INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: December 17, 2010

RE: Carlisle Industrial Brake & Friction / 105-29821-00013

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, 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 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-MOD.dot 12/3/07

IDEM

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December 17, 2010

Mr. John Cage
Carlisle Industrial Brake & Friction
1031 East Hillside Drive
Bloomington, IN 47401

Re: 105-29821-00013
First Minor Revision to
M105-28659-00013

Dear Mr. Cage

Carlisle Industrial Brake & Friction was issued a Minor Source Operating Permit (MSOP) No. M105-28659-00013 on March 24, 2010 for a stationary motor vehicle parts and accessories, including brakes, brake parts, and clutch parts, manufacturing facility located at 1031 E. Hillside Drive, Bloomington, Indiana. On October 25, 2010, the Office of Air Quality (OAQ) received an application from the source requesting to construct and operate several new emission units and control devices at the source. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-6.1-6, these changes to the permit are required to be reviewed in accordance with the Minor Permit Revision (MPR) procedures of 326 IAC 2-6.1-6(h). Pursuant to the provisions of 326 IAC 2-6.1-6, a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-6.1-6, this permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Brian Williams, of my staff, at 317-234-5375 or 1-800-451-6027, and ask for extension 4-5375.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

IC/BMW

cc: File - Monroe County
Monroe County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Billing, Licensing and Training Section

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New Source Construction and Minor Source Operating Permit OFFICE OF AIR QUALITY

Carlisle Industrial Brake & Friction
1031 E Hillside Drive
Bloomington, Indiana 47401

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M105-28659-00013	
Issued by: original signed by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: March 24, 2010 Expiration Date: March 24, 2015

First Notice-Only Change No.: 105-29161-00013, issued on May 11, 2010.

First Minor Permit Revision No.: 105-29821-00013	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 17, 2010 Expiration Date: March 24, 2015

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary motor vehicle parts and accessories, including brakes, brake parts, and clutch parts, manufacturing facility.

Source Address:	1031 E Hillside Drive, Bloomington, Indiana 47401
General Source Phone Number:	812-334-8711
SIC Code:	3714
County Location:	Monroe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) One Brake Assembly and Brake Part manufacturing operation, including the following:

(1) Metal Surface Coating Operations, including the following;

(A) One (1) Spray Paint Booth, identified as PB1, constructed in 1992, using air atomization to spray coatings on metal automotive brake assemblies and actuator assemblies, with a maximum application rate of thirty-three hundredths (0.33) gal/hr, equipped with dry filters for particulate control, and exhausting outside the building through stack S-PB1;

(B) One (1) Spray Paint Booth, identified as PB2, constructed in 1992, using air atomization to spray coatings on metal automotive brake assemblies, with a maximum application rate of fifty hundredths (0.50) gal/hr, equipped with dry filters for particulate control, and exhausting outside the building through stack S-PB2;

(C) One (1) Spray Paint Booth, identified as PB3, constructed in 1992, using air atomization to spray coatings on metal automotive brake assemblies, with a maximum application rate of fifty hundredths (0.50) gal/hr, equipped with dry filters for particulate control, and exhausting outside the building through stack S-PB3;

(D) One (1) Light Rail Paint Booth, identified as PB4, approved for construction in 2010, using air atomization to spray adhesive on metallic friction material backing plates, with a maximum application rate of one hundred two thousandths (0.102) gal/hr and a maximum usage rate of less than five (5) gal/day, equipped with dry filters for particulate control, and exhausting outside the building through stack S-PB4.

(E) One (1) natural gas-fired Aquamaster CM 3600 Parts Washer/Conveyorized degreaser, identified as PW1, constructed in 2007, with a maximum throughput capacity of ninety (90) parts/hr, consisting of one (1) twenty-seven hundredths (0.27) MMBtu/hr Pre-Wash Burner, one (1) seventy hundredths (0.70) MMBtu/hr Dip Stage Burner, one (1) twenty-seven hundredths (0.27) MMBtu/hr Rinse Stage Burner, and one (1) twenty-five hundredths (0.25) MMBtu/hr Blow-off Stage Burner, using a water-based VOC and HAP free alkaline solvent, uncontrolled and exhausting to the outside through stacks S-PW1A, S-PW1B, and S-PW1C;

(F) Seven (7) Parts Washers/cold cleaner degreasers, each using a water-based alkaline solvent, uncontrolled and exhausting to the inside of the building. No VOC or HAP emissions are anticipated from the solvent usage in these units. Including the following:

(i) Four (4) Parts Washers/cold cleaner degreasers, identified as PW2 through PW4 and PW6, each constructed in 1993, with a maximum solvent replacement volume of six hundredths (0.06) gal/day;

(ii) One (1) Parts Washer/cold cleaner degreaser, identified as PW5, constructed in 1988, with a maximum solvent replacement volume of six hundredths (0.06) gal/day; and

(iii) Two (2) Parts Washers/cold cleaner degreasers, identified as PW7 and PW8, each constructed in 2009, with a maximum replacement volume of six teen hundredths (0.16) gal/day.

(iv) One (1) Parts Washer/cold cleaner degreaser, identified as PW9, approved for construction in 2010, with a maximum solvent replacement volume of six hundredths (0.06) gal/day.

(G) One (1) natural gas-fired Paint Drying Oven, identified as OV1, constructed in 1992, with a maximum heat input capacity of one (1.00) MMBtu/hr, uncontrolled and exhausting outside the building through stack S-OV1; and

(H) One (1) natural gas-fired Permafuse Oven, identified as OV2, constructed in 2007, with a maximum heat input capacity of eighty hundredths (0.80) MMBtu/hr, processing a maximum of fifteen (15.0) brake parts, or twenty-two hundredths (0.22) pounds of bonding film, per hour, uncontrolled and exhausting outside the building through stack S-OV2.

(2) Metal Machining Operations

(A) One (1) Lathe Machine M1800, identified as LM1, constructed in 2006, having a maximum throughput of twenty (20) metal automotive brake parts/hour or one hundred (100) pounds of metal parts/hour, with particulate emissions controlled by a portable dust collector, identified as baghouse BH5, and exhausting inside the building;

(B) One (1) Vertical Turret Lathe M1905, identified as LM2, constructed in 2006, having a maximum throughput of five (5) metal automotive brake parts/hour or four hundred twenty-five 425 pounds of metal parts/hour, with particulate emissions controlled by a portable dust collector, identified as baghouse BH5, and exhausting inside the building;

(C) One (1) Vertical Turret Lathe M1900, identified as LM3, constructed in 1981, having a maximum throughput of five (5) metal automotive brake parts/hour or two hundred fifty 250 pounds of metal parts/hour, with particulate emissions controlled by a portable dust collector, identified as baghouse BH5, and exhausting inside the building; and

(D) One (1) Vertical Turret Lathe M1921, identified as LM4, constructed in 2006, having a maximum throughput of twelve (12) metal automotive brake parts/hour or one hundred forty-four (144) pounds of metal parts/hour, with particulate emissions controlled by a portable dust collector, identified as baghouse BH5, and exhausting inside the building.

(3) Metal Grinding and Finishing Operations

(A) One (1) Grinder M1796, identified as G1, constructed in 2007, for the finishing of metal brake parts, having a maximum throughput of eight (8) parts/hour or five tenths (0.5) lbs/hour, with particulate emissions controlled by baghouse (BH3), and exhausting inside the building; and

(B) One (1) Grinder M1797, identified as G2, constructed in 2007, having a maximum throughput of twenty (20) parts/hour or five tenths (0.5) lbs/hour, with particulate emissions controlled by baghouse (BH4), and exhausting inside the building.

(b) Clutch lining manufacturing operation, including the following;

(1) Friction Materials Closed/Compression Molding Operations

(A) One (1) Mixer, identified as M1, approved for construction in 2010, for the mixing of friction materials, having a maximum throughput capacity of two hundred fifty (250) lbs/hour, with particulate emissions controlled by baghouse (BH1), and exhausting outside the building through stack S-BH1;

(B) One (1) Mixer, identified as M2, approved for construction in 2010, for the mixing of friction materials, having a maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH1), and exhausting outside the building through stack S-BH1;

(C) Eight (8) Clutch Lining Presses, identified as PR1 through PR8, for the forming of friction materials into clutch lining parts, approved for construction in 2010, electrically heated, having a combined maximum throughput capacity of thirty (30) lbs/hour, uncontrolled and exhausting inside the building;

(D) One (1) Pre-form Machine, identified as PM1, approved for construction in 2010, for the forming of friction materials into pre-form blocks, having a maximum throughput capacity of two hundred (200) lbs/hour, with

particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(E) Three (3) Pre-form Machines, identified as PM2, PM3, and PM4, approved for construction in 2010, for the forming of friction materials into pre-form blocks, having a combined maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(F) Two (2) Military Block Presses, identified as PR9 and PR10, approved for construction in 2010, for the forming of pre-form blocks into military blocks, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled and exhausting inside the building;

(G) Three (3) Light Rail/OHDB Mold Presses, identified as PR11, PR13, and PR14, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(H) Four (4) OHDB Mold Presses, identified as PR15, PR16, PR17, and PR18, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(I) One (1) 1000T Down Acting Press, identified as PR20, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(J) One (1) 2500T Up Acting Press, identified as PR21, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(K) Two (2) Military Block/OHDB Mold Presses, identified as PR22 and PR23, approved for construction in 2010, for the pressing of friction materials into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(L) Four (4) Cabinet Ovens, identified as OV3 through OV6, approved for construction in 2010, for the curing of clutch lining and military block parts, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs of molded parts/hour, uncontrolled and exhausting outside the building through stacks S-OV3 through S-OV6;

(M) Two (2) Cabinet Ovens, identified as OV8 and OV9, approved for construction in 2010, for curing of molded parts, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs of molded parts/hour, uncontrolled, and exhausting outside the

building through stacks S-OV8 and S-OV9; and

(N) One (1) natural gas-fired Cabinet Oven, identified as OV10, approved for construction in 2010, for curing molded parts, with a maximum heat input capacity of thirty hundredths (0.30) MMBtu/hr, having a maximum throughput capacity of one hundred (100) lbs/hour, uncontrolled, and exhausting outside the building through stack S-OV10.

(2) Friction Materials Machining Operations

(A) One (1) Cutting Machine, identified as C1, approved for construction in 2010, for the sizing of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(B) One (1) Slitting Machine, identified as S1, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(C) One (1) Drill Machine, identified as D1, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(D) One (1) Slotting Machine, identified as S3, approved for construction in 2010, for the slotting of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(E) One (1) Saw Machine, identified as SW1, approved for construction in 2010, for the sizing of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(F) One (1) Drill Machine, identified as D2, approved for construction in 2010, for the drilling of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2.

(3) Friction Materials Grinding and Finishing Operations

(A) One (1) Sander, identified as S2, approved for construction in 2010, for the sizing of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(B) One (1) Sander, identified as S4, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of

seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(C) One (1) Sander, identified as S5, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(D) One (1) Grinder, identified as G3, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(E) One (1) Grinder, identified as G4, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(F) One (1) Grinder, identified as G5, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(G) One (1) Grinder, identified as G6, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(H) One (1) Grinder, identified as G7, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(I) One (1) Grinder, identified as G8, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(J) One (1) Grit Blaster, identified as BL1, approved for construction in 2010, equipped with three (3) nozzles, having a maximum throughput capacity of eighty-seven (87) lbs of metal backing plates per hour and five hundred seventy-two and twelve hundredths (572.12) lbs of aluminum oxide grit/hour/nozzle, with particulate emissions controlled by a dust collector (DC1) and an integral cyclone separator, and exhausting inside the building.

(c) One (1) natural gas fired boiler, identified as B1, initially constructed in 1953 and a burner replacement in 1976, with a maximum heat input capacity of twelve and fifty-six

hundredths (12.56) MMBtu per hour, uncontrolled and exhausting outside the building through stack S-B1.

(d) One (1) natural gas fired boiler, identified as B2, initially constructed in 1953 and a burner replacement in 1976, with a maximum capacity of twelve and fifty-six hundredths (12.56) MMBtu per hour, uncontrolled and exhausting outside the building through stack S-B2.

(e) One (1) Emergency Diesel Fire Pump Engine, identified as FP1, constructed in 1981, with a maximum power output rating of ninety-seven (97.0) hp, uncontrolled and exhausting outside the building.

(f) One (1) natural gas-fired Hot Water Boiler, identified as HWB1, constructed in 1998, with a maximum heat input capacity of thirty-four hundredths (0.34) MMBtu/hr, uncontrolled and exhausting inside the building;

(g) One (1) natural gas-fired Heat Treat Oven used for maintenance and R&D, identified as OV7, approved for construction in 2010, with a maximum heat input capacity of sixty hundredths (0.60) MMBtu/hr, uncontrolled and exhausting outside the building through stack S-HT1;

(h) Maintenance activities, as defined in 326 IAC 2-1.1-3(e)(34), including:

(1) Repair and maintenance of paved and unpaved roads, including paving or sealing, or both, of parking lots and roadways.

(2) Painting, including interior and exterior painting of buildings, and solvent use excluding degreasing operations utilizing halogenated organic solvents.

(3) Brazing, soldering, or welding operations and associated equipment; including: One (1) Welding Booth with Three (3) MIG Welders, One (1) TIG Welder, Two (2) Stick Welders, One (1) Cutting Torch, and One (1) Plasma Cutter

(4) Blast-cleaning equipment using water as the suspension agent and associated equipment.

(5) Lubrication, including:

(A) hand-held spray can lubrication;

(B) dipping metal parts into lubricating oil; or

(C) manual or automated addition of cutting oil in machining operations.

(i) Four (4) Horizontal Mills, Four (4) Lathes, Two (2) CNC Machines, Two (2) Table Saws, and Five (5) Bench Grinders used for maintenance activities, constructed in 1981, all controlled by an area dust collector (MicroAir MX 3500, gas flow rate = 3,500cfm) and exhausting inside the building; and

(j) Activities performed using hand-held equipment, as defined in 326 IAC 2-1.1-3(e)(35), including:

(1) Cutting, excluding cutting torches.

(2) Grinding.

(3) Machining wood, metal, or plastic.

(4) Surface grinding.

(5) Turning wood, metal, or plastic.

(k) Storage equipment and activities, as defined in 326 IAC 2-1.1-3(e)(39), including pressurized storage tanks and associated piping for the following:

(1) Acetylene.

(2) Liquid natural gas (LNG) (propane).

(l) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(m) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;

(n) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(o) One (1) Test Lab Facility, as defined in 326 IAC 2-1.1-3(e)(2); and

(p) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 Permit Term [326 IAC 2-6.1-7(a)] [326 IAC 2-1.1-9.5] [IC 13-15-3-6(a)]

(a) This permit, M105-28659-00013, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.5 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.6 Enforceability

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.7 Severability

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.8 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.9 Duty to Provide Information

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.10 Reserved

B.11 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

(c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.12 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M105-28659-00013 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.15 Permit Renewal [326 IAC 2-6.1-7]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.16 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC61-53IGCN1003
Indianapolis, Indiana 46204-2251

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.17 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.18 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.19 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.20 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.21 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), 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.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-1 or in this permit.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Reserved

C.12 Instrument Specifications [326 IAC 2-1.1-11]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale

such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.13 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) Reserved.

