



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
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(800) 451-6027  
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TO: Interested Parties / Applicant  
DATE: April 5, 2006  
RE: Bloomfield Manufacturing, Inc. / 055-21752-00025  
FROM: Nisha Sizemore  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision – Approval

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

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

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

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

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

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

Enclosures  
FNPER-AM.dot 1/10/05



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

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*Mitchell E. Daniels, Jr.*  
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April 5, 2006

Mr. Patrick Simpson  
Bloomfield Manufacturing Company, Inc.  
46 West Spring Street  
Bloomfield, Indiana 47424

Re: Exempt Construction and Operation Status,  
055-21752-00025

Dear Mr. Simpson:

The application from Bloomfield Manufacturing Company, Inc., received on September 12, 2005, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the operation of the metal jack and clamp manufacturing source, located at 46 West Spring Street, Bloomfield, Indiana 47424, is classified as exempt from air pollution permit requirements:

- (a) One (1) bar conveyor paint dip line, identified as WBL, capacity: 500 metal jack and/or clamp parts per hour.
- (b) One (1) powder coating spray booth, identified as PCL, constructed in 2001, equipped with a spray gun and one (1) powder coating overspray filter module for each powder coating color, exhausting to the powder coating stack, capacity: 1,176 large metal jack and/or clamp parts per hour or 5,850 small metal jack and/or clamp parts per hour.
- (c) One (1) natural gas-fired burn-off oven, identified as Burn-Off Oven, constructed in 2001, exhausting to the burn-off oven stack, rated at 0.5 million British thermal units per hour, with a maximum capacity of ten (10) pounds of burn-off waste per hour.
- (d) One (1) natural gas-fired cure oven, identified as Cure Oven, constructed in 2001, exhausting to the cure oven stack, rated at 2.0 million British thermal units per hour.
- (e) One (1) welding facility using carbon steel electrodes, identified as S-2 Station North, equipped with an electrostatic precipitator (ESP) for particulate control, exhausting to S-2 North Vent, capacity: 92 metal jack and/or clamp parts per hour.
- (f) One (1) welding facility using carbon steel electrodes, identified as S-6 Station South, equipped with an electrostatic precipitator (ESP) for particulate control, exhausting to S-6 South Vent, capacity: 94 metal jack and/or clamp parts per hour.
- (g) One (1) welding facility using carbon steel electrodes, identified as Hand Operated Station West, equipped with an electrostatic precipitator (ESP) for particulate control, exhausting to West Vent, capacity: 10.5 metal jack and/or clamp parts per hour.
- (h) One (1) Goff cube barrel blaster, using steel shot for blasting, identified as Goff Unit, equipped with a Goff fabric filter system for particulate control, capacity: 800 pounds per hour of iron castings and steel stampings.

The following conditions shall be applicable:

(1) 326 IAC 4-2-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 4-2-2, the one (1) natural gas-fired burn-off oven, which serves as an incinerator, shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Be equipped with a primary burner unless burning wood products;
- (c) Comply with 326 IAC 5-1 (Opacity Limitations) and 326 IAC 2 (Permit Review Rules);
- (d) Be maintained properly as specified by the manufacturer and approved by IDEM;
- (e) Be operated according to the manufacturer's recommendation and only burn waste approved by IDEM;
- (f) Comply with other state and/or local rules or ordinances regarding installation and operation of incinerators;
- (g) Be operated so that emissions of hazardous materials including, but not limited to, viable pathogenic bacteria, dangerous chemical or gases, or noxious odors are prevented;
- (h) Not create a nuisance or a fire hazard; and
- (i) Not emit particulate matter (PM) in excess of 0.5 pounds per 1,000 pounds of dry exhaust gas corrected to fifty percent (50%) excess air.

The operation of the incinerator shall be terminated immediately upon noncompliance with any of the above mentioned requirements.

