

December 12, 2001

Mr. Dennis Davis
Eaton Corporation (Clutch Division)
201 Brandon Street
Auburn, Indiana 46706

Re: Registered Operation Status,
033-14809-00070

Dear Mr. Davis:

The application from Eaton Corporation (Clutch Division) received on August 22, 2001 has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following equipment used in the clutch manufacturing operation, to located at 201 Brandon Street Auburn, Indiana 46706 is classified as registered:

- (a) One (1) diesel-fired emergency generator, identified as E-624 with an output rating of 394 horsepower (HP),
- (b) One (1) diesel-fired fire pump, identified as E-477 with an output rating of 138 HP,
- (c) One (1) diesel-fired air compressor, identified as E-649 with an output rating of 400 HP,
- (d) Four (4) natural gas-fired air handlers, identified as EP-AH1, EP-AH2, EP-AH5 and EP-AH6 each with a heat input capacity of 5.0 mmBtu/hr,
- (e) Two (2) natural gas-fired air handlers, identified as EP-AH3 and EP-AH4 each with a heat input capacity of 4.0 mmBtu/hr,
- (f) Three (3) Heat Treatment Furnace, identified as EP-F1, EP-F4 and EP-F5, each with a capacity of 1.2 mmBtu/hr,
- (g) Two (2) Heat Treatment Furnace, identified as EP-F2 and EP-F3, each with a capacity of 0.736 mmBtu/hr,
- (h) Two (2) Draw Furnaces, identified as EP-D1 and EP-D2, each with a capacity of 0.22 mmBtu/hr,
- (i) Two (2) Draw Furnaces, identified as EP-D3 and EP-D4, each with a capacity of 0.8 mmBtu/hr,
- (j) One (1) Draw Furnace, identified as EP-D5, with a capacity of 0.3 mmBtu/hr,
- (k) Two (2) Preheaters, identified as EP-PH1 and EP-PH2, each with a capacity of 0.3 mmBtu/hr,
- (l) Two (2) Lindberg Pit Furnace, identified as EP-LB1 and EP-LB2, each with a capacity of 0.475 mmBtu/hr,

- (m) One (1) Washer 950 belt, identified as EP-W2, with a capacity of 0.7 mmBtu/hr,
- (n) One (1) Die Washer, identified as EP-W3, with a capacity of 0.3 mmBtu/hr,
- (o) One (1) Washer AFC, identified as EP-W4, with a capacity of 0.5 mmBtu/hr,
- (p) One (1) Washer DOW, identified as EP-W5, with a capacity of 0.4 mmBtu/hr,
- (q) One (1) Washer H.T.West, identified as EP-W6, with a capacity of 0.18 mmBtu/hr,
- (r) One (1) Washer AFC, identified as EP-W7, with a capacity of 0.4 mmBtu/hr,
- (s) One (1) ALMCO Roto Washer, identified as EP-W8, with a capacity of 0.25 mmBtu/hr,
- (t) Miscellaneous machining operation, which includes broaching, surface grinding, drilling, turning, boring threading, and milling, and
- (u) Methanol storage tank, identified as EP-TNK1 with a capacity of 255 cubic feet.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
2. Pursuant to 326 IAC 6-3-2 (Process Operations), the PM emission rate from the Machining Operations shall not exceed 12.3 pounds per hour when operating at a process weight rate of 5.2 tons per hour.

The pounds per hour limitation shall be determined using the following equation:

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

3. Any change or modification which may increase the NO_x potential to emit to 25 tons per year or more from the equipment covered in this registration shall obtain OAQ approval before such change may occur.