(d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-6.1-5(a)(1)]: Surface Coating Operations

(a) One Brake Assembly and Brake Part manufacturing operation, including the following:

(1) Metal Surface Coating Operations, including the following;

(A) One (1) Spray Paint Booth, identified as PB1, constructed in 1992, using air atomization to spray coatings on metal automotive brake assemblies and actuator assemblies, with a maximum application rate of thirty-three hundredths (0.33) gal/hr, equipped with dry filters for particulate control, and exhausting outside the building through stack S-PB1;

(B) One (1) Spray Paint Booth, identified as PB2, constructed in 1992, using air atomization to spray coatings on metal automotive brake assemblies, with a maximum application rate of fifty hundredths (0.50) gal/hr, equipped with dry filters for particulate control, and exhausting outside the building through stack S-PB2;

(C) One (1) Spray Paint Booth, identified as PB3, constructed in 1992, using air atomization to spray coatings on brake metal automotive assemblies, with a maximum application rate of fifty hundredths (0.50) gal/hr, equipped with dry filters for particulate control, and exhausting outside the building through stack S-PB3;

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.1.1 VOC Limit [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) emissions from any coatings delivered to each applicator shall not exceed three and five tenths (3.5) pounds of VOC per gallon of coating, excluding water, for coatings that are air dried or forced warm air dried at temperatures up to ninety degrees Celsius (90°C) (one hundred ninety-four degrees Fahrenheit (194°F)), as delivered to the applicator(s) in Spray Paint Booth #1, identified as PB1.

(b) Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:

(1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(4) Convey VOC containing coatings, thinners, coating related waste, and cleaning

materials from one (1) location to another in closed containers or pipes.

(5) Minimize VOC emissions from the cleaning application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

D.1.2 Particulate [326 IAC 6-3-2(d)]

(a) Particulate from the Paint Booths #1, #2 and #3, identified as PB1, PB2 & PB3, each, shall be controlled by a dry particulate filter and the Permittee shall operate the control device(s) in accordance with manufacturer's specifications.

(b) 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.

(c) 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.

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and any associated control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.4 Volatile Organic Compounds (VOC)[326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC content contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ**,** reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit established in Condition D.1.1.

(1) The VOC content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-6.1-5(a)(1)]: Metal Machining Operations

(a) One Brake Assembly and Brake Part manufacturing operation, including the following:

(2) Metal Machining Operations

(A) One (1) Lathe Machine M1800, identified as LM1, constructed in 2006, having a maximum throughput of twenty (20) metal automotive brake parts/hour or one hundred (100) pounds of metal parts/hour, with particulate emissions controlled by a portable dust collector, identified as baghouse BH5, and exhausting inside the building.

(B) One (1) Vertical Turret Lathe M1905, identified as LM2, constructed in 2006, having a maximum throughput of five (5) metal automotive brake parts/hour or four hundred twenty-five 425 pounds of metal parts/hour, with particulate emissions controlled by a portable dust collector, identified as baghouse BH5, and exhausting inside the building.

(C) One (1) Vertical Turret Lathe M1900, identified as LM3, constructed in 1981, having a maximum throughput of five (5) metal automotive brake parts/hour or two hundred fifty 250 pounds of metal parts/hour, with particulate emissions controlled by a portable dust collector, identified as baghouse BH5, and exhausting inside the building.

(D) One (1) Vertical Turret Lathe M1921, identified as LM4, constructed in 2006, having a maximum throughput of twelve (12) metal automotive brake parts/hour or one hundred forty-four (144) pounds of metal parts/hour, with particulate emissions controlled by a portable dust collector, identified as baghouse BH5, and exhausting inside the building.

(E) One (1) natural gas-fired Heat Treat Oven, identified as OV7, approved for construction in 2010, with a maximum heat input capacity of sixty hundredths (0.60) MMBtu/hr, uncontrolled and exhausting to the inside of the building;

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.2.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the facilities listed in this condition shall not exceed the pound per hour limitations listed in the table below:

Emission Unit	Process Weight Rate		Particulate Emission Limit (lb/hour)
	(lbs/hr)	(tons/hr)	
Lathe Machine M1800 (LM1) controlled by baghouse (BH5)	100.0	0.050	0.551
Vertical Turret Lathe M1905 (LM2) controlled by baghouse (BH5)	250.0	0.125	1.018
Vertical Turret Lathe M1900 (LM3) controlled by baghouse (BH5)	425.0	0.213	1.452
Vertical Turret Lathe M1921 (LM4) controlled by baghouse (BH5)	144.0	0.072	0.703

These limitations were calculated as follows:

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:

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

Compliance Determination Requirements

D.2.2 Particulate Control

(a) In order to comply with Condition D.1.1, the baghouses for particulate control shall be in operation and control emissions from the metal machining operations at all times that any of the metal machining equipment is in operation.

(b) 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.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-6.1-5(a)(1)]: Clutch Lining Manufacturing Operations

(b) Clutch lining manufacturing operation, including the following;

(1) Friction Material Closed/Compression Molding Operations

(A) One (1) Mixer, identified as M1, approved for construction in 2010, for the mixing of friction materials, having a maximum throughput capacity of two hundred fifty (250) lbs/hour, with particulate emissions controlled by baghouse (BH1), and exhausting outside the building through stack S-BH1;

(B) One (1) Mixer, identified as M2, approved for construction in 2010, for the mixing of friction materials, having a maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH1), and exhausting outside the building through stack S-BH1;

(C) Eight (8) Clutch Lining Presses, identified as PR1 through PR8, for the forming of friction materials into clutch lining parts, approved for construction in 2010, electrically heated, having a combined maximum throughput capacity of thirty (30) lbs/hour, uncontrolled and exhausting inside the building;

(D) One (1) Pre-form Machine, identified as PM1, approved for construction in 2010, for the forming of friction materials into pre-form blocks, having a maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(E) Three (3) Pre-form Machines, identified as PM2, PM3, and PM4, approved for construction in 2010, for the forming of friction materials into pre-form blocks, having a combined maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(F) Two (2) Military Block Presses, identified as PR9 and PR10, approved for construction in 2010, for the forming of pre-form blocks into military blocks, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled and exhausting inside the building;

(G) Three (3) Light Rail/OHDB Mold Presses, identified as PR11, PR13, and PR14, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(H) Four (4) OHDB Mold Presses, identified as PR15, PR16, PR17, and PR18, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(I) One (1) 1000T Down Acting Press, identified as PR20, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(J) One (1) 2500T Up Acting Press, identified as PR21, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(K) Two (2) Military Block/OHDB Mold Presses, identified as PR22 and PR23, approved for construction in 2010, for the pressing of friction materials into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(~~E~~L) Four (4) Cabinet Ovens, identified as OV3 through OV6, approved for construction in 2010, for the curing of clutch lining and military block parts, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs of molded parts/hour, uncontrolled and exhausting outside the building through stacks S-OV3 through S-OV6;

(M) Two (2) Cabinet Ovens, identified as OV8 and OV9, approved for construction in 2010, for curing of molded parts, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs of molded parts/hour, uncontrolled, and exhausting outside the building through stacks S-OV8 and S-OV9; and

(N) One (1) natural gas-fired Cabinet Oven, identified as OV10, approved for construction in 2010, for curing molded parts, with a maximum heat input capacity of thirty hundredths (0.30) MMBtu/hr, having a maximum throughput capacity of one hundred (100) lbs/hour, uncontrolled, and exhausting outside the building through stack S-OV10.

(2) Friction Materials Machining Operations

(A) One (1) Cutting Machine, identified as C1, approved for construction in 2010, for the sizing of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(B) One (1) Slitting Machine, identified as S1, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(C) One (1) Drill Machine, identified as D1, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(D) One (1) Slotting Machine, identified as S3, approved for construction in 2010, for the slotting of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(E) One (1) Saw Machine, identified as SW1, approved for construction in 2010, for the sizing of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions

controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(F) One (1) Drill Machine, identified as D2, approved for construction in 2010, for the drilling of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2.

(3) Friction Material Grinding and Finishing Operations

(A) One (1) Sander, identified as S2, approved for construction in 2010, for the sizing of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(B) One (1) Sander, identified as S4, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(C) One (1) Sander, identified as S5, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(D) One (1) Grinder, identified as G3, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(E) One (1) Grinder, identified as G4, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(F) One (1) Grinder, identified as G5, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(G) One (1) Grinder, identified as G6, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(H) One (1) Grinder, identified as G7, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(I) One (1) Grinder, identified as G8, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(J) One (1) Grit Blaster, identified as BL1, approved for construction in 2010, equipped with three (3) nozzles, having a maximum throughput capacity of eighty-seven (87) lbs of metal backing plates per hour and five hundred seventy-two and twelve hundredths (572.12) lbs of aluminum oxide grit/hour/nozzle, with particulate emissions controlled by a dust collector (DC1) and an integral cyclone separator, and exhausting inside the building.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.3.1 Particulate Limit [326 IAC 2-6.1-6(g)(5)(C)]

Pursuant to 326 IAC 2-6.1-6(g)(5)(C), the dust collector DC1 and the baghouses BH1, BH2, and BH6 shall comply with the following limits when any of the friction material mixing, machining, grinding, and/or finishing equipment is in operation:

(a) Achieve and maintain at least ninety-nine (99%) efficiency.

(b) No visible emissions.

Compliance with these limits shall limit the potential to emit of PM to less than 25 tons per twelve (12) consecutive month period and shall render 326 IAC 2-6.1-6(i) (Significant Permit Revisions) not applicable.

D.3.2 Particulate [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from the cutting machine (C1), saw machine (SW1), and three (3) sanders (S2, S4, and S5) shall not exceed 0.551 pounds per hour, each, when operating at a process weight rate less than one hundred (100) pounds per hour.

(b) Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the facilities listed in this condition shall not exceed the pound per hour limitations listed in the table below:

Emission Unit	Process Weight Rate		Particulate Emission Limit (lb/hour)
	(lbs/hr)	(tons/hr)	
Slitting Machine (S1) controlled by baghouse (BH6)	200.0	0.100	0.877
Drill Machine (D1) controlled by baghouse (BH6)	200.0	0.100	0.877
Drill Machine (D2) controlled by baghouse (BH2)	200	0.10	0.877
Slotting Machine (S3) controlled by baghouse (BH6)	200	0.10	0.877
Grinder (G3) controlled by baghouse (BH6)	200.0	0.100	0.877
Grinder (G4) controlled by baghouse (BH6)	200.0	0.100	0.877
Grinder (G5) controlled by baghouse (BH2)	100	0.05	0.551
Grinder (G6) controlled by baghouse (BH6)	100	0.05	0.551
Grinder (G7) controlled by baghouse (BH6)	200	0.10	0.877
Grinder (G8) controlled by baghouse (BH6)	200	0.10	0.877
Grit Blaster (BL1) controlled by dust collector (BL1)	1,803.36	0.902	3.83

These limitations were calculated as follows:

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:

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

D.3.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and any associated control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.3.4 Particulate Control

(a) In order to comply with Conditions D.1.1 and D.1.2, the baghouse(s), integral cyclone separator, and dust collector for particulate control shall be in operation and control emissions from the friction material mixing, machining, grinding and finishing operations at all times that any of the friction material mixing, machining, grinding and/or finishing equipment is in operation.

(b) 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.3.5 Testing Requirements [326 IAC 2-6.1][326 IAC 2-4.1][326 IAC 8-1-6][326 IAC 2-1.1-11]

Pursuant to Air-014-NPD (Approval and Validation of Alternate Emission Factors) and in order to verify the MSOP status of the source, in accordance with 326 IAC 2-6.1, the Hazardous Air Pollutant (HAP) and Volatile Organic Compound (VOC) potential to emit (PTE) of the Clutch Parts Manufacturing Line's Closed/Compression Molding operations shall be confirmed, as follows:

(a) Not later than ninety (90) days after the issuance of the permit (#M105-28659-00013), the Permittee shall submit a copy of the September 18, 1997 test report and associated test data generated from testing conducted at Carlisle Motion Control Industries, Inc.'s South Hill facility, located at 1000 Cycle Lane in South Hill, Virginia, for PTE validation by IDEM.

The report and data shall be submitted to:
Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

(1) If the alternate emission factors are determined to be valid and acceptable in determining the HAP and VOC PTE of the Clutch Parts Manufacturing Line's Closed/Compression Molding Operations, then the testing requirement, as defined in subsection (b) of this condition, will be satisfied.

(2) If the alternate emission factors are not determined to be valid and acceptable in determining the HAP and VOC PTE of the Clutch Parts Manufacturing Line's

Closed/Compression Molding Operations, then the testing requirement, as defined in subsection (b) of this condition, shall be conducted.

(b) Not later than one hundred eighty (180) days after the issuance of the permit (#M105-28659-00013), the Permittee shall conduct a test to determine the HAP and VOC PTE of the Clutch Parts Manufacturing Line's Closed/Compression Molding Operations utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.3.6 Visible Emissions Notations

(a) Visible emission notations of the baghouse stack exhausts (BH1, BH2, and BH6) shall be performed once per day during normal daylight operations. A trained employee or a trained contractor shall record whether emissions are normal or abnormal.

(b) 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 startup or shut down time.

(c) 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.

(d) A trained employee or contractor is a person who has worked or trained 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.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.3.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.6, the Permittee shall maintain records of daily visible emission notations of the baghouse stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-6.1-5(a)(1)]: Natural gas-fired Boilers

(c) One (1) natural gas fired boiler, identified as B1, initially constructed in 1953 and a burner replacement in 1976, with a maximum heat input capacity of twelve and fifty-six hundredths (12.56) MMBtu per hour, uncontrolled and exhausting outside the building through stack S-B1.

(d) One (1) natural gas fired boiler, identified as B2, initially constructed in 1953 and a burner replacement in 1976, with a maximum capacity of twelve and fifty-six hundredths (12.56) MMBtu per hour, uncontrolled and exhausting outside the building through stack S-B2.

(f) One (1) natural gas-fired Hot Water Boiler, identified as HWB1, constructed in 1998, with a maximum heat input capacity of thirty-four hundredths (0.34) MMBtu/hr, uncontrolled and exhausting inside the building;

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Limitations for Sources of Indirect Heating) the PM emissions from the two (2) natural gas-fired boilers, identified as B1 & B2, each, shall be limited to eight tenths (0.8) lbs/mmBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}},$$

where

$C = 50\ u/m^3$
Pt = emission rate limit (lbs/MMBtu)
Q = total source heat input capacity (MMBtu/hr) (25.13)
N = number of stacks (2.0)
a = plume rise factor (0.67)
h = stack height (ft) (38.0)

Pursuant to 326 IAC 6-2-3(d) (Particulate Emission Limitations for Sources of Indirect Heating: emission limitations for facilities specified in 326 IAC 6-2-1(c)), PM from boilers B1 and B2, shall in no case exceed eight tenths (0.8) pounds of particulate matter per million British thermal units heat input.