(2) 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:

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

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

- (a) Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) powder coating spray booth, identified as PCL, shall be controlled by a powder coating overspray filter module, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

- (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

- (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

- (b) Pursuant to 326 IAC 6-3-2(c), the particulate (PM) from the one (1) Goff cube barrel blaster, identified as Goff Unit, shall be limited to less than 2.22 pounds per hour when operating at a process weight rate of 800 pounds per hour (0.40 tons per hour).

This limitation is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The Goff fabric filter system shall be in operation at all times the Goff cube barrel blaster, identified as Goff Unit, is in operation, in order to comply with this limit.

- (4) Pursuant to 326 IAC 8-2-9, the owner or operator shall not allow the discharge into the atmosphere VOC in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicators of the one (1) bar conveyor paint dip line.

Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from the application equipment of one (1) bar conveyor paint dip line during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

Based on the MSDS submitted by the source and calculations made, the one (1) bar conveyor line is in compliance with this requirement.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

- (5) Visible emissions notations of the Goff cube barrel blaster stack exhaust shall be performed once per day during normal daylight operations, when venting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start up or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (6) The Permittee shall record the total static pressure drop across the Goff fabric filter system controlling the one (1) Goff mechanical blaster, at least once per day when the blaster is in operation when venting to the atmosphere. When, for any one reading, the pressure drop across the Goff fabric filter system shall be maintained within a range of 2.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps to return operation of the unit to within "normal" parameters. A pressure reading that is outside

the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

- (7) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (8) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.
- (9) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the Goff barrel blaster.
- (10) Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

These monitoring conditions are necessary, since the Goff cube barrell blaster is considered integral to the process and since the Goff cube barrel blaster must operate properly and at all times to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-1.1-3 (Exemptions).

Sincerely,  
Original signed by

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

CJF/MES

cc: File - Greene County  
Greene County Health Department  
Air Compliance – Jim Thorpe  
Compliance Branch  
Administrative and Development Section  
Technical Support and Modeling - Michele Boner  
Charles Staehler – August Mack Environmental

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

Technical Support Document (TSD) for an Exemption

**Source Background and Description**

<b>Source Name:</b>	<b>Bloomfield Manufacturing Company, Inc.</b>
<b>Source Location:</b>	<b>46 West Spring Street, Bloomfield, Indiana 47424</b>
<b>County:</b>	<b>Greene</b>
<b>SIC Code:</b>	<b>3499</b>
<b>Registration Permit No.:</b>	<b>055-16056-00025</b>
<b>Operation Permit Issuance Date:</b>	<b>July 14, 2004</b>
<b>Exemption No.:</b>	<b>055-21752-00025</b>
<b>Permit Reviewer:</b>	<b>Craig J. Friederich</b>

The Office of Air Quality (OAQ) has reviewed an application from Bloomfield Manufacturing Company., Inc. relating to the construction and operation of a Goff blasting unit, equipped with a Goff fabric filter system for particulate control. The source will also be removing the existing abrasive mechanical blaster using steel shot for blasting, identified as Wheelabrator. The removal of the existing Wheelabrator, and the addition of the new Goff blasting unit, which has integral control, will cause the potential to emit to revert back below Registration thresholds. Therefore, a comprehensive Exemption will be issued for this source.

**Permitted Emission Units and Pollution Control Equipment**

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

- (a) One (1) bar conveyor paint dip line, identified as WBL, capacity: 500 metal jack and/or clamp parts per hour.
- (b) One (1) powder coating spray booth, identified as PCL, constructed in 2001, equipped with a spray gun and one (1) powder coating overspray filter module for each powder coating color, exhausting to the powder coating stack, capacity: 1,176 large metal jack and/or clamp parts per hour or 5,850 small metal jack and/or clamp parts per hour.
- (c) One (1) natural gas-fired burn-off oven, identified as Burn-Off Oven, constructed in 2001, exhausting to the burn-off oven stack, rated at 0.5 million British thermal units per hour, with a maximum capacity of ten (10) pounds of burn-off waste per hour.
- (d) One (1) natural gas-fired cure oven, identified as Cure Oven, constructed in 2001, exhausting to the cure oven stack, rated at 2.0 million British thermal units per hour.
- (e) One (1) welding facility using carbon steel electrodes, identified as S-2 Station North, equipped with an electrostatic precipitator (ESP) for particulate control, exhausting to S-2 North Vent, capacity: 92 metal jack and/or clamp parts per hour.
- (f) One (1) welding facility using carbon steel electrodes, identified as S-6 Station South, equipped with an electrostatic precipitator (ESP) for particulate control, exhausting to S-6 South Vent, capacity: 94 metal jack and/or clamp parts per hour.
- (g) One (1) welding facility using carbon steel electrodes, identified as Hand Operated Station West, equipped with an electrostatic precipitator (ESP) for particulate control, exhausting to West Vent, capacity: 10.5 metal jack and/or clamp parts per hour.

