PM/PM10 PTE (lbs/hour) | PM/PM10 PTE (tons/yr) |
|---|---|---|---|---|---|
| 002 | 400 | 0.03 | 7000 | 1.80 | 7.88 |

**Notes:**
There are no AP-42 emission factors for metal shredding, fluff shredding or fluff separation.
Assume PM10 emissions = PM emissions.
All material input to the vehicle/metal shredder is wetted in the shredder with the Smart Water Injection System. Therefore, downstream fluff is wet when handled by the Z-box cleaning system. The emission factor submitted by Metal Dynamics was to use the design air flow rate of the bleed off exhaust air from the cylcone and the design particulate emission rate of the cyclone which Metal Dynamics claims as integral to the operation Z-box fluff separation process.
The PTE determined above is higher than the PM/PM10 emission factors for Z-box separators as presented in Institute of Scrap Recycling Industries, Inc. "Title V Applicability Workbook" Appendix D.11.A through D.11.E. The Permittee will test to confirm this emission

**Methodology:**
PTE of PM/PM10 (lbs/hour) = Design PTE (gr/dscf) x dscfm x 60 (min/hr) x lb/ 7000 gr
PTE of PM/PM10 (tons/year) = lbs/hr x 8760 hrs/yr x ton/2000 lbs

**Appendix A: Emission Calculations**
**Conveyors**

**Company Name:** Metal Dynamics, LLC
**Address City IN Zip:** 2205 South Holt Road, Indianapolis, Indiana 46241
**Registration No.:** 097-22690-00580
**Registration Issuance Date:** June 26, 2006
**Registration Revision No.:** 097-23684-00580
**Reviewer:** M. Caraher
**Date:** October 11, 2006

| Emission Unit ID | number of conveyors | Maximum Capacity (tons/hour) | PM Emission Factor (lbs/ton) | PM Emissions (tons/year) | PM Emissions each conveyor (lbs/hr) | PM10 Emission Factor (lbs/ton) | PM10 Emissions (tons/yr) |
|---|---|---|---|---|---|---|---|
| 003 (dry) | 1 | 400 | 0.003 | 5.26 | 1.20 | 0.0011 | 1.93 |
| 003 (wet) | 17 | 400 | 0.00014 | 4.17 | 0.06 | 4.5E-05 | 1.34 |
| | | | **Total Emissions** | **9.43** | | | **3.27** |

**Notes:**
Input conveyor is dry. All material input to the vehicle/metal shredder is wetted in the shredder with the Smart Water Injection System.
The PM/PM10 emission factors are from AP-42 Chapter 11.19, Table 11.19.2-2.
Based on uncontrolled PM emissions in lbs/hr for each conveyor, control equipment is not needed to specifically comply with 326 IAC 6-3-2.

**Methodology:**
PTE of PM/PM10 (tons/year) = # of conveyors x Maximum Capacity (tons/hour) x Emission Factor (lbs/ton) x 8760 hours/year x ton/2000 lbs

**Appendix A: Emission Calculations**
**HAP Emissions**

**Company Name:** Metal Dynamics, LLC
**Address City IN Zip:** 2205 South Holt Road, Indianapolis, Indiana 46241
**Registration No.:** 097-22690-00580
**Registration Issuance Date:** June 26, 2006
**Registration Revision No.:** 097-23684-00580
**Reviewer:** M. Caraher
**Date:** October 11, 2006

Process rate: (tons/hour) 400

| | HAP ? | Emission Factor (lbs/ton) | Emissions (lbs/hr) | Emissions (tons/yr) |
|---|---|---|---|---|
| Methylene Chloride | Yes | 6.00E-05 | 2.40E-02 | 1.05E-01 |
| 1,1 Dichloroethene | No | 1.33E-05 | 5.32E-03 | 2.33E-02 |
| MEK | Yes | 5.33E-06 | 2.13E-03 | 9.34E-03 |
| 1,1,1 Trichloroethane | Yes | 2.00E-04 | 8.00E-02 | 3.50E-01 |
| Benzene | Yes | 4.00E-04 | 1.60E-01 | 7.01E-01 |
| Tetrachloroethene | Yes | 2.67E-06 | 1.07E-03 | 4.68E-03 |
| Trichloroethene | Yes | 6.67E-05 | 2.67E-02 | 1.17E-01 |
| Toluene | Yes | 3.33E-04 | 1.33E-01 | 5.83E-01 |
| Ethylbenzene | Yes | 6.67E-05 | 2.67E-02 | 1.17E-01 |
| Styrene | Yes | 1.33E-05 | 5.32E-03 | 2.33E-02 |
| o-xylene | Yes | 6.67E-05 | 2.67E-02 | 1.17E-01 |
| m, p, - xylene | Yes | 1.33E-04 | 5.32E-02 | 2.33E-01 |
| Total VOC | | | | **2.38E+00** |
| Total PCB | Yes | 8.73E-05 | 3.49E-02 | 1.53E-01 |
| Cadmium | Yes | 1.16E-06 | 4.64E-04 | 2.03E-03 |
| Chromium | Yes | 1.28E-06 | 5.12E-04 | 2.24E-03 |
| Lead | Yes | 7.89E-06 | 3.16E-03 | 1.38E-02 |
| Total Metals | | | | 1.81E-02 |
| **Highest Single HAP - Benzene** | | | | **7.01E-01** |
| **Combined HAPs** | | | | **2.53E+00** |

**Notes:**

Emission factors from Table D-11.F "Title V Applicability Workbook" Institute of Scrap Recycling Industries, Inc. (Jan 1996), for stack test/results of a 150 ton per hour auto shredder.

