

Eric Tuley
Tower Automotive
3301 Cline Road
Corydon, IN 47112

Re: 061-12306-00014
First Minor Permit Revision to
MSOP No.: 061-10826-00014

Dear Mr. Tuley.:

Tower Automotive was issued a Minor Source Operating Permit on July 16, 1999 for a truck frame coating and preparation operation. A letter requesting changes to this permit was received on May 25, 2000. Pursuant to the provisions of 326 IAC 2-6.1-6(g) a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the following:

Addition of two (2) ovens and two (2) hot water generators to their existing E-Coat Line. The facility is also expanding its weld lines to a total of four (4), encompassing thirty two (32) total weld stations. A powder coat system and a new wax coating line replacing the existing one will also be added. The wax coating line will include the addition of two (2) boilers.

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 Management (OAM).
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.
6. Prior to start of operation, the following requirements should be met:
 - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
 - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

Pursuant to 326 IAC 2-6.1-6(g), 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. Please attach a copy of this modification and the following revised permit pages to the front of the original 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 Nishat Hydari, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call 973-575-2555 (ext. 3216) or 1-800-451-6027 press 0 and ask for extension 3-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
NH/EVP

cc: File - Harrison County
U.S. EPA, Region V
Harrison County Health Department
Air Compliance Section Inspector - Joe Foyst
Compliance Data Section - Jerri Curless
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michelle Boner

**NEW SOURCE CONSTRUCTION PERMIT
and MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY**

**Tower Automotive
3301 Cline Road
Corydon, Indiana 47112**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units 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 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 061-10826-00014	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: July 16, 1999
First Minor Permit Revision: 061-12306-00014	Pages Affected: 4, 5, 17, 19, 20, 20a
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:

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 through A.3 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 truck frame coating and preparation operation.

Authorized Individual: Eric Tuley
Source Address: 3301 Cline Road, Corydon, Indiana 47112
Mailing Address: 3301 Cline Road, Corydon, Indiana 47112
Phone Number: (812) 738-5608
SIC Code: 3711
County Location: Harrison
County Status: Attainment for all criteria pollutants
Source Status: Minor Source, under PSD or Emission Offset Rules;
Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

1. The following new equipment,
 - (a) Four (4) welding operation lines, identified as U152 Line A, U152 Line b, Line 1 and Line 2, consisting of a total of thirty two (32) metal inert gas (MIG) stations, with a total maximum wire consumption rate of 92.94 pounds of wire per hour (lb wire/hr),
 - (b) one (1) E Dip Coater, with a maximum design throughput of 144 units per hour, and

2. The following existing equipment:
 - (a) one (1) 2.6 MMBtu/hr natural gas fired component parts washer,
 - (b) two (2) 5.4 MMBtu/hr natural gas fired side bar washers,
 - (c) one (1) 7.5 MMBtu/hr natural gas fired frame assembly washer,
 - (d) two (2) 3.75 MMBtu/hr natural gas fired rust proofing boilers,
 - (e) one (1) 5.0 MMBtu/hr natural gas fired rust proofing oven,
 - (f) one (1) 0.35 MMBtu/hr natural gas fired maintenance steam cleaner,
 - (g) five (5) 2.592 MMBtu/hr natural gas fired building heater units,
 - (h) one (1) touch up paint operation (utilizing the specified balck lacquer with 1.42 pounds volatile organic compounds per gallon, only), with PM(PM10) overspray emissions controlled by a dry filter system, and
 - (i) two (2) 0.25 MMBtu/hr natural gas fired space heaters.

3. The following equipment:
- (a) Two (2) natural gas fired hot water generators, identified as E-Coat #1 and E-Coat #2, each with a maximum heat input capacity of 1.15 million (MM) British thermal units (Btu) per hour, and exhausting to stacks 13 and 14, respectively;
 - (b) Two (2) natural gas fired ovens, identified as E-Coat Oven #1 and E-Coat Oven #2, each with a maximum heat input capacity of 5.0 MMBtu per hour, and exhausting to stacks 15 and 16, respectively;
 - (c) Two (2) natural gas fired boilers, identified as Wax Boiler #1 and Wax Boiler #2, each with a maximum heat input capacity of 3.35 MMBtu per hour, and exhausting to one (1) stack, identified as 17;
 - (d) One (1) powder coat system, identified as Powder Coat, utilizing an air atomization spray application system, coating a maximum of 65 metal frames per hour, using dry filters for particulate matter control, and exhausting to stack 30; and
 - (e) One (1) wax coat system, identified as Wax Coat, utilizing a dipping application system, coating a maximum of 60 metal frames per hour.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is not required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a not major source, as defined in 326 IAC 2-7-1(22);
- (b) It is not an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);
- (c) It is not a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1 EMISSION UNIT OPERATION CONDITIONS