The source is being re-permitted after it was taken out of the issued FESOP 033-11794-00070. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3)). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

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

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

Sincerely,

Original signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

APD

cc: File - DeKalb County
DeKalb County Health Department
Air Compliance - Doyle Houser
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	Eaton Corporation (Clutch Division)
Address:	201 Brandon Street
City:	Auburn
Authorized individual:	Dennis Davis
Phone #:	(219) 925-7463
Registration #:	033-14809-00070

I hereby certify that **Eaton Corporation (Clutch Division)** is still in operation and is in compliance with the requirements of Registration **033-14809-00070**.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Eaton Corporation (Clutch Plant)
Source Location: 201 Brandon Street, Auburn, Indiana 46706
County: DeKalb
SIC Code: 3417, 3465
Operation Permit No.: 033-14809-00070
Permit Reviewer: Aida De Guzman

The Office of Air Quality (OAQ) has reviewed an application from Eaton Corporation (Clutch Plant) relating to the operation of a clutch manufacturing plant.

The source consists of the following emission units:

- (a) One (1) diesel-fired emergency generator, identified as E-624 with an output rating of 394 horsepower (HP),
- (b) One (1) diesel-fired fire pump, identified as E-477 with an output rating of 138 HP,
- (c) One (1) diesel-fired air compressor, identified as E-649 with an output rating of 400 HP,
- (d) Four (4) natural gas-fired air handlers, identified as EP-AH1, EP-AH2, EP-AH5 and EP-AH6 each with a heat input capacity of 5.0 mMBtu/hr,
- (e) Two (2) natural gas-fired air handlers, identified as EP-AH3 and EP-AH4 each with a heat input capacity of 4.0 mMBtu/hr,
- (f) Three (3) Heat Treatment Furnace, identified as EP-F1, EP-F4 and EP-F5, each with a capacity of 1.2 MMBtu/hr,
- (g) Two (2) Heat Treatment Furnace, identified as EP-F2 and EP-F3, each with a capacity of 0.736 MMBtu/hr,
- (h) Two (2) Draw Furnaces, identified as EP-D1 and EP-D2, each with a capacity of 0.22 MMBtu/hr,
- (i) Two (2) Draw Furnaces, identified as EP-D3 and EP-D4, each with a capacity of 0.8 MMBtu/hr,
- (j) One (1) Draw Furnace, identified as EP-D5, with a capacity of 0.3 MMBtu/hr,
- (k) Two (2) Preheaters, identified as EP-PH1 and EP-PH2, each with a capacity of 0.3

MMBtu/hr,

- (l) Two (2) Lindberg Pit Furnace, identified as EP-LB1 and EP-LB2, each with a capacity of 0.475 MMBtu/hr,
- (m) One (1) Washer 950 belt, identified as EP-W2, with a capacity of 0.7 MMBtu/hr,
- (n) One (1) Die Washer, identified as EP-W3, with a capacity of 0.3 MMBtu/hr,
- (o) One (1) Washer AFC, identified as EP-W4, with a capacity of 0.5 MMBtu/hr,
- (p) One (1) Washer DOW, identified as EP-W5, with a capacity of 0.4 MMBtu/hr,
- (q) One (1) Washer H.T.West, identified as EP-W6, with a capacity of 0.18 MMBtu/hr,
- (r) One (1) Washer AFC, identified as EP-W7, with a capacity of 0.4 MMBtu/hr,
- (s) One (1) ALMCO Roto Washer, identified as EP-W8, with a capacity of 0.25 MMBtu/hr,
- (t) Miscellaneous machining operation, which includes broaching, surface grinding, drilling, turning, boring threading, and milling, and
- (u) Methanol storage tank, identified as EP-TNK1 with a capacity of 255 cubic feet.

Source Definition

Eaton Corporation consists of two (2) plants:

- (a) Plant 1, which is the Clutch Plant is located at 201 Brandon Street, Auburn, Indiana 46706, and
- (b) Plant 2, which is the Research and Development Division (R&D) is located at 518 Michigan Avenue, Auburn, Indiana 46706.