D.4.2 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the one (1) thirty-four hundredths (0.34) MMBtu/hr natural gas-fired boiler (identified as HWB1) shall be limited to forty-seven hundredths (0.47) pounds per MMBtu heat input.

This limitation is based on the following equation:

$Pt = 1.09/Q^{0.26}$

Where: Pt = Pounds of Particulate Matter emitted per million Btu (lb/mmBtu) heat input; and

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input (25.47).

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for boilers B1 and B2, and any associated control device(s). Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Carlisle Industrial Brake & Friction
Address:	1031 E Hillside Drive
City:	Bloomington, Indiana 47401
Phone #:	812-334-8711
MSOP #:	M105-28659-00013

I hereby certify that Carlisle Industrial Brake & Friction is : ☐ still in operation.
☐ no longer in operation.

I hereby certify that Carlisle Industrial Brake & Friction is : ☐ in compliance with the requirements of MSOP M105-28659-00013.
☐ not in compliance with the requirements MSOP M105-28659-00013.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER: (317) 233-6865

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____
_____

Mail to: Permit Administration & Support Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Carlisle Industrial Brake & Friction
1031 E Hillside Drive
Bloomington, Indiana 47401

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)

4. I hereby certify that Carlisle Industrial Brake & Friction 1031 E Hillside Drive, Bloomington, Indiana 47401, completed construction of the motor vehicle parts and accessories, including brakes, brake parts, and clutch parts, manufacturing facility on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on ***Reviewer: Insert date application received at IDEM*** and as permitted pursuant to New Source Construction Permit and Minor Source Operating Permit No. M105-28659-00013, Plant ID No. 105-00013 issued on _____.

5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature_____
Date_____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana

on this _____ day of _____, 20 _____. My Commission expires: _____.

Signature_____
Name_____ (typed or printed)

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Permit Revision to a Minor Source Operating Permit (MSOP)

Source Description and Location

Source Name:	**Carlisle Industrial Brake and Friction**
Source Location:	**1031 East Hillside Drive, Bloomington, Indiana 47401**
County:	**Monroe**
SIC Code:	**3714**
Operation Permit No.:	**105-28659-00013**
Operation Permit Issuance Date:	**March 24, 2010**
Minor Permit Revision No.:	**105-29821-00013**
Permit Reviewer:	**Brian Williams**

On October 25, 2010, the Office of Air Quality (OAQ) received an application from Carlisle Industrial Brake & Friction related to a modification to an existing stationary motor vehicle parts and accessories, including brakes, brake parts, and clutch parts, manufacturing facility.

Existing Approvals

The source was issued MSOP No. 105-28659-00013 on March 24, 2010. The source has since received the following approvals:

(a) Notice-Only Change No. 105-29161-00013, issued on May 11, 2010.

County Attainment Status

The source is located in Monroe County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Monroe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Monroe County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for $PM_{2.5}$ emissions until 326 IAC 2-2 is revised.

(c) Other Criteria Pollutants
Monroe County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

(a) The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

(b) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

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

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Brake Assembly & Brake Parts Manufacturing Line									
Paint Booth #1 (PB1)	7.56	7.56	7.56	0	0	5.09	0	0.24	0.0.17 (xylene)
Paint Booth #2 (PB2)	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04 (xylene)
Paint Booth #3 (PB3)	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04 (xylene)
Shoe Cell Assembly	0	0	0	0	0	1.96	0	1.95	0.96 (phenol)
Machining & Grinding Operations (1)	16.31	3.43	3.43	0	0	0	0	11.20	4.11 (chromium)
Clutch Parts Manufacturing Line									
Material Handling	0.45	0.21	0.21	0	0	0	0	0	0
Molding Operations	0	0	0	0	0	4.13	0	0.54	0.48 (phenol)
Machining & Grinding Operations (1)	19.34	3.54	3.54	0	0	0	0	0	0
Natural Gas Combustion	0.24	0.98	0.73	0.08	12.86	0.71	10.80	0.24	0.23 (hexane)
Emergency Diesel Fire Pump	0.05	0.05	0.05	0.05	0.75	0.06	0.16	negl.	negl.

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Fugitive Emissions (Paved Roads)	0.60	0.12	0.02	0	0	0	0	0	0
Parts Washer W9	0	0	0	0	0	0	0	0	0
Total PTE of Entire Source	**66.91**	**38.23**	**37.89**	**0.13**	**13.61**	**15.55**	**10.96**	**14.26**	**4.11 (chromium)**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA	NA

negl. = negligible
These emissions are based upon TSD to Notice-Only Change No. 105-29161-00013, issued on May 11, 2010.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Carlisle Industrial Brake and Friction on October 25, 2010, relating to the construction and operation of several new emission units and control devices at the source. Upon further review, the source has determined that the four (4) cabinet ovens (OV3 through OV6) will exhaust outside the building via stacks instead of to the indoors. In addition, the source has determined that the drill machine (D1), slitting machine (S1), and two (2) grinders (G3 and G4) will be controlled by baghouse BH6 instead of baghouse B2. These emission units were all approved for construction in MSOP No. 105-28659-00013, issued on March 24, 2010.

The following is a list of the new emission units and pollution control devices:

(a) One (1) Brake Assemble and Brake Part manufacturing operation, including the following:

(1) Metal Surface Coating Operations, including the following;

(A) One (1) Light Rail Paint Booth, identified as PB4, approved for construction in 2010, using air atomization to spray adhesive on metallic friction material backing plates, with a maximum application rate of one hundred two thousandths (0.102) gal/hr and a maximum usage rate of less than five (5) gal/day, equipped with dry filters for particulate control, and exhausting outside the building through stack S-PB4;

(b) Clutch lining manufacturing operation including the following:

(1) Friction Materials Closed/Compression Molding Operations:

(A) One (1) Mixer, identified as M2, approved for construction in 2010, for the mixing of friction materials, having a maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH1), and exhausting outside the building through stack S-BH1;

(B) Three (3) Pre-form Machines, identified as PM2, PM3, and PM4, approved for construction in 2010, for the forming of friction materials into pre-form blocks,

having a combined maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(C) Three (3) Light Rail/OHDB Mold Presses, identified as PR11, PR13, and PR14, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(D) Four (4) OHDB Mold Presses, identified as PR15, PR16, PR17, and PR18, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(E) One (1) 1000T Down Acting Press, identified as PR20, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(F) One (1) 2500T Up Acting Press, identified as PR21, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(G) Two (2) Military Block/OHDB Mold Presses, identified as PR22 and PR23, approved for construction in 2010, for the pressing of friction materials into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building; and

(H) Two (2) Cabinet Ovens, identified as OV8 and OV9, approved for construction in 2010, for curing of molded parts, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs of molded parts/hour, uncontrolled, and exhausting outside the building through stacks S-OV8 and S-OV9.

(I) One (1) natural gas-fired Cabinet Oven, identified as OV10, approved for construction in 2010, for curing molded parts, with a maximum heat input capacity of thirty hundredths (0.30) MMBtu/hr, having a maximum throughput capacity of one hundred (100) lbs/hour, uncontrolled, and exhausting outside the building through stack S-OV10.

(2) Friction Material Machining Operations

(A) One (1) Slotting Machine, identified as S3, approved for construction in 2010, for the slotting of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(B) One (1) Saw Machine, identified as SW1, approved for construction in 2010, for the sizing of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(C) One (1) Drill Machine, identified as D2, approved for construction in 2010, for the drilling of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse

(BH2), and exhausting outside the building through stack S-BH2.

(3) Friction Materials Grinding and Finishing Operations

(A) One (1) Sander, identified as S4, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(B) One (1) Sander, identified as S5, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(C) One (1) Grinder, identified as G5, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(D) One (1) Grinder, identified as G6, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(E) One (1) Grinder, identified as G7, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(F) One (1) Grinder, identified as G8, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(G) One (1) Grit Blaster, identified as BL1, approved for construction in 2010, equipped with three (3) nozzles, having a maximum throughput capacity of eighty-seven (87) lbs of metal backing plates per hour and five hundred seventy-two and twelve hundredths (572.12) lbs of aluminum oxide grit/hour/nozzle, with particulate emissions controlled by a dust collector (DC1) and an integral cyclone separator, and exhausting inside the building.

"Integral Part of the Process" Determination

The Permittee has submitted the following information to justify why the cyclone separator and dust collector should be considered an integral part of the light rail blaster (BL1):

(a) Without the cyclone separator and dust collector the light rail blaster would be inoperable from a production standpoint. Operating pressures would be reduced to the point that the light rail blaster could not be effectively operated, the blaster would quickly lose grit, the operator could not see the parts being blasted due to a cloud of grit and fines within the cabinet, and it would generally make a big mess on the floor.

(b) After blasting an adhesive is applied to the parts. To ensure a proper bond the part must be free of any contaminates. Therefore, the cyclone separator and dust collector are necessary to ensure that the part being blasted is clean because they collect and remove any dust generated when the light rail blaster is in operation.

IDEM, OAQ has evaluated the information submitted and agrees that the cyclone separator should be considered an integral part of the light rail blaster operation. This determination is based on the fact that the cyclone separator is necessary to maintain proper operating pressures, to recirculate the grit, and to ensure that the parts are clean. Operating conditions in the proposed permit will specify that the cyclone separator shall operate at all times when the light rail blaster is in operation. However, IDEM has determined that the dust collector should not be considered an integral part of the light rail blaster operation. This determination is based on the fact that the dust collector does not serve a primary purpose other than pollution control and the light rail blaster can operate without it. Therefore, the permitting level will be determined using the potential to emit after the cyclone separator, but before the dust collector.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – MSOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-6.1-6. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)								
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Light Rail Paint Booth (PB4)	0.53	0.53	0.53	0	0	0.12	0	0	0
Friction Material Handling and Mixing	0.10	0.03	0.03	0	0	0	0	0	0
Friction Material Mixing (M2)	0.26	0.13	0.13	0	0	0	0	0	0
Friction Materials Closed/Compression Molding Operations	0	0	0	0	0	0.54	0	0.434	0.39 Phenol
Friction Material Machining Operations	17.68	1.77	1.77	0	0	0	0	0	0
Friction Material Grinding Operations	27.92	2.79	2.79	0	0	0	0	0	0
Light Rail Blaster (BL1)	10.69	10.69	10.69	0	0	0	0	0.064	0.06 Manganese
Cabinet Oven (OV10) Natural Gas Combustion	0.002	0.01	0.01	0.001	0.13	0.007	0.11	negl.	negl.
Total PTE of Proposed Revision	**57.18**	**15.94**	**15.94**	**0**	**0**	**0.66**	**0**	**0.50**	**0.39 Phenol**

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

This MSOP is being revised through a MSOP Minor Permit Revision pursuant to 326 IAC 2-6.1-6(g)(5)(C), even though the uncontrolled potential to emit PM of this revision is greater than 25 tons per year. In order to render the requirements of 326 IAC 2-6.1-6(i) (Significant Permit Revisions) not applicable to this revision, the source has agreed to limit PM emissions to less than twenty-five (25) tons per year by using a particulate air pollution control device as follows:

(a) Achieving and maintaining ninety-nine (99%) efficiency.

(b) Complying with a no visible emission standard.

(c) The potential to emit before air pollution controls does not exceed major source thresholds for federal permitting programs.

(d) Certifying to the commissioner that the air pollution control device supplier guarantees that a specific outlet concentration, in conjunction with design airflow, will result in actual emissions less than twenty-five (25) tons of PM or fifteen (15) tons of PM10 per year.

PTE of the Entire Source After Issuance of the MSOP Revision

The table below summarizes the potential to emit of the entire source, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	**Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)**								
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Brake Assembly & Brake Parts Manufacturing Line									
Paint Booth #1 (PB1)	7.56	7.56	7.56	0	0	5.09	0	0.24	0.0.17 (xylene)
Paint Booth #2 (PB2)	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04 (xylene)
Paint Booth #3 (PB3)	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04 (xylene)
Light Rail Paint Booth (PB4) (DC1)	**0.53**	**0.53**	**0.53**	**0**	**0**	**0.12**	**0**	**0**	**0**
Shoe Cell Assembly	0	0	0	0	0	1.96	0	1.95	0.96 (phenol)
Machining & Grinding Operations (1)	16.31	3.43	3.43	0	0	0	0	11.20	4.11 (chromium)
Clutch Parts Manufacturing Line									
Material Handling	~~0.45~~ **0.22**	~~0.21~~ **0.08**	~~0.21~~ **0.08**	0	0	0	0	0	0
Material Mixing (BH1)(2)	**0.01**	**0.003**	**0.003**	**0**	**0**	**0**	**0**	**0**	**0**
Molding Operations	0	0	0	0	0	~~4.13~~ **2.39**	0	~~0.54~~ **0.98**	~~0.48~~ **0.87** (phenol)
Machining & Grinding Operations **(BH2 & BH6)(2)**	~~19.34~~ **0.92**	~~3.54~~ **0.19**	~~3.54~~ **0.19**	0	0	0	0	~~0~~ **0.06**	~~0~~ **0.06 (manganese)**
Natural Gas Combustion	0.2**45**	0.9**89**	~~0.73~~ **0.99**	0.08	~~12.86~~ **12.99**	0.71	~~10.80~~ **10.91**	0.2**45**	0.23 (hexane)
Emergency Diesel Fire Pump	0.05	0.05	0.05	0.05	0.75	0.06	0.16	negl.	negl.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)								
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Fugitive Emissions (Paved Roads)	0.60	0.12	0.02	0	0	0	0	0	0
Parts Washer W9	0	0	0	0	0	0	0	0	0
Total PTE of Entire Source	~~66.91~~ **48.80**	~~38.23~~ **35.29**	~~37.89~~ **35.19**	0.13	~~13.61~~ **13.74**	~~15.55~~ **13.93**	~~10.96~~ **11.07**	~~14.26~~ **14.76**	4.11 (chromium)
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA	NA

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
(1) PM emissions based on 326 IAC 6-3-2 allowable particulate matter emission limits.
(2) **These are PTE after control. Pursuant to 326 IAC 2-6.1-6(g)(5)(C), the source must achieve and maintain at least 99% efficiency and no visible emissions for baghouses BH1, BH2, and BH6, and dust collector DC1. Compliance with these limits shall limit the potential to emit of PM from this modification to less than 25 tons per twelve (12) consecutive month period and shall render 326 IAC 2-6.1-6(i) (Significant Permit Revisions) not applicable.**

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this MSOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)								
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Brake Assembly & Brake Parts Manufacturing Line									
Paint Booth #1 (PB1)	7.56	7.56	7.56	0	0	5.09	0	0.24	0.0.17 (xylene)
Paint Booth #2 (PB2)	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04 (xylene)
Paint Booth #3 (PB3)	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04 (xylene)
Light Rail Paint Booth (PB4) (DC1)	0.53	0.53	0.53	0	0	0.12	0	0	0
Shoe Cell Assembly	0	0	0	0	0	1.96	0	1.95	0.96 (phenol)
Machining & Grinding Operations (1)	16.31	3.43	3.43	0	0	0	0	11.20	4.11 (chromium)

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)								
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Clutch Parts Manufacturing Line									
Material Handling	0.22	0.08	0.08	0	0	0	0	0	0
Material Mixing (BH1)(2)	0.01	0.003	0.003	0	0	0	0	0	0
Molding Operations	0	0	0	0	0	2.39	0	0.98	0.87 (phenol)
Machining & Grinding Operations (BH2 & BH6)(2)	0.92	0.19	0.19	0	0	0	0	0.06	0.06 (manganese)
Natural Gas Combustion	0.25	0.99	0.99	0.08	12.99	0.71	10.91	0.25	0.23 (hexane)
Emergency Diesel Fire Pump	0.05	0.05	0.05	0.05	0.75	0.06	0.16	negl.	negl.
Fugitive Emissions (Paved Roads)	0.60	0.12	0.02	0	0	0	0	0	0
Parts Washer W9	0	0	0	0	0	0	0	0	0
Total PTE of Entire Source	**48.80**	**35.29**	**35.19**	**0.13**	**13.74**	**13.93**	**11.07**	**14.76**	**4.11 (chromium)**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA	NA

negl. = negligible

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

(1) PM emissions based on 326 IAC 6-3-2 allowable particulate matter emission limits.