- (a) Four (4) welding operation lines, identified as U152 Line A, U152 Line b, Line 1 and Line 2, consisting of a total of thirty two (32) metal inert gas (MIG) stations, with a total maximum wire consumption rate of 92.94 pounds of wire per hour (lb wire/hr),
- (b) one (1) E Dip Coater, with a maximum design throughput of 144 units per hour,
- (c) one (1) 2.6 MMBtu/hr natural gas fired component parts washer,
- (e) two (2) 5.4 MMBtu/hr natural gas fired side bar washers,
- (f) one (1) 7.5 MMBtu/hr natural gas fired frame assembly washer,
- (g) two (2) 3.75 MMBtu/hr natural gas fired rust proofing boilers,
- (h) one (1) 5.0 MMBtu/hr natural gas fired rust proofing oven, and
- (i) one (1) 0.35 MMBtu/hr natural gas fired maintenance steam cleaner.

Emission Limitations and Standards

D.1.1 Particulate Matter (PM) from the MIG Welding Operation [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from the welding operation not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

D.1.2 Miscellaneous Metal Coating Operations, E-Coater [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(d)(3), the volatile organic compound (VOC) content of coatings applied to the E-Coater shall be limited as follows:

Coatings	Limit (pounds of VOC/gallon of coating less water delivered to the applicator)
Extreme Performance Coat	3.5

D.1.3 Miscellaneous Metal Coating Operations, E-Coater [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), solvent sprayed from the application equipment during clean up 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.

D.1.4 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control devices.

SECTION D.2

EMISSION UNIT OPERATION CONDITIONS

- (a) five (5) 2.592 MMBtu/hr natural gas fired building heater units.
- (b) two (2) 0.25 MMBtu/hr natural gas fired space heaters.
- (c) Two (2) natural gas fired hot water generators, identified as E-Coat #1 and E-Coat #2, each with a maximum heat input capacity of 1.15 million (MM) British thermal units (Btu) per hour, and exhausting to stacks 13 and 14, respectively.
- (d) Two (2) natural gas fired ovens, identified as E-Coat Oven #1 and E-Coat Oven #2, each with a maximum heat input capacity of 5.0 MMBtu per hour, and exhausting to stacks 15 and 16, respectively.
- (e) Two (2) natural gas fired boilers, identified as Wax Boiler #1 and Wax Boiler #2, each with a maximum heat input capacity of 3.35 MMBtu per hour, and exhausting to one (1) stack, identified as 17.

D.2.1 Particulate Matter (PM) [326 IAC 6-2-4]

The two (2) 3.35 MMBtu/hr natural gas fired boilers (identified as Wax Boiler #1 and Wax Boiler #2) have a heat input of less than 10 MMBtu/hr and pursuant to 326 IAC 6-2-4(a) are subject to a default particulate matter emission limit of 0.6 pounds per million (MM) Btu of heat input.

SECTION D.3 EMISSION UNIT OPERATION CONDITIONS

one (1) touch up paint operation (utilizing the specified black lacquer with 1.42 pounds volatile organic compounds per gallon, only), with PM(PM10) overspray emissions controlled by a dry filter system.
One (1) powder coat system, identified as Powder Coat, utilizing an air atomization spray application system, coating a maximum of 65 metal frames per hour, using dry filters for particulate matter control, and exhausting to stack 30.
One (1) wax coat system, identified as Wax Coat, utilizing a dipping application system, coating a maximum of 60 metal frames per hour.

Emission Limitations and Standards

D.3.1 Particulate Matter (PM) Overspray from the Touch up Booth [326 IAC 6-3]

Pursuant to 326 IAC 6-3, the PM overspray emissions from the touch up booth and the powder coat system (identified as Powder Coat), shall not exceed the pound per hour emission rate established as E in the following formula:

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:

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

D.3.2 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this emissions unit and its control device.