### **Unpermitted Emission Units and Pollution Control Equipment**

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

### **New Emission Units and Pollution Control Equipment**

- (h) One (1) Goff cube barrel blaster, using steel shot for blasting, identified as Goff Unit, equipped with a Goff fabric filter system for particulate control, exhausting to general ventilation, capacity: 800 pounds per hour of iron castings and steel stampings.

### **Emission Units and Pollution Control Equipment Removed**

The following facilities have been removed from the source and are not included in the proposed permit:

One (1) abrasive mechanical blaster using steel shot for blasting, identified as Wheel-abrator, equipped with a fabric filter system for particulate control, capacity: 15,865 pounds per hour of iron castings and 38 pounds per hour of steel stampings.

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

- (a) The company has submitted the following justification such that the Goff fabric filter system be considered as an integral part of the one (1) Goff cube barrel blaster:
  - (1) The Goff fabric filter system is necessary because operation of the Goff cube blaster without control would immediately result in parts that do not meet the necessary standards for use in subsequent operations. The purpose of the shot-blast machines is to clean parts for further machining or painting. In all cases, the part must be free from metal fines for quality in the manufacturing process.
  - (2) IDEM, OAQ has evaluated the justifications and agreed that the Goff fabric filter system system will be considered as an integral part of the one (1) Goff cube barrel blaster, because the control equipment serves a primary purpose other than pollution control. The fabric filter system is necessary for the recycling of the shotblast media. The system is designed for such recycling to take place, and could not be operated otherwise. Therefore, the permitting level will be determined using the potential to emit after the Goff fabric filter system system. Operating conditions in the proposed permit will specify that this Goff fabric filter system system shall operate at all times when the one (1) Goff cube barrel blaster is in operation.
- (b) Pursuant to Registration 055-16056-00025, the IDEM, OAQ, agreed that the overspray filter module for the one (1) powder coating spray booth, identified as PCL, should be considered integral.

IDEM, OAQ evaluated the justifications and agreed that the filter module will be considered as an integral part of the one (1) powder coating spray booth. This control device clearly has an overwhelming net positive economic effect. Therefore, the permitting level will be determined using the potential to emit after the filter module. Operating conditions in the proposed Exemption will specify that this filter module shall operate at all times when the one (1) powder coating spray booth is in operation.

**Stack Summary**

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
Powder Coating Stack	Powder Coating Spray Booth	25.0	1.17	3,500	450
Burn-off Oven Stack	Burn-off Oven	25.0	1.17	650	1,400
S-2 North Vent	Welding S-2 Station North	29.25	2.00	N/A	Ambient
S-6 South Vent	Welding S-6 Station South	29.08	2.00	N/A	Ambient

**Emission Calculations**

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

**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	3.51
PM <sub>10</sub>	3.56
SO <sub>2</sub>	0.060
VOC	9.47
CO	0.955
NO <sub>x</sub>	0.942

HAPs	Potential to Emit (tons/yr)
Benzene	0.00002
Dichlorobenzene	0.00001
Formaldehyde	0.001
Hexane	0.016
Toluene	0.00003
Lead Compounds	0.000004

HAPs	Potential to Emit (tons/yr)
Cadmium Compounds	0.00001
Chromium Compounds	0.00004
Manganese Compounds	0.008
Nickel Compounds	0.00005
Triethylamine	0.906
Glycol Ethers	2.17
Total	3.10

The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants are less than the levels listed in 326 IAC 2-5.1-2. Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.

