



TO: Interested Parties / Applicant

RE: Metal Dynamics, LLC / R097-22690-00580

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



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

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



June 26, 2006

Mr. John Hayworth
National Director, EHS
Metal Management, Inc.
254 Doremus Avenue
Newark, NJ 07105

CERTIFIED MAIL

Re: Registered Construction and Operation Status,
097-22690-00580

Dear Mr. Hayworth:

The application from Metal Dynamics, LLC, received on February 22, 2006, has been reviewed. 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 1800 South Holt Road, Indianapolis, Indiana, 46241 is classified as registered:

- (a) One (1) vehicle/metal shredder, model number 98-104, identified as Emission Unit ID 001, constructed in 2006, with a maximum capacity of 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, constructed in 2006, with a maximum capacity of 150 tons per hour, using a cyclone as control and as an integral part of the separation process, exhausting 15,000 acfm to stack/vent P002.
- (c) Eighteen (18) conveyors, identified as Emission Unit ID 003, constructed in 2006, with a maximum capacity to transfer and convey 150 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.



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- (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) 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)	150	55.44
Z-box cleaning system for metal/fluff separation (002)	150	55.44
Each of the eighteen (18) covered conveyors (003)	150	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:

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

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 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.

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:	1800 South Holt Road
City:	Indianapolis, Indiana 46241
Authorized individual:	Plant Manager
Phone #:	(973) 344-2696
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
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
Chicago, IL 60680**

(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, transport damp product and various conveyors are enclosed. Transfer points and material handling associated with unloading, transport damp product and 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 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 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, utilize enclosed conveyors, and transfers and handles damp material. Metal Dynamics, LLC. uses sweepers, 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, 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.

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

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	Metal Dynamics, LLC
Source Location:	1800 South Holt Road, Indianapolis, Indiana 46241
County:	Marion
SIC Code:	5093
Operation Permit No.:	097-22690-00580
Permit Reviewer:	M. Caraher

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 relating to the construction and operation of 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.

New Emission Units and Pollution Control Equipment

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

- (a) One (1) vehicle/metal shredder, model number 98-104, identified as Emission Unit ID 001, constructed in 2006, with a maximum capacity of 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, constructed in 2006, with a maximum capacity of 150 tons per hour, using a cyclone as control and as an integral part of the separation process, exhausting 15,000 acfm to stack/vent P002.
- (c) Eighteen (18) conveyors, identified as Emission Unit ID 003, constructed in 2006, with a maximum capacity to transfer and convey 150 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.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

Air Pollution Control Justification as an Integral Part of the Process

- (a) The company has 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 instantaneous 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) The company has 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 Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
P002	Z-box/Cylcone	25	0.875	15,000	ambient

Recommendation

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

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on February 22, 2006 with additional information received on April 18, 2006.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 8).

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/yr)
PM	24.63
PM-10	19.99
SO ₂	0.00
VOC	0.89
CO	0.00
NO _x	0.00

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

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM, PM10, SO₂, VOC, CO and NO_x are each less than 25 tons per year. The potential to emit PM and PM10 is greater than 5 tons per year and 10 tons per year, respectively. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration 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.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-2.5	nonattainment
PM10	attainment
SO ₂	maintenance attainment
NO ₂	attainment
8-hour Ozone	basic nonattainment
1-hour Ozone	maintenance attainment
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 PM_{2.5} in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as surrogate for PM_{2.5} 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, SO₂, NO₂, 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.

Source Status

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

Pollutant	Emissions (tons/yr)
PM	22.12
PM-10	19.81
SO ₂	0.00
VOC	0.89
CO	0.00
NO _x	0.00
Single HAP	0.26
Combination HAPs	0.95

Note: Fugitive PM/PM10 emissions are not counted into the PSD/EO potential to emit for this review.

- (a) This new source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3, the PSD and Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

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

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.
(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) 326 IAC 14, 20 and 40 CFR Part 63, applicable to this source.

State Rule Applicability – Entire Source

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

This source is not major under nonattainment NSR because it has the potential to emit less than 100 tons of PM10 (as a surrogate for PM2.5). Therefore, the 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 SO₂ 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'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.