(2) These are PTE after control. Pursuant to 326 IAC 2-6.1-6(g)(5)(C), the source must achieve and maintain at least 99% efficiency and no visible emissions for baghouses BH1, BH2, and BH6, and dust collector DC1. Compliance with these limits shall limit the potential to emit of PM from this modification to less than 25 tons per twelve (12) consecutive month period and shall render 326 IAC 2-6.1-6(i) (Significant Permit Revisions) not applicable.

MSOP Status

This revision to an existing Title V minor stationary source will not change the minor status, because the uncontrolled/unlimited potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-6.1 (MSOP).

Pursuant to 326 IAC 2-6.1-6(g)(5)(C), the dust collector DC1 and the baghouses BH1, BH2, and BH6 shall comply with the following limits when the any of the friction material mixing, machining, grinding, and/or finishing equipment is in operation:

(a) Achieve and maintain at least ninety-nine (99%) efficiency.

(b) No visible emissions.

Compliance with these limits shall limit the potential to emit of PM to less than 25 tons per twelve (12) consecutive month period and shall render 326 IAC 2-6.1-6(i) (Significant Permit Revisions) not applicable.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

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

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(a) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart MMMM (4M), Surface Coating of Miscellaneous Metal Parts and Products (40 CFR Part 63.3880 - 63.3981), because this source is not a major source of HAPs as defined in 40 CFR 63.2.

(b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Friction Materials Manufacturing Facilities, 40 CFR 63, Subpart QQQQQ (5Q) (326 IAC 20-68), are not included in the permit, since this source is not a major source of HAPs.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH (6H), are not included in the permit for the light rail paint booth, because the coatings used do not contain compounds of cadmium (Cd), chromium (Cr), lead (Pb), manganese (Mn), or nickel (Ni). Additionally, this source does not perform autobody refinishing operations, or paint stripping operations involving the use of chemical strippers containing methylene chloride (MeCl) in the paint removal processes.

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Nine Metal Fabrication and Finishing Source Categories, 40 CFR 63, Subpart XXXXXX (6X) (326 IAC 20), are not included in the permit, because although this existing source manufactures metal brake assemblies and brake parts, it is not primarily engaged in the operations in one of the nine metal fabrication and finishing source categories, as defined in 40 CFR 63.11514 and 63.11522.

(e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR Part 63, 326 IAC 14, and 326 IAC 20) included in the permit.

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

(a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.

(b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Revision Section above.

(c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

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

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

(1) Opacity shall not exceed an average of forty percent (40%) 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.

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

Metal Surface Coating Operations

(a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(15), the light rail paint booth (PB4) is exempt from the requirements of 326 IAC 6-3-2, because it has the potential to use less than five (5) gallons of coatings per day.

(b) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The light rail paint booth (PB4) is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions are less than twenty-five (25) tons per year.

(c) 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)
Pursuant to 326 IAC 8-2-1, the provisions of 326 IAC 8-2-9 apply to miscellaneous metal coating operations constructed after July 1, 1990, located in any county, and which have actual emissions of greater than fifteen (15) pounds per day of VOC before add-on controls. The potential to emit of the light rail paint booth (PB4) is less than fifteen (15) pounds per day of VOC before add-on controls. Therefore, the light rail paint booth (PB4) is not subject to the requirements of 326 IAC 8-2-9.

(d) There are no other 326 IAC 8 Rules that are applicable to the light rail paint booth (PB4).

Friction Material Handling

(a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The potential particulate emissions from the friction material handling are less than five hundred fifty-one thousandths (0.551) pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14) the friction material handling is exempt from the requirements of 326 IAC 6-3-2.

Friction Material Mixing

(a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The potential particulate emissions from the friction material mixing (M2) are less than five hundred fifty-one thousandths (0.551) pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14) the friction material mixing (M2) is exempt from the requirements of 326 IAC 6-3-2.

Friction Materials Closed/Compression Molding Operations

(a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The friction material closed/compression molding operations are not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions are less than twenty-five (25) tons per year.

(b) There are no other 326 IAC 8 Rules that are applicable to the light rail paint booth (PB4).

Friction Material Machining Operations

(a) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The saw machine (SW1) has a process weight rate of seventy-five (75) pounds per hour. Therefore, pursuant to 326 IAC 6-3-2(e)(2), the particulate matter (PM) from the saw machine (SW1) shall not exceed 0.551 pounds per hour when operating at a process weight rate less than one hundred (100) pounds per hour.

The baghouse (BH6) shall be in operation at all times the saw machine (SW1) is in operation, in order to comply with this limit.

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the drill machine (D2) and slotting machine (S3) shall not exceed the corresponding pound per hour limitations listed in the table below:

Emission Unit	Control Device ID	Process Weight Rate (tons/hr)	Allowable Emission Rate (lb/hr)	Uncontrolled PM Emissions (lb/hr)
Drill Machine (D2)	BH2	0.10	0.877	1.70
Slotting Machine (S3)	BH6	0.10	0.877	1.70

The pound per hour limitations were calculated with 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:

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

The baghouse (BH2) shall be in operation at all times the drill machine (D2) is in operation, in order to comply with this limit. The baghouse (BH6) shall be in operation at all times slotting machine (S3) is in operation, in order to comply with this limit.

Friction Materials Grinding and Finishing Operations

(a) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The two (2) sanders (S4 and S5) each have a process weight rate of seventy-five (75) pounds per hour. Therefore, pursuant to 326 IAC 6-3-2(e)(2), the particulate matter (PM) from each sander shall not exceed 0.551 pounds per hour when operating at a process weight rate less than one hundred (100) pounds per hour.

The baghouse (BH6) shall be in operation at all times the sander (S4) is in operation, in order to comply with this limit. The baghouse (BH2) shall be in operation at all times the sander (S5) is in operation, in order to comply with this limit.

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the four (4) grinders (G5 through G8) shall not exceed the corresponding pound per hour limitations listed in the table below:

Emission Unit	Control Device ID	Process Weight Rate (tons/hr)	Allowable Emission Rate (lb/hr)	Uncontrolled PM Emissions (lb/hr)
Grinder (G5)	BH2	0.05	0.551	0.85
Grinder (G6)	BH6	0.05	0.551	0.85
Grinder (G7)	BH6	0.10	0.877	1.70
Grinder (G8)	BH6	0.10	0.877	1.70
Grit Blaster (BL1)	DC1	0.902	3.83	2.44

The pound per hour limitations were calculated with 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:

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

The baghouse (BH2) shall be in operation at all times the grinder (G5) is in operation, in order to comply with this limit. The baghouse (BH6) shall be in operation at all times the grinders (G6, G7, and G8) are in operation, in order to comply with these limits. The integral cyclone separator and dust collector (DC!) shall be in operation at all times the grit blaster is in operation, in order to comply with this limit.

Natural Gas Combustion

(a) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The natural gas-fired cabinet oven (OV10) is not subject to 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating), because, pursuant to 326 IAC 1-2-19, this emission unit does not meet the definition of an indirect heating unit.

(b) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The natural gas-fired cabinet oven (OV10) is exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight.

(c) 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)
This natural gas-fired cabinet oven (OV10) is not subject to 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations) because the potential to emit sulfur dioxide from the natural gas-fired cabinet oven (OV10) is less than twenty-five (25) tons per year and ten (10) pounds per hour.

Compliance Determination, Monitoring and Testing Requirements

(a) The compliance determination and monitoring requirements applicable to this source are as follows:

Emission Unit/Control	Operating Parameters	Frequency
Baghouse BH1	Visible Emissions	Once per day
Baghouse BH2	Visible Emissions	Once per day
Baghouse BH6	Visible Emissions	Once per day

(b) The existing testing requirements will not change because of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in MSOP No. 105-28659-00013 issued on March 24, 2010

Proposed Changes

(a) The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

(1) The emission unit descriptions in Section A.2 and D.3 have been revised to incorporate the new emission units and changes to the existing four (4) cabinet ovens (OV3 through OV6), drill press (D1), slitting machine (S1) and two (2) grinders (G3 and G4).

(2) Section D - Particulate Limit has been included in the revision in order to render the requirements 326 IAC 2-6.1-6(i) (Significant Permit Revisions) not applicable.

(3) Section D - Particulate has been revised to include the allowable particulate emission rates for the new emission units.

(4) Section D - Particulate Control has been revised to indicate that the source must operate the integral cyclone, dust collector DC1 and baghouses BH1, BH2, and BH6 at all times when the associated emission units are in operation in order to comply with Section D - Particulate Limit and Section D - Particulate.

(5) Section D - Visible Emissions has been included in the revision since the source now must perform visible emission notations to determine compliance with the no visible emission limit for baghouse BH1, BH2, BH6, and dust collector DC1.

(6) Section D - Record Keeping Requirements has been included in the revision since the source must document that they performed the daily visible emission notations.

...

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) One Brake Assembly and Brake Part manufacturing operation, including the following:

(1) Metal Surface Coating Operations, including the following;

...

(D) One (1) Light Rail Paint Booth, identified as PB4, approved for

construction in 2010, using air atomization to spray adhesive on metallic friction material backing plates, with a maximum application rate of one hundred two thousandths (0.102) gal/hr and a maximum usage rate of less than five (5) gal/day, equipped with dry filters for particulate control, and exhausting outside the building through stack S-PB4;

(~~D~~**E**) One (1) natural gas-fired Aquamaster CM 3600 Parts Washer/Conveyorized degreaser, identified as PW1, constructed in 2007, with a maximum throughput capacity of ninety (90) parts/hr, consisting of one (1) twenty-seven hundredths (0.27) MMBtu/hr Pre-Wash Burner, one (1) seventy hundredths (0.70) MMBtu/hr Dip Stage Burner, one (1) twenty-seven hundredths (0.27) MMBtu/hr Rinse Stage Burner, and one (1) twenty-five hundredths (0.25) MMBtu/hr Blow-off Stage Burner, using a water-based VOC and HAP free alkaline solvent, uncontrolled and exhausting to the outside through stacks S-PW1A, S-PW1B, and S-PW1C;

(~~E~~**F**) Seven (7) Parts Washers/cold cleaner degreasers, each using a water-based alkaline solvent, uncontrolled and exhausting to the inside of the building. No VOC or HAP emissions are anticipated from the solvent usage in these units. Including the following:

(i) Four (4) Parts Washers/cold cleaner degreasers, identified as PW2 through PW4 and PW6, each constructed in 1993, with a maximum solvent replacement volume of six hundredths (0.06) gal/day;

(ii) One (1) Parts Washer/cold cleaner degreaser, identified as PW5, constructed in 1988, with a maximum solvent replacement volume of six hundredths (0.06) gal/day; and

(iii) Two (2) Parts Washers/cold cleaner degreasers, identified as PW7 and PW8, each constructed in 2009, with a maximum replacement volume of six teen hundredths (0.16) gal/day.

(iv) One (1) Parts Washer/cold cleaner degreaser, identified as PW9, approved for construction in 2010, with a maximum solvent replacement volume of six hundredths (0.06) gal/day.

(~~F~~**G**) One (1) natural gas-fired Paint Drying Oven, identified as OV1, constructed in 1992, with a maximum heat input capacity of one (1.00) MMBtu/hr, uncontrolled and exhausting outside the building through stack S-OV1; and

(~~G~~**H**) One (1) natural gas-fired Permafuse Oven, identified as OV2, constructed in 2007, with a maximum heat input capacity of eighty hundredths (0.80) MMBtu/hr, processing a maximum of fifteen (15.0) brake parts, or twenty-two hundredths (0.22) pounds of bonding film, per hour, uncontrolled and exhausting outside the building through stack S-OV2.

...

(b) Clutch lining manufacturing operation, including the following;

(1) Friction Materials Closed/Compression Molding Operations

...

(B) One (1) Mixer, identified as M2, approved for construction in 2010, for the mixing of friction materials, having a maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH1), and exhausting outside the building through stack S-BH1;

(~~B~~**C**) Eight (8) Clutch Lining Presses, identified as PR1 through PR8, for the forming of friction materials into clutch lining parts, approved for construction in 2010, electrically heated, having a combined maximum throughput capacity of thirty (30) lbs/hour, uncontrolled and exhausting inside the building;

(~~C~~**D**) One (1) Pre-form Machine, identified as PM1, approved for construction in 2010, for the forming of friction materials into pre-form blocks, having a maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(E) Three (3) Pre-form Machines, identified as PM2, PM3, and PM4, approved for construction in 2010, for the forming of friction materials into pre-form blocks, having a combined maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(~~D~~**F**) Two (2) Military Block Presses, identified as PR9 and PR10, approved for construction in 2010, for the forming of pre-form blocks into military blocks, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled and exhausting inside the building; ~~and~~

(G) Three (3) Light Rail/OHDB Mold Presses, identified as PR11, PR13, and PR14, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(H) Four (4) OHDB Mold Presses, identified as PR15, PR16, PR17, and PR18, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(I) One (1) 1000T Down Acting Press, identified as PR20, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(J) One (1) 2500T Up Acting Press, identified as PR21, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(K) Two (2) Military Block/OHDB Mold Presses, identified as PR22 and PR23, approved for construction in 2010, for the pressing of friction materials into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(~~E~~**L**) Four (4) Cabinet Ovens, identified as OV3 through OV6, approved for construction in 2010, for the curing of clutch lining and military block parts, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs of molded parts/hour, uncontrolled and exhausting ~~inside~~ **outside** the building **through stacks S-OV3 through S-OV6**; ~~and~~

(M) Two (2) Cabinet Ovens, identified as OV8 and OV9, approved for construction in 2010, for curing of molded parts, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs of molded parts/hour, uncontrolled, and exhausting outside the building through stacks S-OV8 and S-OV9; and

(N) One (1) natural gas-fired Cabinet Oven, identified as OV10, approved for construction in 2010, for curing molded parts, with a maximum heat input capacity of thirty hundredths (0.30) MMBtu/hr, having a maximum throughput capacity of one hundred (100) lbs/hour, uncontrolled, and exhausting outside the building through stack S-OV10.

