

Mr. Kent Krause
Tenneco Automotive - Ligonier
1490 Gerber Street
Ligonier, Indiana 46767

Re: Registered Operation Status,
113-14290-00077

Dear Mr. Krause:

The application from Tenneco Automotive - Ligonier, received on April 17, 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 muffler systems and automotive parts manufacturing, located at 1490 Gerber Street, Ligonier, Indiana 46767 is classified as registered:

- (a) Muffler Assembly
 - (1) Thirty four (34) MIG welding stations, each station is capable of using 11.6 pounds of wire per hour (lbs/hr);
 - (2) Forty-three (43) MIG welding stations, each station is capable of using 12.3 lbs/hr welding wire;
 - (3) Five (5) robotic welding stations, each station is capable of using 12.3 lbs/hr welding wire;
 - (4) Twenty-nine (29) MIG/TIG hand welding stations, each is capable of using 12.3 lbs/hr welding wire;
 - (5) One (1) tube mill induction welding station, which has a capacity of 22,500 lbs/hr of stainless steel;
 - (6) Two (2) stick welding units, that will be used for repair; and
 - (7) One (1) tube mill mist collector.

The Particulate Matter emissions from these welding stations are controlled by six (6) baghouses, identified as T-1, T-2, T-3, T-4, T-5 and T-6.

- (b) Three (3) natural gas-fired air make-up units, each has a heat input capacity of 4.125 million British thermal Units per hour (mmBtu/hr); and
- (c) One (1) natural gas-fired air make-up unit, with a heat input capacity of 3.85 mmBtu/hr.

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 (Process Operations),
 - (a) the PM emission from the welding operation shall be limited to 1.1 pound per hour at process weight rate of 0.14 ton/hour. This limit shall be determined using the following equation:

Interpolation and extrapolation 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
 - (b) The baghouses shall be in operation at all times the welding operation is in operation, in order to comply with this limit.

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

An authorized individual shall provide an annual notice to the 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,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

APD

cc: File - Noble County
Noble County Health Department
Air Compliance - Doyle Houser
Northern Regional Office
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:	Tenneco Automotive - Ligonier
Address:	1490 Gerber Street
City:	Ligonier, Indiana 46767
Authorized individual:	Kent Krause
Phone #:	(219) 894-9461
Registration #:	113-14290-00077

I hereby certify that **Tenneco Automotive - Ligonier** is still in operation and is in compliance with the requirements of Registration **113-14290-00077**.

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: Tenneco Automotive - Ligonier
Source Location: 1490 Gerber Street, Ligonier, Indiana 46767
County: Noble
SIC Code: 3417
Operation Permit No.: 113-14290-00077
Permit Reviewer: Aida De Guzman

The Office of Air Quality (OAQ) has reviewed an application from Tenneco Automotive - Ligonier relating to the construction and operation of a source that manufactures muffler systems and automotive parts. This source consists of the following equipment:

- (a) Muffler Assembly
 - (1) Thirty four (34) MIG welding stations, each station is capable of using 11.6 pounds of wire per hour (lbs/hr);
 - (2) Forty-three (43) MIG welding stations, each station is capable of using 12.3 lbs/hr welding wire;
 - (3) Five (5) robotic welding stations, each station is capable of using 12.3 lbs/hr welding wire;
 - (4) Twenty-nine (29) MIG/TIG hand welding stations, each is capable of using 12.3 lbs/hr welding wire;
 - (5) One (1) tube mill induction welding station, which has a capacity of 22,500 lbs/hr of stainless steel;
 - (6) Two (2) stick welding units, that will be used for repair; and
 - (7) One (1) tube mill mist collector.

The Particulate Matter emissions from these welding stations are controlled by six (6) baghouses, identified as T-1, T-2, T-3, T-4, T-5 and T-6.
- (b) Three (3) natural gas-fired air make-up units, each has a heat input capacity of 4.125 million British thermal Units per hour (mmBtu/hr); and
- (c) One (1) natural gas-fired air make-up unit, with a heat input capacity of 3.85 mmBtu/hr.

Unpermitted Emission Units and Pollution Control Equipment

Tenneco Automotive has been operating since 1990. This is the first air approval issued to this source.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
001	Weld cells dept 14, 24, 25, 26, 37, 41, 43, 44, 46	19.8	3 x 2.2	15,200	72
002	Weld cells dept 12, 17, 20, 21, 29, 40, 41b, 42, 45,49, 55, 95	19.8	3 x 2.2	13,500	72
003	Weld cells dept 11, 12, 29, 55, 95	19.8	3 x 3.3	15,600	72
004	Weld cells dept 7, 9, 10, 13, 22, 27, 29, 33, 38, 49	19.8	3 x 2.2	14,200	72
005	Weld cells dept (inactive)	19.8	3 x 2.2	7,800	72
006	Weld cells dept 4, 28, 48, 81	17.1	3 x 2	15,000	72

Enforcement Issue

- (a) IDEM is aware that the source has been constructed and operated prior to receipt of the proper permit.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

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.