**Methodology:**

Emissions (lbs/hr) = Process rate (tons/hr) x Emission Factor (lbs/ton)

Emissions (tons/yr) = Process rate (tons/hr) x Emission Factor (lbs/ton) x 8760 hrs/yr x ton/2000lbs

**Appendix A: Emission Calculations**
**Paved Roads**

| | |
|---|---|
| **Company Name:** | **Metal Dynamics, LLC** |
| **Address City IN Zip:** | **2205 South Holt Road, Indianapolis, Indiana 46241** |
| **Registration No.:** | **097-22690-00580** |
| **Registration Issuance Date:** | **June 26, 2006** |
| **Registration Revision No.:** | **097-23684-00580** |
| **Reviewer:** | **M. Caraher** |
| **Date:** | **October 11, 2006** |

Ef = [k*{(sL/2)^0.65}*{(W/3)^1.5}] - C

= 4.77 lb PM/mile (0.23 lb PM10/mile)

where k = 0.082 (particle size multiplier for PM) (k=0.004 for PM-10)

sL = 0.8 road surface silt loading (lbs/square foot)

W = 67 average weight (tons) of the vehicles traveling

C = 0.00047 PM emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear (C = 0.00047 for PM-10)

$$E = \frac{4.77 \text{ lb/mi} \times 2000 \text{ mi/yr}}{2000 \text{ lb/ton}} = 4.77 \text{ tons/yr}$$

Eext = E * [(365-p)/365] = 3.14 tons/yr PM

0.18 tons/yr PM-10

Taking natural mitigation due to precipitation into consideration: where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1 of AP-42)

**Notes:**
Emission factor, Ef, from AP-42 Chapter 13.2.1, Equation (1), (12/03)

**Appendix A: Emission Calculations**
**Summary of PTE in Tons per Year**

**Company Name:** Metal Dynamics, LLC
**Address City IN Zip:** 2205 South Holt Road, Indianapolis, Indiana 46241
**Registration No.:** 097-22690-00580
**Registration Issuance Date:** June 26, 2006
**Registration Revision No.:** 097-23684-00580
**Reviewer:** M. Caraher
**Date:** October 11, 2006

**400 tons/hr**

| | Pollutant | | | | | | Highest Single HAP | Combined |
|---|---|---|---|---|---|---|---|---|
| Emission Unit | PM | PM10 | SO2 | NOx | VOC | CO | (benzene) | HAPs |
| 001(Shredder) | 4.50 | 4.50 | 0.00 | 0.00 | 0.89 | 0.00 | see total | see total |
| 002 (Fluff Separation) | 7.88 | 7.88 | 0.00 | 0.00 | 0.00 | 0.00 | below | below |
| 003 (Conveyors) | 9.43 | 3.27 | NA | NA | NA | NA | NA | NA |
| Paved Roads | 3.14 | 0.18 | NA | NA | NA | NA | NA | NA |
| **TOTAL PTE** | 24.95 | 15.83 | 0.00 | 0.00 | 0.89 | 0.00 | 0.70 | 2.53 |
| **TOTAL PSD/EO PTE** | 21.81 | 15.65 | 0.00 | 0.00 | 0.89 | 0.00 | | |

**150 tons/hr**

| | Pollutant | | | | | | Highest Single HAP | Combined |
|---|---|---|---|---|---|---|---|---|
| Emission Unit | PM | PM10 | SO2 | NOx | VOC | CO | (benzene) | HAPs |
| 001(Shredder) | 1.69 | 1.69 | 0.00 | 0.00 | 0.89 | 0.00 | see total | see total |
| 002 (Fluff Separation) | 16.89 | 16.89 | 0.00 | 0.00 | 0.00 | 0.00 | below | below |
| 003 (Conveyors) | 3.53 | 1.23 | NA | NA | NA | NA | NA | NA |
| Paved Roads | 2.51 | 0.18 | NA | NA | NA | NA | NA | NA |
| **TOTAL PTE** | 24.63 | 19.99 | 0.00 | 0.00 | 0.89 | 0.00 | 0.26 | 0.95 |
| **TOTAL PSD/EO PTE** | 22.12 | 19.81 | 0.00 | 0.00 | 0.89 | 0.00 | | |

**Potential Emision Rate Difference (400 tons per hour minus 150 tons per hour)**

| | Pollutant | | | | | | Highest Single HAP | Combined |
|---|---|---|---|---|---|---|---|---|
| Emission Unit | PM | PM10 | SO2 | NOx | VOC | CO | (benzene) | HAPs |
| 001(Shredder) | 2.81 | 2.81 | 0.00 | 0.00 | 0.00 | 0.00 | see total | see total |
| 002 (Fluff Separation) | -9.01 | -9.01 | 0.00 | 0.00 | 0.00 | 0.00 | below | below |
| 003 (Conveyors) | 5.90 | 2.04 | NA | NA | NA | NA | NA | NA |
| Paved Roads | 0.63 | 0.00 | NA | NA | NA | NA | NA | NA |
| **TOTAL PTE** | 0.33 | -4.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.44 | 1.58 |
| **TOTAL PSD/EO PTE** | -0.30 | -4.16 | 0.00 | 0.00 | 0.00 | 0.00 | | |

**Notes:**
Total PSD/EO PTE does not include fugitive emissions