(2) Friction Materials Machining Operations

...

(B) One (1) Slitting Machine, identified as S1, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH~~2~~**6**), and exhausting outside the building through stack S-BH~~2~~**6**;

(C) One (1) Drill Machine, identified as D1, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH~~2~~**6**), and exhausting outside the building through stack S-BH~~2~~**6**;

(D) One (1) Slotting Machine, identified as S3, approved for construction in 2010, for the slotting of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(E) One (1) Saw Machine, identified as SW1, approved for construction in 2010, for the sizing of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(F) One (1) Drill Machine, identified as D2, approved for construction in

2010, for the drilling of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2.

(3) Friction Materials Grinding and Finishing Operations

...

(B) One (1) Sander, identified as S4, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(C) One (1) Sander, identified as S5, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(~~B~~**D**) One (1) Grinder, identified as G3, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH~~2~~**6**), and exhausting outside the building through stack S-BH~~2~~**6**; ~~and~~

(~~C~~**E**) One (1) Grinder, identified as G4, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH~~2~~**6**), and exhausting outside the building through stack S-BH~~2~~**6.;**

(F) One (1) Grinder, identified as G5, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(G) One (1) Grinder, identified as G6, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(H) One (1) Grinder, identified as G7, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(I) One (1) Grinder, identified as G8, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(J) One (1) Grit Blaster, identified as BL1, approved for construction in 2010, equipped with three (3) nozzles, having a maximum throughput capacity of eighty-seven (87) lbs of metal backing plates per hour and five hundred seventy-two and twelve hundredths (572.12) lbs of aluminum oxide grit/hour/nozzle, with particulate emissions controlled by a dust collector (DC1) and an integral cyclone separator, and exhausting inside the building.

...

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-6.1-5(a)(1)]: Clutch Lining Manufacturing Operations

(~~a~~**b**) Clutch lining manufacturing operation, including the following;

(1) Friction Materials Closed/Compression Molding Operations

...

(B) One (1) Mixer, identified as M2, approved for construction in 2010, for the mixing of friction materials, having a maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH1), and exhausting outside the building through stack S-BH1;

(~~B~~**C**) Eight (8) Clutch Lining Presses, identified as PR1 through PR8, for the forming of friction materials into clutch lining parts, approved for construction in 2010, electrically heated, having a combined maximum throughput capacity of thirty (30) lbs/hour, uncontrolled and exhausting inside the building;

(~~C~~**D**) One (1) Pre-form Machine, identified as PM1, approved for construction in 2010, for the forming of friction materials into pre-form blocks, having a maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(E) Three (3) Pre-form Machines, identified as PM2, PM3, and PM4, approved for construction in 2010, for the forming of friction materials into pre-form blocks, having a combined maximum throughput capacity of two hundred (200) lbs/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(~~D~~**F**) Two (2) Military Block Presses, identified as PR9 and PR10, approved for construction in 2010, for the forming of pre-form blocks into military blocks, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled and exhausting inside the building; ~~and~~

(G) Three (3) Light Rail/OHDB Mold Presses, identified as PR11, PR13, and PR14, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(H) Four (4) OHDB Mold Presses, identified as PR15, PR16, PR17, and PR18, approved for construction in 2010, for the pressing of friction material into molds, having a combined maximum throughput capacity of two

hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(I) One (1) 1000T Down Acting Press, identified as PR20, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(J) One (1) 2500T Up Acting Press, identified as PR21, approved for construction in 2010, for the pressing of friction material, having a maximum throughput capacity of one hundred (100) lbs/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(K) Two (2) Military Block/OHDB Mold Presses, identified as PR22 and PR23, approved for construction in 2010, for the pressing of friction materials into molds, having a combined maximum throughput capacity of two hundred (200) lbs/hour, uncontrolled, and exhausting inside the building;

(~~E~~**L**) Four (4) Cabinet Ovens, identified as OV3 through OV6, approved for construction in 2010, for the curing of clutch lining and military block parts, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs of molded parts/hour, uncontrolled and exhausting ~~inside~~ **outside** the building **through stacks S-OV3 through S-OV6**; ~~and~~

(M) Two (2) Cabinet Ovens, identified as OV8 and OV9, approved for construction in 2010, for curing of molded parts, electrically heated, having a combined maximum throughput capacity of two hundred (200) lbs of molded parts/hour, uncontrolled, and exhausting outside the building through stacks S-OV8 and S-OV9; and

(N) One (1) natural gas-fired Cabinet Oven, identified as OV10, approved for construction in 2010, for curing molded parts, with a maximum heat input capacity of thirty hundredths (0.30) MMBtu/hr, having a maximum throughput capacity of one hundred (100) lbs/hour, uncontrolled, and exhausting outside the building through stack S-OV10.

(2) Friction Materials Machining Operations

...

(B) One (1) Slitting Machine, identified as S1, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH~~2~~**6**), and exhausting outside the building through stack S-BH~~2~~**6**;

(C) One (1) Drill Machine, identified as D1, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH~~2~~**6**), and exhausting outside the building through stack S-BH~~2~~**6**;

(D) One (1) Slotting Machine, identified as S3, approved for construction in 2010, for the slotting of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate

emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(E) One (1) Saw Machine, identified as SW1, approved for construction in 2010, for the sizing of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(F) One (1) Drill Machine, identified as D2, approved for construction in 2010, for the drilling of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2.

(3) Friction Materials Grinding and Finishing Operations

...

(B) One (1) Sander, identified as S4, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(C) One (1) Sander, identified as S5, approved for construction in 2010, for the sanding of molded parts, having a maximum throughput capacity of seventy-five (75) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(~~B~~**D**) One (1) Grinder, identified as G3, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH~~2~~**6**), and exhausting outside the building through stack S-BH~~2~~**6**; ~~and~~

(~~C~~**E**) One (1) Grinder, identified as G4, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH~~2~~**6**), and exhausting outside the building through stack S-BH~~2~~**6**.**;**

(F) One (1) Grinder, identified as G5, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH2), and exhausting outside the building through stack S-BH2;

(G) One (1) Grinder, identified as G6, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of one hundred (100) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(H) One (1) Grinder, identified as G7, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6;

(I) One (1) Grinder, identified as G8, approved for construction in 2010, for the shaping of molded parts, having a maximum throughput capacity of two hundred (200) lbs of molded parts/hour, with particulate emissions controlled by baghouse (BH6), and exhausting outside the building through stack S-BH6; and

(J) One (1) Grit Blaster, identified as BL1, approved for construction in 2010, equipped with three (3) nozzles, having a maximum throughput capacity of eighty-seven (87) lbs of metal backing plates per hour and five hundred seventy-two and twelve hundredths (572.12) lbs of aluminum oxide grit/hour/nozzle, with particulate emissions controlled by a dust collector (DC1) and an integral cyclone separator, and exhausting inside the building.

...

D.3.1 Particulate Limit [326 IAC 2-6.1-6(g)(5)(C)]

Pursuant to 326 IAC 2-6.1-6(g)(5)(C), the dust collector DC1 and the baghouses BH1, BH2, and BH6 shall comply with the following limits when any of the friction material mixing, machining, grinding, and/or finishing equipment is in operation:

(a) Achieve and maintain at least ninety-nine (99%) efficiency.

(b) No visible emissions.

Compliance with these limits shall limit the potential to emit of PM to less than 25 tons per twelve (12) consecutive month period and shall render 326 IAC 2-6.1-6(i) (Significant Permit Revisions) not applicable.

D.3.~~1~~**2** Particulate [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from the cutting machine (C1), saw machine (SW1), and three (3) sanders (S2, S4, and S5) shall not exceed 0.551 pounds per hour, each, when operating at a process weight rate less than one hundred (100) pounds per hour.

(b) Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the facilities listed in this condition shall not exceed the pound per hour limitations listed in the table below:

Emission Unit	Process Weight Rate		Particulate Emission Limit (lb/hour)
	(lbs/hr)	(tons/hr)	
~~Cutting Machine (C1) controlled by baghouse (BH2)~~	~~75.0~~	~~0.038~~	~~0.454~~
Slitting Machine (S1) controlled by baghouse (BH~~2~~**6**)	200.0	0.100	0.877
Drill Machine (D1) controlled by baghouse (BH~~2~~**6**)	200.0	0.100	0.877
Drill Machine (D2) controlled by baghouse	**200**	**0.10**	**0.877**

(BH2)			
Slotting Machine (S3) controlled by baghouse (BH6)	**200**	**0.10**	**0.877**
~~Sander (S2) controlled by baghouse (BH2)~~	~~75.0~~	~~0.038~~	~~0.454~~
Grinder (G3) controlled by baghouse (BH~~2~~**6**)	200.0	0.100	0.877
Grinder (G4) controlled by baghouse (BH~~2~~**6**)	200.0	0.100	0.877
Grinder (G5) controlled by baghouse (BH2)	**100**	**0.05**	**0.551**
Grinder (G6) controlled by baghouse (BH6)	**100**	**0.05**	**0.551**
Grinder (G7) controlled by baghouse (BH6)	**200**	**0.10**	**0.877**
Grinder (G8) controlled by baghouse (BH6)	**200**	**0.10**	**0.877**
Grit Blaster (BL1) controlled by dust collector (BL1)	**1,803.36**	**0.902**	**3.83**

...

D.3.~~2~~**3** Preventive Maintenance Plan [326 IAC 1-6-3]

...

D.3.~~3~~**4** Particulate Control

(a) In order to comply with Condition**s** D.1.1 **and D.1.2**, the baghouse(s)**, integral cyclone separator, and dust collector** for particulate control shall be in operation and control emissions from the friction material **mixing,** machining, grinding and finishing operations at all times that any of the friction material **mixing,** machining, grinding and/or finishing equipment is in operation.

D.3.~~4~~**5** Testing Requirements [326 IAC 2-6.1][326 IAC 2-4.1][326 IAC 8-1-6][326 IAC 2-1.1-11]

...

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.3.6 Visible Emissions Notations

(a) Visible emission notations of the baghouse stack exhausts (BH1, BH2, BH6) shall be performed once per day during normal daylight operations. A trained employee or a trained contractor shall record whether emissions are normal or abnormal.

(b) 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 startup or shut down time.

(c) 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.

(d) A trained employee or contractor is a person who has worked or trained 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.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.3.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.6, the Permittee shall maintain records of daily visible emission notations of the baghouse stack

exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

...

(b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

(1) For clarity, IDEM, OAQ has changed references to the general conditions: "in accordance with Section B", "in accordance with Section C", or other similar language, to " Section C ... contains the Permittee's obligations with regard to the records required by this condition."

(2) IDEM, OAQ has decided that the phrases "no later than" and "not later than" are clearer than "within" in relation to the end of a timeline. Therefore, the timelines in Section D - Testing Requirements have been revised to "no later than" or "not later than."

(3) On November 3, 2009, the requirements of 326 IAC 8-2-9(f) were revised. Therefore, Section D - VOC limit has been revised to incorporate the new requirements.

(4) The allowable particulate emission rates for the cutting machine (C1) and sander (S1) in Section D - Particulate have been revised because they each have a process weight rate less than 100 pounds per hour. Therefore, pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from the cutting machine (C1) and sander (S2) shall not exceed 0.551 pounds per hour, each (see change above).

(5) IDEM, OAQ has decided to clarify Section D - Testing Requirements.

...

D.1.1 VOC Limit [326 IAC 8-2-9]

...

(b) ~~Pursuant to 326 IAC 8-2-9(f), 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.~~ **Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:**

(1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(4) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(5) Minimize VOC emissions from the cleaning application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

...

D.1.5 Record Keeping Requirements

(b) ~~All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~ **Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.**

...

D.3.4**5** Testing Requirements [326 IAC 2-6.1][326 IAC 2-4.1][326 IAC 8-1-6][326 IAC 2-1.1-11]

...

(a) ~~Within~~ **Not later than** ninety (90) days after the issuance of the permit (#M105-28659-00013), the Permittee shall submit a copy of the September 18, 1997 test report and associated test data generated from testing conducted at Carlisle Motion Control Industries, Inc.'s South Hill facility, located at 1000 Cycle Lane in South Hill, Virginia, for PTE validation by IDEM.

...

(b) ~~Within~~ **Not later than** one hundred eighty (180) days after the issuance of the permit (#M105-28659-00013), the Permittee shall conduct a test to determine the HAP and VOC PTE of the Clutch Parts Manufacturing Line's Closed/Compression Molding Operations utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with **the provisions of 326 IAC 3-6 (Source Sampling Procedures).** Section C - Performance Testing **contains the Permittee's obligation with regard to the performance testing required by this condition**.

...

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on October 25, 2010.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed MSOP Minor Revision No. 105-29821-00013. The staff recommends to the Commissioner that this MSOP Minor Revision be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5375 or toll free at 1-800-451-6027 extension 4-5375.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Appendix A: Emissions Calculations
Summary of Revision Emissions

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Unlimited Potential to Emit of Revision (tons/yr)										
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAPs**	**Single HAP**	
Light Rail Paint Booth (PB4)	0.53	0.53	0.53	0	0	0.12	0	0	0	
Friction Material Handling	0.10	0.03	0.03	0	0	0	0	0	0	
Friction Material Mixing (M2)	0.26	0.13	0.13	0	0	0	0	0	0	
Friction Materials Closed/Compression Molding Operations	0	0	0	0	0	0.54	0	0.434	0.39	Phenol
Friction Material Machining Operations	17.68	1.77	1.77	0	0	0	0	0	0	
Friction Material Grinding Operations	27.92	2.79	2.79	0	0	0	0	0	0	
Light Rail Blaster (BL1)	10.69	10.69	10.69	0	0	0	0	0.064	0.06	Manganese
Cabinet Oven (OV10) Natural Gas Combustion	0.002	0.01	0.01	0.001	0.13	0.007	0.11	2.48E-03	2.37E-03	Hexane
Total	**57.18**	**15.95**	**15.95**	**0.001**	**0.13**	**0.67**	**0.11**	**0.50**	**0.39**	**Phenol**

Limited Potential to Emit of Revision (tons/yr)										
Emission Unit	**PM*** **	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAPs**	**Single HAP**	
Light Rail Paint Booth (PB4)*	0.53	0.53	0.53	0	0	0.12	0	0	0	
Friction Material Handling*	0.10	0.03	0.03	0	0	0	0	0	0	
Friction Material Mixing (M2)**	0.003	0.001	0.001	0	0	0	0	0	0	
Friction Materials Closed/Compression Molding Operations*	0	0	0	0	0	0.54	0	0.434	0.39	Phenol
Friction Material Machining Operations**	0.18	0.02	0.02	0	0	0	0	0	0	
Friction Material Grinding Operations**	0.28	0.03	0.03	0	0	0	0	0	0	
Light Rail Blaster (BL1)**	0.11	0.11	0.11	0	0	0	0	0.064	0.06	Manganese
Cabinet Oven (OV10) Natural Gas Combustion	0.002	0.01	0.01	8.00E-04	0.13	0.007	0.11	2.48E-03	2.37E-03	Hexane
Total	**1.19**	**0.73**	**0.73**	**0.00**	**0.13**	**0.67**	**0.11**	**0.50**	**0.39**	**Phenol**

*Uncontrolled emissions
**Controlled emissions
*** Pursuant to 326 IAC 2-6.1-6(g)(5)(C), the source has agreed to limit PM emissions from this modification to less than 25 tons per year by using particulate pollution control devices that achieve and maintain at least 99% efficiency and no visible emissions.