A complete application for the purposes of this review was received on April 17, 2001.

Emission Calculations

- (a) Natural Gas Combustion Emissions: See Page 1 of 1 TSD Appendix A for detailed calculations.

(b) Welding Emissions:

SUMMARY OF EMISSIONS (TONS/YEAR)										
Type of Welding/Wire	Throughput (Pounds/Hour)	Emission Factor	PM/PM10 Emissions		Manganese		Chromium		Nickel	
			Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Hand Welding Cells MIG 409 (GMAW) E308-16	107	10.8 lbPM/PM10/1000lb; 0.39 lb Cr/1000 lb; 0.25 lb Mn/1000 lb; 0.043 lb Ni/1000 lb	5.06	0.01	0.12	0.0	0.20	0.0	0.02	0.0
Welding Cells Stick 409 (SMAW) E6011	1.20	38.4 lbPM/PM10/1000lb; 0.005 lb Cr/1000 lb; 0.998 lb Mn/1000 lb; 0.005 lb Ni/1000 lb;	0.20	0.0	0.01	0.0	0.0	0.0	0.0	0.0
Melton(torch units) 409 (GMAW) E308-16	88.3	10.8 lbPM/PM10/1000lb; 0.39 lb Cr/1000 lb; 0.25 lb Mn/1000 lb; 0.043 lb Ni/1000 lb	4.2	0.004	0.10	0.0	0.15	0.0	0.017	0.0
Robotic Welders 409 (GMAW) E308-16	18.5	10.8 lbPM/PM10/1000lb; 0.39 lb Cr/1000 lb; 0.25 lb Mn/1000 lb; 0.043 lb Ni/1000 lb	0.88	0.0	0.02	0.0	0.03	0.0	0.0	0.0
Melton Hego Welders E308-16	65.9	10.8 lbPM/PM10/1000lb; 0.39 lb Cr/1000 lb; 0.25 lb Mn/1000 lb; 0.043 lb Ni/1000 lb	3.11	0.003	0.07	0.0	0.11	0.0	0.0	0.0
Tube Mill	Uses no wire. Sheet steel is rolled and heated by induction and formed into a continuous tube. Coolant evaporates during the welding but a mist collector controls emissions and then exhausted inside the building.									
TOTAL			13.45	0.017	0.32	0.0	0.29	0.0	0.037	0.0

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	13.59
PM-10	13.99
SO ₂	0.04
VOC	0.39
CO	5.97
NO _x	7.11

HAP's	Potential To Emit (tons/year)
Manganese	0.32
Chromium	0.29
Nickel	0.037
TOTAL	0.647

Justification for the Level of Approval

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of Particulate Matter (PM) and Particulate Matter Less than Ten Microns (PM10) are each greater than five (5) tons per year but less than twenty-five (25) tons per year. Therefore, the source will be issued a registration, pursuant to 326 IAC 2-5.5.

Source Status

Existing CWOP/OWOP source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity): .

Process/facility	Limited Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Natural Gas Combustion	0.14	0.54	0.04	0.39	5.97	7.11	0.0
Welding Operation	0.017	0.017	0.0	0.0	0.0	0.0	0.0
Total Emissions	0.157	0.56	0.04	0.39	5.95	7.11	0.0

County Attainment Status

The source is located in Noble 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. Noble 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) Noble 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.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing CWOP/OWOP 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.

This is the first air approval issued to this source.

Federal Rule Applicability

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

State Rule Applicability - Entire Source

- (a) 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 8 (Volatile Organic Sources)
There are no provisions in article 326 IAC 8 that applies to the source that manufactures muffler systems and automotive parts.
- (b) 326 IAC 2-4.1-1 (New Source Toxics Control)
This rule is not applicable to the source because it is not major source of hazardous air pollutants (HAPs), and its existence predates the promulgation of the rule.
- (c) 326 IAC 6-3 (Process Operations)
This rule mandates a PM emission limit of 1.1 pound per hour for the welding operation at process weight rate of 0.14 ton/hour, using the following equation:

Interpolation and extrapolation 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 baghouses shall be in operation at all times the welding operation is in operation, in order to comply with this limit.
- (d) 326 IAC 6-2-4 (PM Emission Limit for Indirect Heating Facilities)
This rule is not applicable to the various air make-up units because they are not source of indirect heating.

Conclusion

The operation of this muffler systems and automotive parts manufacturing source shall be subject to the conditions of the attached **Registration 113-14290-00077**.