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 (SO₂). 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 Monoxide 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 and State Rule Applicability – Individual Facilities 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), for this review and Registered Construction and Operation Status, 097-22690-00580.

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 – 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) 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)	150	55.44
Z-box cleaning system for metal/fluff separation (002)	150	55.44
Each of the eighteen (18) covered conveyors (003)	150	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:

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

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.

Therefore, in order to verify the potential to emit of this source, and 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 vehicle/metal shredding process and the Z-box metal/fluff separation process, compliance stack testing shall be performed on Emission Unit ID 001 and 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 001 and 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 001 and Emission Unit ID 002, utilizing methods as approved by IDEM, OAQ and OES.

Air Quality Impacts from Minor Sources

Modeling Overview

Pursuant to 326 IAC 2-1.1-5, IDEM, OAQ and OES have conducted a modeling analysis of the Limited Potential to Emit (PTE) criteria pollutants from this proposed source to estimate whether the Limited PTE criteria pollutants will cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS).

Modeling Results – Criteria Pollutants

The modeling results indicate that the Limited PTE criteria pollutants from this proposed source will not exceed the National Ambient Air Quality Standards (NAAQS) (see Appendix A pages 7 and 8).

Conclusion

The construction and operation of this automobile shredding and ferrous scrap separation source shall be subject to the conditions of the Registered Construction and Operation Status No. 097-22690-00580.

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

Company Name: Metal Dynamics, LLC
Address City IN Zip: 1800 South Holt Road, Indianapolis, Indiana 46241
Registration No.: 097-22690-00580
Reviewer: M. Caraher
Date: April 20, 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	150	0.00257	0.39	1.69

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" Appendix D, Table D-10.F. The Permittee will test to confirm the emission factor.

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: 1800 South Holt Road, Indianapolis, Indiana 46241
Registration No.: 097-22690-00580
Reviewer: M. Caraher
Date: April 20, 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	150	0.03	15000	3.86	16.89

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 cyclone 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: 1800 South Holt Road, Indianapolis, Indiana 46241
Registration No.: 097-22690-00580
Reviewer: M. Caraher
Date: April 20, 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	150	0.003	1.97	0.45	0.0011	0.72
003 (wet)	17	150	0.00014	1.56	0.02	4.5E-05	0.50
Total Emissions				3.53			1.23

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: 1800 South Holt Road, Indianapolis, Indiana 46241
Registration No.: 097-22690-00580
Reviewer: M. Caraher
Date: April 20, 2006

Process rate: 150
(tons/hour)

	HAP ?	Emission Factor (lbs/ton)	Emissions (lbs/hr)	Emissions (tons/yr)
Methylene Chloride	Yes	6.00E-05	9.00E-03	3.94E-02
1,1 Dichloroethene	No	1.33E-05	2.00E-03	8.74E-03
MEK	Yes	5.33E-06	8.00E-04	3.50E-03
1,1,1 Trichloroethane	Yes	2.00E-04	3.00E-02	1.31E-01
Benzene	Yes	4.00E-04	6.00E-02	2.63E-01
Tetrachloroethene	Yes	2.67E-06	4.01E-04	1.75E-03
Trichloroethene	Yes	6.67E-05	1.00E-02	4.38E-02
Toluene	Yes	3.33E-04	5.00E-02	2.19E-01
Ethylbenzene	Yes	6.67E-05	1.00E-02	4.38E-02
Styrene	Yes	1.33E-05	2.00E-03	8.74E-03
o-xylene	Yes	6.67E-05	1.00E-02	4.38E-02
m, p, - xylene	Yes	1.33E-04	2.00E-02	8.74E-02
Total VOC				8.94E-01
Total PCB	Yes	8.73E-05	1.31E-02	5.74E-02
Cadmium	Yes	1.16E-06	1.74E-04	7.62E-04
Chromium	Yes	1.28E-06	1.92E-04	8.41E-04
Lead	Yes	7.89E-06	1.18E-03	5.18E-03
Total Metals				6.79E-03
Highest Single HAP - Benzene				2.63E-01
Combined HAPs				9.49E-01