D.3.3 Volatile Organic Compounds [326 IAC 8-2-9]

- (a) There are no VOC emission limits that apply to the touch up booth at this time. However, any change or modification which may increase the actual VOC emissions to 15 pounds per day or more from the touch up booth must be approved by the Office of Air Quality (OAQ) before such change may occur.
- (b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the wax coat operation and powder coat operation shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

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

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.3.4 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.1.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

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

D.3.5 Record Keeping Requirements

- (a) To document compliance with Condition D.3.3(b), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.3.3(b).
- (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) A log of the dates of use;
 - (3) The volume weighted VOC content of the coatings used for each month;
 - (4) The cleanup solvent usage for each month;
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Indiana Department of Environmental Management Office of Air Quality

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

Source Background and Description

Source Name:	Tower Automotive
Source Location:	3301 Cline Road, Corydon, IN 47112
County:	Harrison
SIC Code:	3711
Operation Permit No.:	MSOP 061-10826-00014
Operation Permit Issuance Date:	July 16, 1999
Minor Permit Revision No.:	MPR 061-12306-00014
Permit Reviewer:	NH/EVP

The Office of Air Quality (OAQ) has reviewed a minor permit revision application from Tower Automotive relating to the operation of a truck frame coating and preparation operation.

History

On May 25, 2000, Tower Automotive submitted an application to the OAQ requesting to add two (2) ovens and two (2) hot water generators to their existing E-Coat Line. The facility is also expanding its weld lines to a total of four (4), encompassing thirty two (32) total weld stations. A powder coat system and a new wax coating line replacing the existing one will also be added. The wax coating line will include the addition of two (2) boilers. Tower Automotive was issued a Minor Source Operating Permit on July 16, 1999.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment:

- (a) Four (4) welding operation lines, identified as U152 Line A, U152 Line b, Line 1 and Line 2, consisting of a total of thirty two (32) metal inert gas (MIG) stations, with a total maximum wire consumption rate of 92.94 pounds of wire per hour (lb wire/hr);
- (b) Two (2) natural gas fired hot water generators, identified as E-Coat #1 and E-Coat #2, each with a maximum heat input capacity of 1.15 million (MM) British thermal units (Btu) per hour, and exhausting to stacks 13 and 14, respectively;
- (c) Two (2) natural gas fired ovens, identified as E-Coat Oven #1 and E-Coat Oven #2, each with a maximum heat input capacity of 5.0 MMBtu per hour, and exhausting to stacks 15 and 16, respectively;

- (d) Two (2) natural gas fired boilers, identified as Wax Boiler #1 and Wax Boiler #2, each with a maximum heat input capacity of 3.35 MMBtu per hour, and exhausting to one (1) stack, identified as 17;
- (e) One (1) powder coat system, identified as Powder Coat, utilizing an air atomization spray application system, coating a maximum of 65 metal frames per hour, using dry filters for particulate matter control, and exhausting to stack 30; and
- (f) One (1) wax coat system, identified as Wax Coat, utilizing a dipping application system, coating a maximum of 60 metal frames per hour.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) MSOP 061-10826-00014, issued on July 16, 1999.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
13	E-Coat Hot H2O #1	40	3	5,000	100
14	E-Coat Hot H2O #2	40	3	5,000	100
15	E-Coat Oven #1	40	1.6	17,000	200
16	E-Coat Oven #2	40	1.6	38,000	200
17	Wax Boilers Exhaust	40	2'2"	2,000	200
21	Line A Weld Exhaust	40	5	37,000	100
22	Line A Weld Exhaust	40	5	37,000	100
23	Line A Weld Exhaust	40	5	37,000	100
24	Line B Weld Exhaust	40	5	52,000	100
25	Line B Weld Exhaust	40	5	52,000	100
26	Line B Weld Exhaust	40	5	52,000	100
28	Wall Weld Exhaust	30	3' x 3'	6,000	100
29	Wall Weld Exhaust	30	2.5' x 2.5'	6,000	100
30	Wax Spray Booth Exhaust	40	2'8"	16,800	150
31	Wall Weld Exhaust	30	4' x 4'	6,000	100

Recommendation

The staff recommends to the Commissioner that the Minor Permit Revision 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 May 25, 2000. Additional information was received on January 12, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 5).

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 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.”

Pollutant	Potential To Emit (tons/year)
PM	18.77
PM-10	19.24
SO ₂	0.05
VOC	1.93
CO	6.99
NO _x	8.32

HAP's	Potential To Emit (tons/year)
Dipropylene Glycol Methyl Ether	0.04
Manganese	1.38
Chromium	0.41
TOTAL	1.83

(a) Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Justification for Modification

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any criteria pollutant is less than 25 tons per year. Therefore, the MSOP source is being modified through a MSOP Minor Permit Revision. This modification is being performed pursuant to 326 IAC 2-6.1-6(g).