The two (2) plants were determined to be one (1) combined source in the issued FESOP 033-11794-00070. Later on the R&D facility and the clutch plants were considered separate sources because there is no support facility relationship between them. The R&D is there to develop new clutch products. Majority of the R&D work relates to the evaluation of new products, or proposed product changes that must complete a series of evaluation successfully before being release for production. The R&D also infrequently evaluates warranty product that has been returned by a customer. It also develop cost reduction ideas for current products, analyze clutch returns and consult on plant issues. These issues can come from Auburn, Indiana; Oklahoma City, Pennsylvania, United Kingdom, Holland, Brazil, or Australia.

Enforcement Issue

- (a) The Office of Enforcement has dismissed the Notice of Violation, Case No. 2000-9659-A issued against Eaton Corporation on July 11, 2001 for constructing and operating without the proper air permit.

Recommendation

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

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

An application for the purposes of this review was received on August 22, 2001, with additional information received on October 17, 2001.

Emission Calculations

- (a) Natural Gas Combustion Emissions: See Page 1 of 2 TSD Appendix A for detailed calculations.
- (b) Diesel Combustion Emissions: See page 2 of 2 TSD Appendix A for detailed calculations.
- (c) Methanol Storage Tank Emissions: See Tanks Program 4.0 for detailed calculations.
- (d) Machining Operation:

Maximum Amount of Parts Processed @ 8760 hrs/yr = 91,136,850 pounds/year
Using Emission Factor of **0.10 lb/ton** in the AP-42, Chapter 12, Table 12.10-7 (casting and finishing operations during the removal of metal imperfection such as burrs, risers and gates).

$$\begin{aligned} \text{PM/PM10 Emissions} &= 91,136,850 \text{ lb/yr} * \text{ton}/2000 \text{ lb} * 0.10 \text{ lb/ton} * \text{ton}/2000 \text{ lb} \\ &= 2.27 \text{ tons/year} \end{aligned}$$

Potential To Emit

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

Pollutant	Potential To Emit (tons/year)
PM	3.09
PM-10	4.07
SO ₂	0.58
VOC	1.58
CO	16.2
NO _x	24.6

Justification for The Permit Level

The existing source requires a Registration pursuant to 326 IAC 2-5.5-3(1)(b), because Oxides of Nitrogen (NOx) is emitted at levels greater than ten (10) tons per year but less than 25 tons per year.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in DeKalb County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	not determined

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. DeKalb 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 and 40 CFR 52.21.
- (b) DeKalb County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

The source is being taken out of the issued FESOP 033-11794-00070 (which is the only permit issued to the source), and it includes new air heaters (total heat input of 28.25 mmBtu/hr) that were not permitted in the FESOP.

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year for the natural gas-fired air heaters and 500 hours of operation per year for the diesel-fired emergency engines at rated capacity):

Pollutant	Emissions (ton/yr)
PM	3.09
PM10	4.07
SO ₂	0.58
VOC	1.58
CO	16.2
NO _x	24.6

- (a) This existing source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

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

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

The source is being re-permitted after it was taken out of the issued FESOP 033-11794-00070, which includes existing emission units that were in the FESOP and new air heaters that were not permitted in the FESOP.

Federal Rule Applicability

- (a) New Source Performance Standards (NSPS):
There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) National Emission Standards for Hazardous Air Pollutants (NESHAPs):
 - (1) 40 CFR Part 63, Subpart T - Standards for Halogenated Solvent Cleaning.
The various washers are not subject to this NESHAP because they are heat treat washers and do not utilize organic solvents including halogenated solvents.
 - (2) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

- (a) 326 IAC 2-6 (Emission Reporting)
The source is located in DeKalb County and the potential to emit any regulated pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.
- (b) 326 IAC 5-1 (Visible Emissions Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of forty percent (40%) 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.

State Rule Applicability - Individual Facilities

(a) 326 IAC 6-2 Particulate Matter Emissions for Indirect Heating Facilities)
The miscellaneous natural gas-fired heaters and diesel-fired emergency generators are not subject to 326 IAC 6-2 because they are not sources of indirect heating.