### County Attainment Status

The source is located in Greene County.

Pollutant	Status
PM <sub>2.5</sub>	attainment
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
1-Hour Ozone	attainment
8-Hour Ozone	basic nonattainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) 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<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Greene County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements of 326 IAC 2-3, Emission Offset. See the State Rule Applicability - Entire Source section of this document.
- (b) Greene County has been classified as unclassifiable or attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as surrogate for PM<sub>2.5</sub> emissions. See the State Rule Applicability - Entire Source section of this document.

- (c) Greene County has been classified as attainment or unclassifiable in Indiana for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section of this document.

### **Federal Rule Applicability**

- (a) The requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60 Subpart E Standards of Performance for Incinerators), are not included in this Exemption for this source because the one (1) natural gas-fired burn off oven has a charging rate less than fifty (50) tons per day.
- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63 Subpart EEE National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors, are not included in this Exemption for this source because the one (1) natural gas-fired burn off oven is not considered a hazardous waste incinerator and the source is not a major source of HAPs.
- (c) The requirements of 40 CFR 63 Subpart Mmmm, National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, are not included in this Exemption because the source is not a major source of HAPs.

### **State Rule Applicability – Entire Source**

#### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The unrestricted potential to emit from this source is less than two-hundred fifty (250) tons per year of any pollutant and it is not one of the 28 sources listed under 326 IAC 2-2. Therefore, the requirements of 326 IAC 2-2 do not apply.

#### 326 IAC 2-4.1-1 (New Source Toxics Control)

The potential to emit of any single HAP from the entire source is less than ten (10) tons per year and the potential emit of any combination of HAPs from the entire source is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 2.4.1-1 do not apply to this source.

#### 326 IAC 2-6 (Emission Reporting)

This source is not located in Lake or Porter County with the potential to emit greater than twenty-five (25) tons per year of NO<sub>x</sub>, does not emit five (5) tons per year or more of lead and does not require a Part 70 Operating Permit. Therefore, the requirements of 326 IAC 2-6 do not apply.

#### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

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

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### **State Rule Applicability – Individual Facilities**

#### **326 IAC 4-2-2 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 4-2-2, the one (1) natural gas-fired burn-off oven, which serves as an incinerator, shall:

- (a) Consist of primary and secondary chambers or the equivalent;
- (b) Be equipped with a primary burner unless burning wood products;
- (c) Comply with 326 IAC 5-1 (Opacity Limitations) and 326 IAC 2 (Permit Review Rules);
- (d) Be maintained properly as specified by the manufacturer and approved by IDEM;
- (e) Be operated according to the manufacturer's recommendation and only burn waste approved by IDEM;
- (f) Comply with other state and/or local rules or ordinances regarding installation and operation of incinerators;
- (g) Be operated so that emissions of hazardous materials including, but not limited to, viable pathogenic bacteria, dangerous chemical or gases, or noxious odors are prevented;
- (h) Not create a nuisance or a fire hazard; and
- (i) Not emit particulate matter (PM) in excess of 0.5 pounds per 1,000 pounds of dry exhaust gas corrected to fifty percent (50%) excess air.

The operation of the incinerator shall be terminated immediately upon noncompliance with any of the above mentioned requirements.

The one (1) natural gas-fired burn off oven has a maximum exhaust rate of 0.016 pounds of PM per 1,000 pounds of dry exhaust gas, corrected to fifty percent (50%) excess air. Therefore, the one (1) natural gas-fired burn off oven is in compliance with this rule.

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

- (a) Pursuant to 326 IAC 6-3-2(d), particulate from the one (1) powder coating spray booth, identified as PCL, shall be controlled by a powder coating overspray filter module, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

- (a) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

- (b) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

- (b) Pursuant to 326 IAC 6-3-2(c), the particulate (PM) from the one (1) Goff cube barrel blaster, identified as Goff Unit, shall be limited to less than 2.22 pounds per hour when operating at a process weight rate of 800 pounds per hour (0.40 tons per hour).