Actual Emissions

No previous emission data has been received from the source.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

Process/facility	Limited Potential to Emit (tons/year)							
	PM	PM-10	SO ₂	VOC	CO	NO _x	Single HAP	HAPs
Surface Coating (Powder Coat and Wax Coat)	8.80	8.80	0.00	1.47	0.00	0.00	0.04	0.04
Welding Operation	9.81	9.81	0.00	0.00	0.00	0.00	1.38	1.79
Natural gas combustion (E-Coat #1, E-Coat #2, E-Coat Oven #1, E-Coat Oven #2, Wax Boiler #1 and Wax Boiler #2)	0.16	0.63	0.05	0.46	6.99	8.32	0.00	0.00
Total Emissions	18.77	19.24	0.05	1.93	6.99	8.32	1.38	1.83

County Attainment Status

The source is located in Harrison County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Harrison County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) The two (2) natural gas fired boilers, identified as Wax Boiler #1 and Wax Boiler #2, each rated at 3.35 MMBtu per hour, are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because each of the two (2) boilers has a maximum heat input rate of less than 10 MMBtu/hr.
- (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

326 IAC 2-6 (Emission Reporting)

This source is located in Harrison County and the potential to emit PM₁₀ is less than one hundred (100) tons per year. The source is not one of the twenty-eight (28) listed sources and its potential to emit PM₁₀ is less than one-hundred (100) tons per year including fugitive emissions, therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

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

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

State Rule Applicability - Individual Facilities

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

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the wax coat operation and powder coat operation shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

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

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The two (2) 3.35 MMBtu/hr natural gas fired boilers (identified as Wax Boiler #1 and Wax Boiler #2) have a heat input of less than 10 MMBtu/hr and pursuant to 326 IAC 6-2-4(a) are subject to a default particulate matter emission limit of 0.6 pounds per million (MM) Btu of heat input.

This limitation is based on the following equation:

$$Pt = 1.09/Q^{0.26}$$

where: Pt = maximum allowable particulate matter (PM) emitted per MMBtu heat input
Q = total source max. indirect heater input = 3.35 MMBtu/hr + 3.35 MMBtu/hr = 6.7 MMBtu/hr

$$Pt = 1.09/6.7^{0.26} = 0.66 \text{ lbs PM/MMBtu}$$

Therefore, the PM emissions from the two (2) boilers, each rated at 3.35 MMBtu per hour heat input shall be limited to 0.6 pounds per MMBtu heat input.

326 IAC 6-3-2 (Process Operations)

- (a) The particulate matter (PM) from the powder coat facility shall be limited by the following:

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:

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

The dry filters shall be in operation at all times the powder coat facility is in operation, in order to comply with this limit.

- (b) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from the welding operation not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Quality (OAQ) Part 70 Application Form GSD-08.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See attached calculations for detailed air toxic calculations (Appendix A, page 3).

Changes Proposed

The new emission units have been added to Section A.2.

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

1. The following new equipment,
 - (a) ~~eight (8) MIG welding stations, each with a maximum wire consumption of 57.7 lb/hr,~~ **Four (4) welding operation lines, identified as U152 Line A, U152 Line b, Line 1 and Line 2, consisting of a total of thirty two (32) metal inert gas (MIG) stations, with a total maximum wire consumption rate of 92.94 pounds of wire per hour (lb wire/hr),**
 - (b) one (1) E Dip Coater, with a maximum design throughput of 144 units per hour, and
2. The following existing equipment:
 - (a) one (1) 2.6 MMBtu/hr natural gas fired component parts washer,
 - (b) two (2) 5.4 MMBtu/hr natural gas fired side bar washers,
 - (c) one (1) 7.5 MMBtu/hr natural gas fired frame assembly washer,
 - (d) two (2) 3.75 MMBtu/hr natural gas fired rust proofing boilers,
 - (e) one (1) 5.0 MMBtu/hr natural gas fired rust proofing oven,
 - (f) one (1) 0.35 MMBtu/hr natural gas fired maintenance steam cleaner,
 - (g) five (5) 2.592 MMBtu/hr natural gas fired building heater units,
 - (h) one (1) touch up paint operation (utilizing the specified balck lacquer with 1.42 pounds volatile organic compounds per gallon, only), with PM(PM10) overspray emissions controlled by a dry filter system, and
 - (i) two (2) 0.25 MMBtu/hr natural gas fired space heaters.