Appendix A: Emissions Calculations
Summary of Emissions

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Unlimited Potential to Emit (tons/year)										
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAPs**	**Single HAP**	
Paint Booth #1	7.56	7.56	7.56	0	0	5.09	0	0.24	0.17	Xylene
Paint Booth #2	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04	Xylene
Paint Booth #3	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04	Xylene
Light Rail Paint Booth	0.53	0.53	0.53	0	0	0.12	0	0	0	
Shoe Cell Assembly	0	0	0	0	0	1.96	0	1.95	0.96	Phenol
Metal Machining and Grinding Operations	34.25	3.43	3.43	0	0	0	0	11.20	4.11	Chromium
Friction Material Handling	0.22	0.08	0.08	0	0	0	0	0	0	
Friction Material Mixing	0.59	0.30	0.30	0	0	0	0	0	0	
Friction Materials Closed/Compression Molding Operations	0	0	0	0	0	2.39	0	0.98	0.87	Phenol
Friction Material Machining and Grinding Operations	88.87	18.78	18.78	0	0	0	0	0.06	0.06	Manganese
Natural Gas Combustion	0.25	0.99	0.99	0.08	12.99	0.71	10.91	0.25	0.23	Hexane
Fire Pump	0.05	0.05	0.05	0.05	0.75	0.06	0.16	6.58E-04	2.00E-04	Formaldehyde
Paved Roads	0.60	0.12	0.02	0	0	0	0	0	0	
Total	**155.28**	**54.18**	**54.08**	**0.13**	**13.74**	**13.93**	**11.07**	**14.76**	**4.11**	**Chromium**

Potential to Emit After Issuance of the Revision (tons/year)										
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAPs**	**Single HAP**	
Paint Booth #1	7.56	7.56	7.56	0	0	5.09	0	0.24	0.17	Xylene
Paint Booth #2	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04	Xylene
Paint Booth #3	11.18	11.18	11.18	0	0	1.79	0	0.04	0.04	Xylene
Light Rail Paint Booth	0.53	0.53	0.53	0	0	0.12	0	0	0	
Shoe Cell Assembly	0	0	0	0	0	1.96	0	1.95	0.96	Phenol
Metal Machining and Grinding Operations*	16.31	3.43	3.43	0	0	0	0	11.20	4.11	Chromium
Friction Material Handling	0.22	0.08	0.08	0	0	0	0	0	0	
Friction Material Mixing**	0.01	0.003	0.003	0	0	0	0	0	0	
Friction Materials Closed/Compression Molding Operations	0	0	0	0	0	2.39	0	0.98	0.87	Phenol
Friction Material Machining and Grinding Operations**	0.92	0.19	0.19	0	0	0	0	0.06	0.06	Manganese
Natural Gas Combustion	0.25	0.99	0.99	0.08	12.99	0.71	10.91	0.25	0.23	Hexane
Fire Pump	0.05	0.05	0.05	0.05	0.75	0.06	0.16	6.58E-04	2.00E-04	Formaldehyde
Paved Roads	0.60	0.12	0.02	0	0	0	0	0	0	
Total	**48.80**	**35.29**	**35.19**	**0.13**	**13.74**	**13.93**	**11.07**	**14.76**	**4.11**	**Chromium**

* PM emissions limited pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).
** Pursuant to 326 IAC 2-6.1-6(g)(5)(C), the source must achieve and maintain at least 99% efficiency and no visible emissions for baghouses BH1, BH2, and BH6, and dust collector DC1. Compliance with these limits shall limit the potential to emit of PM from this modification to less than 25 tons per twelve (12) consecutive month period and shall render 326 IAC 2-6.1-6(i) (Significant Permit Revisions) not applicable.

Appendix A: Emissions Calculations
Volitile Organic Compound (VOC) Emissions
From the Surface Coating, Molding, and Shoe Cell Assembly Operations

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Material	Density (lb/gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Max Usage Rate (gal/hr)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (lbs/hour)	Actual VOC [a] (lb/day)	Potential VOC (lbs/day)	Actual VOC [b] (ton/yr)	Potential VOC (tonsyear)	* Potential PM/PM10/PM2.5 (lbs/hour)	* Potential PM/PM10/PM2.5 (ton/year)	** Transfer Efficiency
Brake Assembly & Brake Parts Manufacturing Line - Surface Coating																	
Paint Booth #1 (PB1)																	
Red Oxide Primer***	10.21	0%	0%	0%	0%	36.00%	0.330	0.80	0.80	0.26	0.53	6.34	0.10	1.16	1.68	7.38	50%
P1004 Black Gloss H/S H/F ACR ENA	8.11	39.99%	0.00%	39.99%	0.00%	0.00%	0.330	3.24	3.24	1.07	2.14	25.69	0.39	4.69	0.80	3.52	50%
KRYLON® PAINT ALL® Fast Dry Enamel	6.59	50.50%	0.00%	50.50%	0.00%	13.00%	0.025	3.33	3.33	0.08	0.17	2.00	0.03	0.36	0.04	0.18	50%
Clean-up Solvent (Xylene)	7.18	100.00%	0.00%	100.00%	0.00%	0.00%	0.0013	7.18	7.18	0.01	0.02	0.22	3.41E-03	0.04	0	0	100%
							Totals:				2.33		0.42	**5.09**		**7.56**	
Paint Booth #2 (PB2)																	
Red Oxide Primer***	10.21	0%	0%	0%	0%	36.00%	0.500	0.80	0.80	0.40	0.80	9.60	0.15	1.75	2.55	11.18	50%
Clean-up Solvent (Xylene)	7.18	100.00%	0.00%	100.00%	0.00%	0.00%	0.0013	7.18	7.18	0.01	0.02	0.22	3.41E-03	0.04	0	0	100%
							Totals:				0.82		0.15	**1.79**		**11.18**	
Paint Booth #3 (PB3)																	
Red Oxide Primer***	10.21	0%	0%	0%	0%	36.00%	0.500	0.80	0.80	0.40	0.80	9.60	0.15	1.75	2.55	11.18	50%
Clean-up Solvent (Xylene)	7.18	100.00%	0.00%	100.00%	0.00%	0.00%	0.0013	7.18	7.18	0.01	0.02	0.22	3.41E-03	0.04	0	0	100%
							Totals:				0.82		0.15	**1.79**		**11.18**	
Light Rail Paint Booth (PB4)																	
Aqualock 6000	8.70	72.88%	69.79%	3.09%	72.00%	0.00%	0.102	0.96	0.27	0.03	0.05	0.66	0.01	0.12	0.12	0.53	50%
							Totals:				0.05		0.01	**0.12**		**0.53**	
							Surface Coating Subtotal							**8.80**		**30.44**	
Brake Assembly & Brake Parts Manufacturing Line - Shoe Cell Assembly Operations - Permafuse Oven (OV2)																	
Bond Prep Solvent (Denatured Alcohol)	6.61	100.00%	0%	100.00%	0%	0%	0.0013	3.24	6.61	0.01	0.07	0.21	0.01	0.04	0	0	100%
							Total:				0.07		0.01	**0.04**		**0.00**	
Clutch Parts Manufacturing Line - Closed/Compression Molding																	
Solvent (S-1015)***	7.39	100.00%	0%	100.00%	0%	0%	0.0361	7.39	7.39	0.27	2.13	6.40	0.39	1.17	0	0	100%
							Total:				2.13		0.39	**1.17**		**0.00**	

Total State Potential Emissions

Uncontrolled Potential Emissions:	**10.00**	**30.44**
Control Efficiency:	n/a	**95%**
Controlled Emissions:	**n/a**	**0.38**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = Density (lb/gal) * Weight % Organics * 1/(1-Volume % water)
Pounds of VOC per Gallon Coating = Density (lb/gal) * Weight % Organics
PTE of VOC (lbs/hour) = Pounds of VOC/Gallon coating (lb/gal) * Maximum Usage Rate (gal/hr)
PTE of VOC (lbs/day) = Pounds of VOC/Gallon coating (lb/gal) * Maximum Usage Rate (gal/hr) * 24 hours/day
PTE of VOC (tons/year) = Pounds of VOC per Gallon coating (lb/gal) * Maximum Usage Rate (gal/hr) * 8760 hours/year * 1 ton/2000 lbs
PTE of PM/PM10 (tons/year) = Maximum Usage Rate (gal/hr) * Density (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer Efficiency %) * 8760 hours/year * 1 ton/2000 lbs
PTE of PM/PM10 (lbs/hour) = Maximum Usage Rate (gal/hr) * Density (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer Efficiency %)

[a] Actual VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Maximum Usage Rate (gal/hr) * Actual hours of operation per day (hrs)
[b] Actual VOC tons per year = Pounds of VOC per Gallon coating (lb/gal) * Maximum Usage Rate (gal/hr) * Actual hours of operation per day (hrs) * (365 days/yr) * (1 ton/2000 lbs)
Total = Worst Case Coating + Sum of all solvents used
Total State Potential Emissions = Sum of Totals from each Operation

NOTES

[a] The source has indicated that each paint booth comprising the surface coating operations, is currently in use no more than 2 hours per day. Therefore, Actual VOC emissions (lb/day) for the surface coating operations are based on 2hrs per day and 365 days per year. Additionally, Actual VOC emissions (lb/day) for the Shoe Cell Assembly Operations and the Closed/Compression Molding Operations are based on 8hrs/day and 365 days/year.

* PM, PM10, and PM 2.5 emissions are assumed equal.
** Coatings are applied using HVLP guns. The transfer efficiency is from AP-42, Table 4.2.2.11-1. (AP-42, 01/95). All units are controlled by dry filters.
***Based on MSDSs submitted by the source, the following applies:
All parts washers at the facility use a water-based alkaline solvent (CEFA-KLEEN 5378). Therefore, no VOC or HAP emissions are expected from the use of the solvent.
The Red Oxide Primer currently being used in Paint Booths PB1-PB3 does not contain any HAPs.
The Solvent (S-1015) currently being used in the molding operations does not contain any HAPs.
The Aqualock 6000 adhesive currently being used in the light rail booth (PB4) does not contain any HAPs and water is used as a cleanup solvent.

Appendix A: Emissions Calculations
Hazardous Air Pollutant (HAP) Emissions
From the Surface Coating and Shoe Cell Assembly Operations

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Material	Density (lb/gal)	Max Usage Rate (gal/hr)	Weight % Ethylbenzene	Weight % Methanol	Weight % Methyl isobutyl ketone	Weight % Napthalene	Weight % Xylene	Potential Emissions (Tons/Year) Ethylbenzene	Methanol	Methyl isobutyl ketone	Napthalene	Xylene
Brake Assembly & Brake Parts Manufacturing Line - Surface Coating												
Paint Booth #1 (PB1)												
P1004 Black Gloss H/S H/F ACR ENA	8.11	0.33	0%	0%	0%	0.4%	0%	0	0	0	0.047	0
KRYLON® PAINT ALL® Fast Dry Enamel	6.59	0.03	3%	0%	0%	0%	18%	0.022	0	0	0	0.130
Clean-up Solvent (Xylene)	7.18	0.0013	0%	0%	0%	0%	100%	0	0	0	0	0.041
								0.02	**0**	**0**	**0.05**	**0.17**
Paint Booth #2 (PB2)												
Clean-up Solvent (Xylene)	7.18	0.0013	0%	0%	0%	0%	100%	0	0	0	0	0.041
Paint Booth #3 (PB3)												
Clean-up Solvent (Xylene)	7.18	0.0013	0%	0%	0%	0%	100%	0	0	0	0	0.041
							Surface Coating Subtotal	**0.02**	**0.00**	**0.00**	**0.05**	**0.25**
Brake Assembly & Brake Parts Manufacturing Line - Shoe Cell Assembly Operations - Permafuse Oven (OV2)												
Denatured Alcohol	6.61	0.0013	0%	55%	4%	0%	0%	0	0.021	0.002	0	0
							"Worst Case" Uncontrolled Potential Emissions:	**0.02**	**0.021**	**0.002**	**0.05**	**0.25**

Total Combined HAPs **0.34**

METHODOLOGY
PTE of HAP (tons/year) = Density (lb/gal) * Maximum Throughput (units/hour) * Maximum Usage (gal/unit) * Weight % HAP * 8760 hours/year * 1 ton/2000 lbs

NOTES
Based on MSDSs submitted by the source, the following applies:
All parts washers at the facility use a water-based alkaline solvent (CEFA-KLEEN 5378). Therefore, no VOC or HAP emissions are expected from the use of the solvent.
The Red Oxide Primer currently being used in Paint Booths PB1-PB3 does not contain any HAPs.
The Solvent (S-1015) currently being used in the molding operations does not contain any HAPs.
The Aqualock 6000 adhesive currently being used in the light rail booth (PB4) does not contain any HAPs and water is used as a cleanup solvent.