This limitation is based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The Goff fabric filter system shall be in operation at all times the Goff cube barrel blaster, identified as Goff Unit, is in operation, in order to comply with this limit. The potential to emit, after controls, from this facility is 0.46 pounds per hour. Therefore, the one (1) Goff cube barrel blaster, identified as Goff Unit, is in compliance with this rule.

- (c) Pursuant to 6-3-1(b)(5), the one (1) bar conveyer paint dip line is not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because the one (1) bar conveyer paint dip line uses dip coating to apply surface coating materials.
- (d) Pursuant to 6-3-1(b)(2), the one (1) natural gas-fired burn off oven is not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because the one (1) natural gas-fired burn off oven is considered an incinerator.
- (e) Pursuant to 326 IAC 6-3-1(b)(14), the one (1) natural gas-fired cure oven is not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because the one (1) natural gas-fired cure oven has potential particulate emissions less than 0.551 pounds per hour.
- (f) Pursuant to 6-3-1(b) (9), the source-wide welding facilities are not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because the source-wide welding facilities consume less than six hundred and twenty-five (625) pounds of weld wire or rod per day.

#### 326 IAC 8-2-9 (Miscellaneous Metal Coating)

- (a) Pursuant to 326 IAC 8-2-9(a)(4), the one (1) powder coating spray booth, constructed after July 1, 1990, is not subject to the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating) because the one (1) powder coating spray booth has potential emissions less than fifteen (15) pounds of VOC per day before add-on controls.
- (b) The one (1) bar conveyer paint dip line, constructed after July 1, 1990, has the unrestricted potential to emit greater than fifteen (15) pounds of VOC per day. Therefore, the one (1) bar conveyer paint dip line is subject to the requirements of 326 IAC 8-2-9

(Miscellaneous Metal Coating Operations). Pursuant to 326 IAC 8-2-9, the volatile organic compound (VOC) content of coating delivered to the applicators at the one (1) bar conveyer line shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the one (1) bar conveyer paint dip line is in compliance with this requirement.

### Compliance Requirements

The one (1) Goff cube barrell blaster has applicable compliance requirements as specified below:

- (a) Visible emissions notations of the Goff cube barrell blaster stack exhaust shall be performed once per day during normal daylight operations, when venting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start up or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (b) The Permittee shall record the total static pressure drop across the Goff fabric filter system controlling the one (1) Goff mechanical blaster, at least once per day when the blaster is in operation when venting to the atmosphere. When, for any one reading, the pressure drop across the Goff fabric filter system shall be maintained within a range of 2.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps to return operation of the unit to within "normal" parameters. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (d) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced.
- (e) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the Goff barrel blaster.

- (f) Bag failure can be indicated by a significant drop in the baghouse=s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

These monitoring conditions are necessary, since the Goff cube barrel blaster is considered integral to the process and since the Goff cube barrel blaster must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-1.1-3 (Exemptions).

### **Conclusion**

The operation of this metal jack and clamp manufacturing source shall be subject to the conditions of the attached proposed Exemption 055-21752-00025.



**Appendix A: Emission Calculations  
Abrasive Blasting - Confined**

**Company Name: Bloomfield Manufacturing Company, Inc.**  
**Address City IN Zip: 46 West Spring Street, Bloomfield, Indiana 47424**  
**Exemption: 055-21752**  
**Plt ID: 055-00025**  
**Reviewer: Craig J. Friederich**  
**Date: September 12, 2005**

**Table 1 - Emission Factors for Abrasives**

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

**Table 2 - Density of Abrasives (lb/ft3)**

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

**Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)**

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

Internal diameter, in	Nozzle Pressure (psig)							
	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

**Calculations**

**Flow Rate (FR) (lb/hr) = 11400 per nozzle**

**Uncontrolled Emissions (E, lb/hr)**

EF = emission factor (lb PM/ lb abrasive) From Table 1 =

0.004

FR = Flow Rate (lb/hr) =

11400

w = fraction of time of wet blasting =

0.00%

N = number of nozzles =

1.00

**Control Efficiency**

99%

<b>Controlled Emissions =</b>	<b>0.46 lb/hr</b>
	<b>2.00 ton/yr</b>

**METHODOLOGY**

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)

Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs

Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)

E = EF x FR x (1-w/200) x N

w should be entered in as a whole number (if w is 50%, enter 50)

The fabric filter system is integral to the operation of the abrasive mechanical blasting. Therefore, the potential to emit is equal to the controlled emissions.