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: 1800 South Holt Road, Indianapolis, Indiana 46241
Registration No.: 097-22690-00580
Reviewer: M. Caraher
Date: April 20, 2006

$$E_f = [k \cdot ((sL/2)^{0.65}) \cdot (W/3)^{1.5}] - C$$

= 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)

$$E = \frac{4.77 \text{ lb/mi} \times 1600 \text{ mi/yr}}{2000 \text{ lb/ton}} = 3.82 \text{ tons/yr}$$

$$E_{ext} = E \cdot [(365-p)/365] =$$

2.51 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: 1800 South Holt Road, Indianapolis, Indiana 46241
Registration No.: 097-22690-00580
Reviewer: M. Caraher
Date: April 20, 2006

Emission Unit	Pollutant						Highest Single HAP (benzene)	Combined HAPs
	PM	PM10	SO2	NOx	VOC	CO		
001(Shredder)	1.69	1.69	0.00	0.00	0.89	0.00	see total below	see total below
002 (Fluff Separation)	16.89	16.89	0.00	0.00	0.00	0.00		
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		

Notes:

Total PSD/EO PTE does not include fugitive emissions

OFFICE OF AIR QUALITY

Minor Source Criteria Pollutant Modeling Screening Form - Raw Data

General Permit Information

Permit Number: R097-22690-00580
 Company Name: Metal Dynamics, LLC
 City: Indianapolis, Indiana 46241
 County: Marion
 Permit Reviewer: M. Caraher - Indpls OES
 Date results are needed: 5/24/2006

Source Specific Information

TABLE 1 - Criteria Pollutant Emission Rates (lb/hr) - based on the highest allowable emissions rate

Stack ID	CO	NO _x	PM ₁₀	Pb	SO ₂
P002	0	0	3.86	0	0
Totals:					
	0	0	3.86	0	0

TABLE 2 - Hazardous Air Pollutant Emission Rates (lb/hr) - based on the highest allowable emissions rate

Stack ID	HAP Name	HAP Name	HAP Name	HAP Name	HAP Name	HAP Name
P002						
0						
0						
0						
0						
0						
0						
Totals:						
	0	0	0	0	0	0

**TABLE 3 - Stack Information: (All heights are from ground level)
For non-circular stacks, take the average of the stack dimensions as the stack diameter.**

Stack ID	Stack Height (ft)	Flow Rate (acfm)	Stack Temp. (°F)	Stack Diameter (ft)	Closest building related to stack:		
					Height (ft)	Width (ft)	Length (ft)
P002	25	15000	68	0.875			
0							
0							
0							
0							
0							
0							

Closest Property Line (Distance in feet): 200 Y No building (Please check if this applies)

OFFICE OF AIR QUALITY

Minor Source Criteria Pollutant Modeling Screening Form - Modeling Results

General Permit Information

Permit Number: R097-22690-00580

Company Name: Metal Dynamics, LLC Model Used (Please check one):

City: Indianapolis, Indiana 46241 SCREEN ISCST

County: Marion Date Modeling Completed: 5/24/2006

Permit Reviewer: M. Caraher - Indpls OES Modeler: M. Caraher - Indpls OES

Date results are needed: 24-May-06

Modeling Results

TABLE 4 - Criteria Pollutants - Maximum Concentration (ug/m3):

Averaging Period	CO	NOX	PM10	Pb	SO2
1-hour modeled concentration					
NAAQ Standard	40000				
PASS or FAIL	PASS				
3-hour modeled concentration					
NAAQ Standard					1300
PASS or FAIL					PASS
8-hour modeled concentration					
NAAQ Standard	10000				
PASS or FAIL	PASS				
24-hour modeled concentration					
NAAQ Standard			150		365
PASS or FAIL			PASS		PASS
Quarterly modeled concentration					
NAAQ Standard				1.5	
PASS or FAIL				PASS	
Annual modeled concentration					
NAAQ Standard		100	50		80
PASS or FAIL		PASS	PASS		PASS

Includes background concentration(s) from PM10 monitor @ 1735 South West Street

TABLE 5 - HAPs - Maximum Concentration (ug/m3):

Averaging Period	HAP Name	HAP Name	HAP Name	HAP Name	HAP Name	HAP Name
8-hour modeled concentration						
PEL Standard						
PASS or FAIL	PASS					
Annual modeled concentration						
NATA Standard						
PASS or FAIL	PASS					