Appendix A: Emissions Calculations
Volitile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) Emissions
Brake Assembly & Brake Parts Manufacturing Line - Shoe Cell Assembly Operations - Permafuse Oven (OV2)

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Hazardous Air Pollutant (HAP) Emissions

Material	Max Usage Rate * (lbs/hr)	Weight % Formaldehyde	Weight % Phenol	Formaldehyde Emissions (ton/yr)	Phenol Emissions (ton/yr)
Bonding Film	0.22	1.00	1.00	0.96	0.96
			Total Single HAPs	**0.96**	**0.96**

Total Combined HAPs	1.93

Volitile Organic Compound (VOC) Emissions

Material	Max Usage Rate * (lbs/hr)	Weight % VOC Compounds	Uncontrolled VOC Emission Rate (lbs/hr)	Uncontrolled VOC Emission Rate (tons/yr)
Bonding Film	0.22	2.00	0.44	1.93
		Total VOCs	**0.44**	**1.93**

METHODOLOGY
PTE of Single HAP (tons/year) = Maximum Usage rate (lbs/hr) * % HAP Content * 8760 hrs/yr * 1 ton/2000 lbs
Total Combined HAP (tons/year) = SUM (PTE of Single HAP (tons/year))
Weight % VOC = SUM (Weight % Formaldehyde + Weight % Phenol)
PTE of VOC (lbs/hr) = Maximum Usage rate (lbs/hr) * Weight % VOC
PTE of VOC (tons/yr) = PTE of VOC (lbs/hr) * (8760 hours/1 year) *(1 ton/2000 lbs)

NOTES
Particulate emissions from the Brake Assembly & Brake Parts Manufacturing Line - Shoe Cell Assembly Operations - Permafuse Oven (OV2) operations are negligible.

Appendix A: Emission Calculations
Particulate Emissions (PM)
from the Clutch Parts Manufacturing Line - Material Handling

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Unit ID	Maximum Capacity * (lbs/hr)	Pollutant	Emission Factor (lbs/ton) [α]	Emission Rate Uncontrolled (lbs/hr)	Emission Rate Uncontrolled (tons/yr)
Friction Material Handling (NF-718 and NF-794)	250.0	PM	0.220	0.0275	**0.120**
		PM10*	0.078	0.0098	**0.043**
(New) Friction Material Handling (NF-419, NF-782, NF-787, NF-794, and NF-817)	200.0	PM	0.220	0.0220	**0.096**
		PM10*	0.078	0.0078	**0.034**

Total PM:	**0.22**
Total PM10:	**0.08**

Methodology

* The maximum capacity of the friction material handling operation is limited by the maximum capacity of each mixer (M1 and M2).

[α] No AP42 emission factors exist for the loading and unloading of friction materials into the mixer, therefore, for a conservative estimate the EPA WebFire PM and PM10 emission factors for Mineral Products, Concrete Batching, Mixer loading of cement/sand/aggregate (SCC 3-05-011-09) were used.

Emission Rate for PM an PM10 before controls (lbs/hr) = Maximum Capacity (lbs/hr) * Emission Factor (lbs/ton) * (1 ton/2000 lbs)
Emission Rate for PM and PM10 before controls (tons/yr) = Emission Rate (lbs/hr) * (8760 hours/1 year) *(1 ton/2000 lbs)
Emission Rate for PM and PM10 after controls (lbs/hr) = Emission Rate before controls (lbs/hr) * (1-control efficiency)
Emission Rate for PM and PM10 after controls (tons/yr) = Emission Rate after controls (lbs/hr) * (8760 hours/1 year) * (1 ton/2000 l

Notes

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5
* PM 2.5 emissions are assumed equal to PM10 emissions.

Appendix A: Emission Calculations
Particulate Emissions (PM)
from the Clutch Parts Manufacturing Line - Material Mixing

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Unit ID	Maximum Capacity (lbs/hr)	Control Efficiency (%)	Pollutant	Emission Factor (lbs/ton) [α]	Emission Rate before Controls (lbs/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
Mixer (M1) controlled by baghouse (BH1)	250.0	99.00%	PM	0.60	0.0750	**0.329**	7.50E-04	**3.29E-03**
			PM10*	0.30	0.0375	**0.164**	3.75E-04	**1.64E-03**
New Mixer (M2) controlled by baghouse (BH1)	200.0	99.00%	PM	0.60	0.0600	**0.263**	6.00E-04	**2.63E-03**
			PM10*	0.30	0.0300	**0.131**	3.00E-04	**1.31E-03**

Total PM:	**0.59**	**5.91E-03**
Total PM10:	**0.30**	**2.96E-03**

Methodology

[α] No AP42 emission factors exist for the mixing of friction materials, therefore, for a conservative estimate the EPA WebFIRE PM and PM10 emission factors for Fiberglass Manufacturing - Raw material: Mixing/Weighing (SCC 30501223) were used.
Emission Rate for PM an PM10 before controls (lbs/hr) = Maximum Capacity (lbs/hr) * Emission Factor (lbs/ton) * (1 ton/2000 lbs)
Emission Rate for PM and PM10 before controls (tons/yr) = Emission Rate (lbs/hr) * (8760 hours/1 year) *(1 ton/2000 lbs)
Emission Rate for PM and PM10 after controls (lbs/hr) = Emission Rate before controls (lbs/hr) * (1-control efficiency)
Emission Rate for PM and PM10 after controls (tons/yr) = Emission Rate after controls (lbs/hr) * (8760 hours/1 year) * (1 ton/2000 lbs)

Notes

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate
* PM 2.5 emissions are assumed equal to PM10 emissions.

Appendix A: Emission Calculations
Volitile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) Emissions
from the Clutch Parts Manufacturing Line - Closed/Compression Molding

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Hazardous Air Pollutant (HAP) Emissions

Material	Max Usage Rate * (lbs/hr)	Max Usage Rate * (tpy)	Phenol EF (lb/ton) [α]	Formaldehyde EF (lb/ton) [α]	Acrylonitrile EF [α] (lb/ton)	Butadiene EF [α] (lb/ton)	Phenol Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Acrylonitrile Emissions (ton/yr)	Butadiene Emissions (ton/yr)
Friction Material (worst case from NF-718 & NF 794)	250.0	1,095.0	0.880	0.020	0.080	0.010	0.48	0.01	0.04	0.01
(New) Friction Material Handling (worst case from NF-419, NF-782, NF-787, NF-794, and NF-817)	200.0	876.0	0.880	0.020	0.080	0.010	0.39	0.01	0.04	0.00
						Total Single HAPs	**0.87**	**0.02**	**0.08**	**0.01**

Total Combined HAPs	**0.98**

Volitile Organic Compound (VOC) Emissions

Material	Max Usage Rate * (lbs/hr)	Max Usage Rate * (tpy)	Emission Factor [β] (lbs/ton)	Uncontrolled VOC Emission Rate (lbs/hr)	Uncontrolled VOC Emission Rate (tons/yr)
Friction Material (worst case from NF-718 & NF 794)	250.0	1,095.0	1.238	0.15	0.68
(New) Friction Material Handling (worst case from NF-419, NF-782, NF-787, NF-794, and NF-817)	200.0	876.0	1.238	0.12	0.54
			Total VOCs	**0.28**	**1.22**

METHODOLOGY

PTE of VOC (lbs/hr) = Emission Factor (lbs/ton) * Capacity (lbs/hr) * (1 ton/2000 lbs)
PTE of VOC (tons/yr) = Emission Rate (lbs/hr) * (8760 hours/1 year) *(1 ton/2000 lbs)
PTE of HAP (tons/year) = Maximum Throughput (tons/year) * Emission Factor (lb/ton) * 1 ton/2000 lbs

NOTES

* The maximum usage rate of the friction material is limited by the maximum capacity of the mixer (M1).

[α] No AP 42 emission factors exist for Closed/Compression Molding Operations; therefore, Hazardous Air Pollutant (HAP) and Volatile Organic Compound (VOC) Emissions from the Clutch Parts Manufacturing Line's Closed/Compression Molding operations were characterized using emission factors developed for a similar operation installed at the source's heavy-duty truck brake lining manufacturing facility located in South Hill, Virginia.

The site-specific emission factors used for estimating the emission rates of VOC, phenol, formaldehyde, butadiene and acrylonitirile from the closed/compression molding presses were taken from a Virginia Department of Environmental Quality (Virginia DEQ) memorandum from Mr. Matthew Biesterveld of the South Central Regional Office, dated December 15, 2004. The data used in that memo were taken from a test report generated on September 18, 1997. IDEM has determined that these alternate emission factors must be validited for use in the closed/compression molding operations.

[β] Since each of the above listed HAPs are also VOCs, the VOC emission factor used to calculate emissions from the Clutch Parts Manufacturing Line's Closed/Compression Molding operations was generated by adding a safety factor of 25% to the sum of the individual HAP emission factors.

Particulate emissions from the Clutch Parts Manufacturing Line's Closed/Compression Molding operations are negligible.

Appendix A: Emission Calculations
Particulate Emissions (PM)
from the Machining Operations

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Unit ID	Maximum Capacity (lbs/hr)	Control Efficiency (%)	Pollutant	Emission Factor [α] (lbs/ton)	Emission Rate before Controls (lbs/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
Brake Assembly & Brake Parts Manufacturing Line								
Lathe Machine M1800 (LM1) controlled by portable dust collector (BH5)	100.0	98.0%	PM	17.0	0.850	**3.723**	0.0170	**0.0745**
			PM10*	1.7	0.085	**0.372**	0.0017	**0.0074**
Vertical Turret Lathe M1905 (LM2) controlled by portable dust collector (BH5)	425.0	98.0%	PM	17.0	3.613	**15.823**	0.0723	**0.3165**
			PM10*	1.7	0.361	**1.582**	0.0072	**0.0316**
Vertical Turret Lathe M1900 (LM3) controlled by portable dust collector (BH5)	250.0	98.0%	PM	17.0	2.125	**9.308**	0.0425	**0.1862**
			PM10*	1.7	0.213	**0.931**	0.0043	**0.0186**
Vertical Turret Lathe M1921 (LM4) controlled by portable dust collector (BH5)	144.0	98.0%	PM	17.0	1.224	**5.361**	0.0245	**0.1072**
			PM10*	1.7	0.122	**0.536**	0.0024	**0.0107**
			PM		7.812	34.214	0.156	0.684
			PM10		0.781	3.421	0.016	0.068
Clutch Parts Manufacturing Line								
Cutting Machine (C1) controlled by baghouse (BH2)	75.0	99.0%	PM	17.0	0.638	**2.792**	0.0064	**0.0279**
			PM10	1.7	0.064	**0.279**	0.0006	**0.0028**
Slitting Machine (S1) controlled by baghouse (BH6)	200.0	99.0%	PM	17.0	1.700	**7.446**	0.0170	**0.0745**
			PM10	1.7	0.170	**0.745**	0.0017	**0.0074**
Drill Machine (D1) controlled by baghouse (BH6)	200.0	99.0%	PM	17.0	1.700	**7.446**	0.0170	**0.0745**
			PM10	1.7	0.170	**0.745**	0.0017	**0.0074**
			PM		4.038	17.684	0.040	0.177
			PM10		0.404	1.768	0.004	0.018
New Expander Tubes								
Saw Machine (SW1) controlled by baghouse (BH6)	75.0	99.0%	PM	17.0	0.638	**2.792**	0.0064	**0.0279**
			PM10	1.7	0.064	**0.279**	0.0006	**0.0028**
Drill Machine (D2) controlled by baghouse (BH2)	200.0	99.0%	PM	17.0	1.700	**7.446**	0.0170	**0.0745**
			PM10	1.7	0.170	**0.745**	0.0017	**0.0074**
			PM		2.338	10.238	0.023	0.102
			PM10		0.234	1.024	0.002	0.010
New OHDB/Light Rail Manufacturing Line								
Slotting Machine (S3) controlled by baghouse (BH6)	200.0	99.0%	PM	17.0	1.700	**7.446**	0.0170	**0.0745**
			PM10	1.7	0.170	**0.745**	0.0017	**0.0074**
			PM		1.700	7.446	0.017	0.074
			PM10		0.170	0.745	0.002	0.007
					Total PM:	**51.90**		**0.86**
					Total PM10:	**5.19**		**0.09**

Methodology

[α] EPA WebFIRE PM and PM10 emission factors for Grey Iron Foundries - Grinding/Cleaning (Table 12.10-7, SCC#30400340); and
Emission Rate for PM an PM10 before controls (lbs/hr) = Emission Factor (lbs/ton) * Capacity (lbs/hr) * (1 ton/2000 lbs)
Emission Rate for PM and PM10 before controls (tons/yr) = Emission Rate (lbs/hr) * (8760 hours/1 year) *(1 ton/2000 lbs)
Emission Rate for PM and PM10 after controls (lbs/hr) = Emission Rate (lbs/hr) before controls * (1-control efficiency)
Emission Rate for PM and PM10 after controls (tons/yr) = Emission Rate after controls (lbs/hr) * (8760 hours/1 year) * (1 ton/2000 lbs)

Notes

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

* PM 2.5 emissions are assumed equal to PM10 emissions.

Appendix A: Process Particulate Emissions
Potential Metal Hazardous Air Pollutant Process Emissions (MHAP)
from the Machining Operations

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Unit ID	* Total Uncontrolled Potential Particulate (PM) (tons/yr)	Weight % Chromium Compounds	Weight % Lead Compounds	Weight % Manganese Compounds	Weight % Nickel Compounds	Chromium Compounds Emissions (ton/yr)	Lead Compounds Emissions (ton/yr)	Manganese Compounds Emissions (ton/yr)	Nickel Compounds Emissions (ton/yr)
Brake Assembly & Brake Parts Manufacturing Line									
Lathe Machine M1800 (LM1) controlled by portable dust collector (BH5)	3.723	12.00%	0.70%	10.00%	10.00%	0.447	0.026	0.372	0.372
Vertical Turret Lathe M1905 (LM2) controlled by portable dust collector (BH5)	15.823	12.00%	0.70%	10.00%	10.00%	1.899	0.111	1.582	1.582
Vertical Turret Lathe M1900 (LM3) controlled by portable dust collector (BH5)	9.308	12.00%	0.70%	10.00%	10.00%	1.117	0.065	0.931	0.931
Vertical Turret Lathe M1921 (LM4) controlled by portable dust collector (BH5)	5.361	12.00%	0.70%	10.00%	10.00%	0.643	0.038	0.536	0.536
					Total Uncontrolled Potential Emissions (tons/yr)	**4.11**	**0.24**	**3.42**	**3.42**
					Control Efficiency (%)	**98%**	**98%**	**98%**	**0.98**
					Controlled Potential Emissions (tons/year)	**0.082**	**0.005**	**0.068**	**0.07**

Methodology:
Uncontrolled Potential Emissions (tons/yr) = Total Potential Particulate (tons/yr) * Weight % Metal HAP
Controlled Potential Emissions (tons/yr) = Uncontrolled Potential Emissions (tons/yr) *(1 - Control Efficiency (%))

Total Combined HAPs (tons/yr)	**11.19**
Controlled Potential Emissions (tons/year)	**0.22**

Notes:
Total emissions based on rated capacity at 8,760 hours/year.
* The Total Uncontrolled Potential Particulate (PM) Process Emissions from the Metal Machining Operations, taken from page 8 of 14, of this Appendix.

Potential emissions for the metallic HAPs, including: Chromium, Lead, Manganese and Nickel, were determined using a "worst case" content from the various materials used by the source, taken from MSDSs provided by the source.

> Metal HAPS, including Cadmium, Chromium, Lead, Manganese and Nickel, are particulate in nature and can be controlled using a control device.
The clutch parts manufacturing line, expander tubes, and OHDB/Light Rail Manufacturing machining operations do not generate HAPs emissions.