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

**Company Name: Bloomfield Manufacturing Company, Inc.**  
**Address City IN Zip: 46 West Spring Street, Bloomfield, Indiana 47424**  
**Exemption: 055-21752**  
**Pit ID: 055-00025**  
**Reviewer: Craig J. Friederich**  
**Date: September 12, 2005**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

2.00

17.5

One (1) cure oven rated at 2.00 MMBtu/hr.

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	100	5.50	84.0
				**see below		
Potential Emission in tons/yr	0.017	0.067	0.005	0.876	0.048	0.736

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

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

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

See page 4 for HAPs emissions calculations.

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

**Company Name: Bloomfield Manufacturing Company, Inc.**  
**Address City IN Zip: 46 West Spring Street, Bloomfield, Indiana 47424**  
**Permit Number: 055-21752**  
**Pit ID: 055-00025**  
**Reviewer: Craig J. Friederich**  
**Date: September 12, 2005**

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 0.002	Dichlorobenzene 0.001	Formaldehyde 0.075	Hexane 1.80	Toluene 0.003
Potential Emission in tons/yr	0.00002	0.00001	0.001	0.016	0.00003

HAPs - Metals						
Emission Factor in lb/MMcf	Lead 0.001	Cadmium 0.001	Chromium 0.001	Manganese 0.0004	Nickel 0.002	<b>Total</b>
Potential Emission in tons/yr	0.000004	0.00001	0.00001	0.000003	0.00002	<b>0.017</b>

Methodology is the same as page 3.

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

**Appendix A: Emissions Calculations**

**Welding**

**Company Name:** Bloomfield Manufacturing Company, Inc.  
**Address City IN Zip:** 46 West Spring Street, Bloomfield, Indiana 474;  
**Permit Number:** 055-21752  
**Pit ID:** 055-00025  
**Reviewer:** Craig J. Friederich  
**Date:** September 12, 2005

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING											
Metal Inert Gas (MIG)	1.00	1.05	0.024	0.0003	0.000001	0.000001	0.025	0.0003	0.000001	0.000001	0.0003
Metal Inert Gas (MIG)	1.00	1.20	0.024	0.0003	0.000001	0.000001	0.029	0.0004	0.000001	0.000001	0.0004
Metal Inert Gas (MIG)	1.00	3.46	0.024	0.0003	0.000001	0.000001	0.083	0.001	0.000003	0.000003	0.001
<b>EMISSION TOTALS</b>											
Potential Emissions lbs/hr							0.137	0.002	0.00001	0.00001	0.002
Potential Emissions lbs/day							3.29	0.041	0.0001	0.0001	0.041
Potential Emissions tons/year							0.600	0.008	0.00003	0.00003	0.008

**METHODOLOGY**

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

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

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

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

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

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

**Company Name:** Bloomfield Manufacturing Company, Inc.  
**Address City IN Zip:** 46 West Spring Street, Bloomfield, Indiana 47424  
**Permit Number:** 055-21752  
**Pit ID:** 055-00025  
**Permit Reviewer:** Craig J. Friederich  
**Date:** September 12, 2005

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Triethylamine	Weight % Glycol Ethers	Triethylamine Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)
<b>Bar Conveyer Line</b>							
Black Acrylic Dipping Enamel	8.888	0.0033	500	1.41%	3.38%	0.906	2.17
<b>Total</b>						0.906	2.17