(b) 326 IAC 8-3 (Degreasing Operation)
The various washers are not subject to 326 IAC 8-3 because they are heat treat

washers and they do not utilize organic solvents.

(c) 326 IAC 6-3-2 (Process Operations),
This rule mandates an allowable PM emission rate of 12.3 lb/hr from the Machining Operations when operating at a process weight rate of 5.2 ton/hr pounds per hour.

The pounds per hour limitation shall be calculated using the following equation:

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

The source is in compliance with 326 IAC 6-3-2, since the machining operation emits less than what the rule allows.

Conclusion

The operation of this clutch manufacturing plant shall be subject to the conditions of the attached **Registration 033-14809-00070**.

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

nat. gas-fired units:

EP-F1, EP-F4, EP-F5 @ 1.2 mmBtu/hr
 EP-F2, EP-F3 @ 0.736 mmBtu/hr
 EP-D1, EP-D2 @ 0.22 mmBtu/hr
 EP-D3, EP-D4 @ 0.8 mmBtu/hr
 EP-D5 @ 0.3mmBtu/hr
 EP-PH1, EP-PH2 @ 0.3 mmBtu/hr
 EP-LB2 @ 0.475 mmBtu/hr

Company Name: Eaton Corporation (Clutch Plant)
Address City IN Zip: 201 Brandon St., Auburn, Indiana 46706
Registration No.: 033-14809
Plt ID: 033-00070
Reviewer: Aida De Guzman
Date Application Received: July 13, 2001

Small Industrial Boiler

EP-W1 @ 0.4 mmBtu/hr
 EP-W2 @ 0.7 mmBtu/hr
 EP-W3 @ 0.3 mmBtu/hr
 EP-W4 @ 0.5 mmBtu/hr
 EP-W5 @ 0.4 mmBtu/hr
 EP-W6 @ 0.18 mmBtu/hr
 EP-W7 @ 0.4 mmBtu/hr

EP-W8 @ 0.25 mmBtu/hr
 EP-AH1 @ 5.0 mmBtu/hr
 EP-AH2 @ 5.0 mmBtu/hr
 EP-AH3 @ 4.0 mmBtu/hr
 EP-AH4 @ 4.0 mmBtu/hr
 EP-AH5 @ 5.0 mmBtu/hr
 EP-AH6 @ 5.0 mmBtu/hr

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

39.6

347.0

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.3	1.3	0.1	17.4	1.0	14.6

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

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Emission (tons/yr) = Throughput (MMCF/yr) * Ef (lb/MMCF)/2000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included)

**Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Turbine (>250 and <600 HP)
Reciprocating**

Company Name: Eaton Corporation (Clutch Plant)
Address City IN Zip: 201 Brandon St., Auburn, IN 46706
Registration No.: 033-14809
Plt ID: 033-00070
Reviewer: Aida De Guzman
Date Application Received: May 30, 2001

"1 Diesel emergency generator ID E-624 @ 394 HP

"1 Diesel fire pump ID E-477 @ 138 HP

"1 Diesel air compressor ID E-649 @ 400 HP

B. Emissions calculated based on output rating (hp)

Heat Input Capacity
Horsepower (hp)

Potential Throughput
hp-hr/yr

932.0	8164320.0 @ 8760 hr/yr					
	466000 @ 500 hr/yr					
	Pollutant					
Emission Factor in lb/hp-hr	PM*	PM10*	SO2	NOx	VOC	CO
	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission @ 8760 hrs/yr (tons/yr)	8.98	8.98	8.37	126.55	10.26	27.27
Potential Emission @ 500 hrs/yr (tons/yr)	0.51	0.5	0.48	7.2	0.58	1.6

Methodology

Potential Throughput (hp-hr/yr) = hp * 500 hr/yr

Use a conversion factor of 7,000 Btu per hp-hr to convert from horsepower to Btu/hr, unless the source gives you a source-specific brake-specific fuel consumption. (AP-42, Footnote a, Table 3.3-1)

Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-2

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)

Emission (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

*PM 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.

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).