Appendix A: Emission Calculations
Particulate Emissions (PM)
from the Grinding Operations

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Unit ID	Maximum Capacity (lbs/hr)	Control Efficiency (%)	Pollutant	Emission Factor [a] (lbs/ton)	Emission Rate before Controls (lbs/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
Brake Assembly & Brake Parts Manufacturing Line								
Grinder M1796 (G1) controlled by baghouse (BH3)	0.50	98.0%	PM	17.0	4.25E-03	**0.019**	8.50E-05	**3.72E-04**
			PM10*	1.7	4.25E-04	**0.002**	8.50E-06	**3.72E-05**
Grinder M1797 (G2) controlled by baghouse (BH4)	0.50	98.0%	PM	17.0	4.25E-03	**0.019**	8.50E-05	**3.72E-04**
			PM10*	1.7	4.25E-04	**0.002**	8.50E-06	**3.72E-05**
			Subtotal	PM	8.50E-03	0.037	1.70E-04	7.45E-04
				PM10	8.50E-04	3.72E-03	1.70E-05	7.45E-05
Clutch Parts Manufacturing Line								
Sander (S2) controlled by baghouse (BH2)	75.0	99.0%	PM	17.0	0.638	**2.792**	6.38E-03	**0.028**
			PM10*	1.7	0.064	**0.279**	6.38E-04	**2.79E-03**
Grinder (G3) controlled by baghouse (BH6)	200.0	99.0%	PM	17.0	1.700	**7.446**	0.017	**0.074**
			PM10*	1.7	0.170	**0.745**	1.70E-03	**7.45E-03**
Grinder (G4) controlled by baghouse (BH6)	200.0	99.0%	PM	17.0	1.700	**7.446**	0.0170	**0.074**
			PM10*	1.7	0.170	**0.745**	0.002	**0.007**
			Subtotal	PM	4.04	17.68	0.04	0.18
				PM10	0.40	1.77	0.00	0.02
New Expander Tubes								
Grinder (G5) controlled by baghouse (BH2)	100.0	99.0%	PM	17.0	0.850	**3.723**	0.009	**0.037**
			PM10*	1.7	0.085	**0.372**	8.50E-04	**3.72E-03**
Grinder (G6) controlled by baghouse (BH6)	100.0	99.0%	PM	17.0	0.850	**3.723**	0.0085	**0.037**
			PM10*	1.7	0.085	**0.372**	0.001	**0.004**
			Subtotal	PM	1.70	7.45	0.02	0.07
				PM10	0.17	0.74	0.00	0.01
New Light Rail Manufacturing Line								
Grinder (G8) controlled by baghouse (BH6)	200.0	99.0%	PM	17.0	1.700	**7.446**	0.017	**0.074**
			PM10*	1.7	0.170	**0.745**	1.70E-03	**7.45E-03**
Vertical Belt Sander (S4) controlled by baghouse (BH6)	75.0	99.0%	PM	17.0	0.638	**2.792**	0.0064	**0.028**
			PM10*	1.7	0.064	**0.279**	0.001	**0.003**
			Subtotal	PM	2.34	10.24	0.02	0.10
				PM10	0.23	1.02	0.00	0.01
New OHDB Line								
Grinder (G7) controlled by baghouse (BH6)	200.0	99.0%	PM	17.0	1.700	**7.446**	0.017	**0.074**
			PM10*	1.7	0.170	**0.745**	1.70E-03	**7.45E-03**
			Subtotal	PM	1.70	7.45	0.02	0.07
				PM10	0.17	0.74	0.00	0.01
New Wichita Large Friction Discs								
Sander (S5) controlled by baghouse (BH2)	75.0	99.0%	PM	17.0	0.638	**2.792**	0.006	**0.028**
			PM10*	1.7	0.064	**0.279**	6.38E-04	**2.79E-03**
			Subtotal	PM	0.64	2.79	0.01	0.03
				PM10	0.06	0.28	0.00	0.003
					Total PM:	**45.64**		**0.46**
					Total PM10:	**4.56**		**0.05**

Methodology

[a] EPA WebFIRE PM and PM10 emission factors for Grey Iron Foundries - Grinding/Cleaning (Table 12.10-7, SCC#30400340); and
Emission Rate for PM an PM10 before controls (lbs/hr) = Emission Factor (lbs/ton) * Capacity (lbs/hr) * (1 ton/2000 lbs)
Emission Rate for PM and PM10 before controls (tons/yr) = Emission Rate (lbs/hr) * (8760 hours/1 year) *(1 ton/2000 lbs)
Emission Rate for PM and PM10 after controls (lbs/hr) = Emission Rate (lbs/hr) before controls * (1-control efficiency)
Emission Rate for PM and PM10 after controls (tons/yr) = Emission Rate after controls (lbs/hr) * (8760 hours/1 year) * (1 ton/2000 lbs)

Notes

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
* PM 2.5 emissions are assumed equal to PM10 emissions.

Appendix A: Process Particulate Emissions
Potential Metal Hazardous Air Pollutant Process Emissions (MHAP)
from the Grinding Operations

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Unit ID	* Total Uncontrolled Potential Particulate (PM) (tons/yr)	Weight % Chromium Compounds	Weight % Lead Compounds	Weight % Manganese Compounds	Weight % Nickel Compounds	Chromium Compounds Emissions (ton/yr)	Lead Compounds Emissions (ton/yr)	Manganese Compounds Emissions (ton/yr)	Nickel Compounds Emissions (ton/yr)
Brake Assembly & Brake Parts Manufacturing Line									
Grinder M1796 (G1) controlled by baghouse (BH3)	0.0186	12.00%	0.70%	10.00%	10.00%	2.23E-03	1.30E-04	1.86E-03	1.9E-03
Grinder M1797 (G2) controlled by baghouse (BH4)	0.0186	12.00%	0.70%	10.00%	10.00%	2.23E-03	1.30E-04	1.86E-03	1.9E-03
					Total Uncontrolled Potential Emissions (tons/yr)	**4.47E-03**	**2.61E-04**	**3.72E-03**	**3.72E-03**
					Control Efficiency (%)	**98%**	**98%**	**98%**	**98%**
					Controlled Potential Emissions (tons/year)	**8.94E-05**	**5.21E-06**	**7.45E-05**	**7.45E-05**

Total Combined HAPs (tons/yr)	**1.22E-02**
Controlled Potential Emissions (tons/year)	**2.43E-04**

Methodology:
Uncontrolled Potential Emissions (tons/yr) = Total Potential Particulate (tons/yr) * Weight % Metal HAP
Controlled Potential Emissions (tons/yr) = Uncontrolled Potential Emissions (tons/yr) *(1 - Control Efficiency (%))

Notes:
Total emissions based on rated capacity at 8,760 hours/year.
* Total Uncontrolled Potential Particulate (PM) Process Emissions from the Metal Grinding Operations, taken from page 10 of 14, of this Appendix.
Potential emissions for the metallic HAPs, including: Chromium, Lead, Manganese and Nickel, were determined using a "worst case" content from the various materials used by the source, taken from MSDSs provided by the source.
> Metal HAPS, including Cadmium, Chromium, Lead, Manganese and Nickel, are particulate in nature and can be controlled using a control device.
The clutch parts manufacturing line, expander tubes, and OHDB/Light Rail Manufacturing grinding operations do not generate HAPs emissions.

Appendix A: Emission Calculations
Particulate and HAP Emissions (PM) from
Light Rail Blaster (BL1)

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Emission Unit	Amount of Material Collected (lbs/hr)*	Unlimited Potential to Emit PM/PM10 (tons/yr)**	Dust Collector Control Efficiency (%)	Potential to Emit After Control (lbs/hr)	Potential to Emit After Control (tons/yr)	Weight % Manganese	Potential to Emit Manganese (tons/yr)
Light Rail Blaster	2.44	10.69	99.00%	0.024	0.11	0.60%	0.06

Methodology
* Amount of material collected in the dust collector provided by the source.
** The grit blaster consists of a cyclone separator and dust collector. The cyclone separator has been determined to be integral to the process, so the unlimited potential to emit will be determined after the cyclone but before the dust
Unlimited PTE PM/PM10 (tons/yr) = Amount of Material Collected (lbs/hr) * 8,760 (hrs/yr) * 1/2000 (ton/lbs)
PTE After Control (lbs/hr) = Amound of Material Collected (lbs/hr) * (1 - % Control Efficiency)
PTE After Control (tons/yr) = Amound of Material Collected (lbs/hr) * (1 - % Control Efficiency) * 8,760 (hrs/yr) * 1/2000 (ton/lbs)
PTE Manganese (tons/yr) = Unlimited PTE PM/PM10 (tons/yr) * Weight % Manganese

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

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Combustion Source	Unit ID	# of units	Heat Input per unit (MMBtu/hr)	Total Heat Input (MMBtu/hr)
Boiler	B1	1	12.56	12.56
Boiler	B2	1	12.56	12.56
Hot Water Boiler	HWB1	1	0.34	0.34
Paint Drying Oven	OV1	1	1.00	1.00
Permafuse Oven	OV2	1	0.80	0.80
Heat Treat Oven	OV7	1	0.60	0.60
Cabinet Oven	OV10	1	0.30	0.30
Aqua Master Parts Washer				
Pre-wash Burne	PW1	1	0.27	1.49
Dip Stage Burne		1	0.70	
Rinse Stage Bur		1	0.27	
Blow-off Stage B		1	0.25	
Totals:		**11**	**29.66**	**29.66**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
29.66	259.79

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.247	0.987	0.987	0.078	12.99	0.71	10.91

*PM emission factor is filterable PM only. PM10 and PM2.5 emission factor is filterable and condensable fractions combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.10E-03	1.20E-03	0.08	1.80	3.40E-03
Potential Emission in tons/yr	2.73E-04	1.56E-04	9.74E-03	0.234	4.42E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.00E-04	1.10E-03	1.40E-03	3.80E-04	2.10E-03
Potential Emission in tons/yr	6.49E-05	1.43E-04	1.82E-04	4.94E-05	2.73E-04

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Total HAPs	**0.245**	tons/yr
Worst Single HAP	**0.234**	tons/yr

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

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Maximum Input Rate (<=4.2 MMBtu/hr) / Output Rating (<=600 HP)
Emergency Diesel Fire Pump (FP1)

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Emissions calculated based on output rating (hp):

Output Horsepower Rating (hp)	97.0
Maximum Hours Operated per Year *	500
Potential Throughput (hp-hr/yr)	48,500

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.05	0.05	0.05	0.05	0.75	0.06	0.16

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	1.58E-04	6.94E-05	4.84E-05	6.64E-06	2.00E-04	1.30E-04	1.57E-05	2.85E-05

Potential Emission of Total HAPs (tons/yr): 6.58E-04

Methodology
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Notes
Emission Factors are from AP 42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
* The "Maximum Hours Operated per Year" as set forth in the September 6, 1995 memorandum from John S. Seitz of US EPA on the subject of "Calculating Potential to Emit for Emergency Generators".
**PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.
***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: Carlisle Industrial Brake & Friction
Address City IN Zip: 1031 East Hillside Drive, Bloomington, IN 47401
Permit No.: 105-29821-00013
Reviewer: Brian Williams

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Vehicle Informtation (provided by source)

Vehicle Type	Maximum number of vehicles	Maximum number of one-way trips per day per	Maximum trips per day (trip/day)	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle & Load (tons/trip)	Total Weight driven per day (ton/day)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Personal Car/Truck	50.0	2.0	100.0	2.0	0.7	2.7	270.0	98,550.0	1,350.0	0.3	25.6	9,332.4
Freight Truck (6 axle	5.0	2.0	10.0	16.0	32.0	48.0	480.0	175,200.0	1,350.0	0.3	2.6	933.2
Front Loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Total	**110.0**			**50.7**	**750.0**	**273,750.0**	**2,700.0**	**0.5**	**28.1**	**10,265.6**

'erage Vehicle Weight Per Trip = 6.8 tons/trip
Average Miles Per Trip = 0.26 miles/trip

nmitigated Emission Factor, Ef = k*[(sL/2)^0.65]*[(W/3)^1.5] - C (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	6.8	6.8	6.8	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer mont

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)]
itigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)
N = 365 days per year

	PM	PM10	PM2.5	
nmitigated Emission Factor, Ef =	0.13	0.025	3.40E-03	lb/mile
litigated Emission Factor, Eext =	0.12	0.022	3.11E-03	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Personal Car/Truck	5.97E-01	1.15E-01	1.59E-02	5.46E-01	1.05E-01	1.45E-02	2.73E-01	5.25E-02	7.25E-03
Freight Truck (6 axle	5.97E-02	1.15E-02	1.59E-03	5.46E-02	1.05E-02	1.45E-03	2.73E-02	5.25E-03	7.25E-04
Front Loader	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.6569	**0.1262**	**0.0175**	**0.6007**	**0.1154**	**0.0160**	**0.3003**	**0.0577**	**0.0080**

Methodology
Maximum trips per day (trip/day) = [Maximum number of vehicles * Maximum number of one-way trips per day per vehicle type]
Maximum Weight of Vehicle & Load (tons/trip) = [Maximum Weight of Vehicle (tons) + Maximum Weight of Load (tons)]
Total Weight driven per day (ton/day) = [Maximum Weight of Vehicle & Load (tons/trip)] * [Maximum trips per day (trip/day)]
Total Weight driven per year (ton/yr) = [Maximum trips per day (trip/day) * 365 days/yr]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Maximum one-way miles (miles/yr) = [[Maximum one-way distance (mi/day) * 365 days/yr]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter PM10 = Particulate Matter (<10 ur PTE = Potential to Emit

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: John Cage
Carlisle Industrial Brake & Friction
1031 E Hillside Drive
Bloomington, IN 47401

DATE: December 17, 2010

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Minor Permit Revision
105-29821-00013

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Doug Taylor (Plant Manager)
Jon Akin (ARCADIS)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Mail Code 61-53

IDEM Staff	MIDENNEY 12/17/2010 Carlisle Industrial Brake & Friction 105-29821-00013 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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1		John Cage Carlisle Industrial Brake & Friction 1031 E Hillside Drive Bloomington IN 47401-6597 (Source CAATS) via confirm delivery									
2		Doug Taylor Plant Mgr Carlisle Industrial Brake & Friction 1031 E Hillside Drive Bloomington IN 47401-6597 *(RO CAATS)*									
3		Monroe County Health Department 119 W 7th St Bloomington IN 47404-3989 *(Health Department)*									
4		Mr. Randy Brown Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 *(Affected Party)*									
5		Mr. Richard Monday 545 E. Margaret Dr. Terre Haute IN 47801 *(Affected Party)*									
6		Jon Akin ARCADIS 251 East Ohio Street #800 Indianapolis IN 46204 *(Consultant)*									
7		Monroe County Commissioners Monroe County Courthouse, Room 322 Bloomington IN 47404 *(Local Official)*									
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