**METHODOLOGY**

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs



**Appendix A: Emission Calculations  
Incinerator (Burn-off Oven)**

**Company Name:** Bloomfield Manufacturing Company, Inc.  
**Address City IN Zip:** 46 West Spring Street, Bloomfield, Indiana 47424  
**Permit Number:** 055-21752  
**Plt ID:** 055-00025  
**Reviewer:** Craig J. Friederich  
**Application Date:** September 12, 2005

THROUGHPUT

lbs/hr

10.0

THROUGHPUT

ton/yr

43.8

	POLLUTANT				
	PM	SO2	CO	VOC	NOX
Emission Factor in lb/ton	7.00	2.50	10.0	3.00	3.00
Potential Emissions in ton/yr	0.153	0.055	0.219	0.066	0.066

**Methodology**

PM = PM<sub>10</sub>

Emission factors are from AP 42 (5th Edition 1/95) Table 2.1-12, Uncontrolled emission factors for industrial/commercial refuse combustors, multiple chambers

Throughput (lb/hr) \* 8760 hr/yr \* ton/2000 lb = throughput (ton/yr)

**Appendix A: Emissions Calculations  
Summary from Entire Source**

**Company Name: Bloomfield Manufacturing Company, Inc.**  
**Address City IN Zip: 45 West Spring Street, Bloomfield, Indiana 47424**  
**Permit Number: 055-21752**  
**Pit ID: 055-00025**  
**Reviewer: Craig J. Friederich**  
**Date: September 12, 2005**

**Uncontrolled Emissions (tons per year)**

Facility	PM	PM10	SO2	NOx	VOC	CO
Surface Coating / Assembly	0.741	0.741	0.00	0.00	9.36	0.00
Welding	0.600	0.600	0.00	0.00	0.00	0.00
Abrasive Blasting	2.00	2.00	0.00	0.00	0.00	0.00
Cure Oven	0.017	0.067	0.005	0.876	0.048	0.736
Burn-off Oven	0.153	0.153	0.055	0.066	0.066	0.219
<b>Total</b>	<b>3.51</b>	<b>3.56</b>	<b>0.060</b>	<b>0.942</b>	<b>9.47</b>	<b>0.955</b>

**Controlled Emissions (tons per year)**

Facility	PM	PM10	SO2	NOx	VOC	CO
Surface Coating / Assembly	0.741	0.741	0.00	0.00	9.36	0.00
Welding	0.600	0.600	0.00	0.00	0.00	0.00
Abrasive Blasting	2.00	2.00	0.00	0.00	0.00	0.00
Cure Oven	0.017	0.067	0.005	0.876	0.048	0.736
Burn-off Oven	0.153	0.153	0.055	0.066	0.066	0.219
<b>Total</b>	<b>3.51</b>	<b>3.56</b>	<b>0.060</b>	<b>0.942</b>	<b>9.47</b>	<b>0.955</b>

**HAPs Emissions (tons per year)**

Facility	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Lead
Surface Coating / Assembly	0.00	0.00	0.00	0.00	0.00	0.00
Welding	0.00	0.00	0.00	0.00	0.00	0.00
Cure Oven	0.00002	0.00001	0.001	0.016	0.00003	0.000004
<b>Total</b>	<b>0.00002</b>	<b>0.00001</b>	<b>0.001</b>	<b>0.016</b>	<b>0.00003</b>	<b>0.000004</b>

Facility	Cadmium	Chromium	Manganese	Nickel
Surface Coating / Assembly	0.00	0.00	0.00	0.00
Welding	0.00	0.00003	0.01	0.00003
Cure Oven	0.00001	0.00001	0.000003	0.00002
<b>Total</b>	<b>0.00001</b>	<b>0.00004</b>	<b>0.008</b>	<b>0.00005</b>

Facility	Triethylamine	Glycol Ethers	Total
Surface Coating / Assembly	0.906	2.17	3.08
Welding	0.00	0.00	0.01
Cure Oven	0.00	0.00	0.017
<b>Total</b>	<b>0.906</b>	<b>2.17</b>	<b>3.10</b>