3. The following equipment:

- (a) Two (2) natural gas fired hot water generators, identified as E-Coat #1 and E-Coat #2, each with a maximum heat input capacity of 1.15 million (MM) British thermal units (Btu) per hour, and exhausting to stacks 13 and 14, respectively;
- (b) Two (2) natural gas fired ovens, identified as E-Coat Oven #1 and E-Coat Oven #2, each with a maximum heat input capacity of 5.0 MMBtu per hour, and exhausting to stacks 15 and 16, respectively;
- (c) Two (2) natural gas fired boilers, identified as Wax Boiler #1 and Wax Boiler #2, each with a maximum heat input capacity of 3.35 MMBtu per hour, and exhausting to one (1) stack, identified as 17;
- (d) One (1) powder coat system, identified as Powder Coat, utilizing an air atomization spray application system, coating a maximum of 65 metal frames per hour, using dry filters for particulate matter control, and exhausting to stack 30; and
- (e) One (1) wax coat system, identified as Wax Coat, utilizing a dipping application system, coating a maximum of 60 metal frames per hour.

The following changes have been made to Section D.1.

SECTION D.1 EMISSION UNIT OPERATION CONDITIONS

- (a) ~~eight (8) MIG welding stations, each with a maximum wire consumption of 57.7 lb/hr,~~ **Four (4) welding operation lines, identified as U152 Line A, U152 Line b, Line 1 and Line 2, consisting of a total of thirty two (32) metal inert gas (MIG) stations, with a total maximum wire consumption rate of 92.94 pounds of wire per hour (lb wire/hr),**
- (b) one (1) E Dip Coater, with a maximum design throughput of 144 units per hour,
- (c) one (1) 2.6 MMBtu/hr natural gas fired component parts washer,
- (e) two (2) 5.4 MMBtu/hr natural gas fired side bar washers,
- (f) one (1) 7.5 MMBtu/hr natural gas fired frame assembly washer,
- (g) two (2) 3.75 MMBtu/hr natural gas fired rust proofing boilers,
- (h) one (1) 5.0 MMBtu/hr natural gas fired rust proofing oven, and
- (i) one (1) 0.35 MMBtu/hr natural gas fired maintenance steam cleaner.

The following changes have been made to Section D.1.1.

D.1.1 Particulate Matter (PM) from the MIG Welding Operation [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the MIG welding operation shall not exceed 23.25 pounds per hour when operating at a process weight rate of 13.33 tons per hour.

~~The pounds per hour limitation was calculated with the following equation:~~

~~Interpolation and extrapolation of the data for the process weight rate up to 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~~

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from the welding operation not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

The following changes have been made to Section D.2.

SECTION D.2 EMISSION UNIT OPERATION CONDITIONS

- (c) five (5) 2.592 MMBtu/hr natural gas fired building heater units, ~~and~~.
- (d) two (2) 0.25 MMBtu/hr natural gas fired space heaters.
- (c) Two (2) natural gas fired hot water generators, identified as E-Coat #1 and E-Coat #2, each with a maximum heat input capacity of 1.15 million (MM) British thermal units (Btu) per hour, and exhausting to stacks 13 and 14, respectively.**
- (d) Two (2) natural gas fired ovens, identified as E-Coat Oven #1 and E-Coat Oven #2, each with a maximum heat input capacity of 5.0 MMBtu per hour, and exhausting to stacks 15 and 16, respectively.**
- (e) Two (2) natural gas fired boilers, identified as Wax Boiler #1 and Wax Boiler #2, each with a maximum heat input capacity of 3.35 MMBtu per hour, and exhausting to one (1) stack, identified as 17.**

The following rule cite has been added to Section D.2.

~~There are no requirements applicable to the combustion units:~~

D.2.1 Particulate Matter (PM) [326 IAC 6-2-4]

The two (2) 3.35 MMBtu/hr natural gas fired boilers (identified as Wax Boiler #1 and Wax Boiler #2) have a heat input of less than 10 MMBtu/hr and pursuant to 326 IAC 6-2-4(a) are subject to a default particulate matter emission limit of 0.6 pounds per million (MM) Btu of heat input.

The following changes have been made to Section D.3.

SECTION D.3 EMISSION UNIT OPERATION CONDITIONS

one (1) touch up paint operation (utilizing the specified black lacquer with 1.42 pounds volatile organic compounds per gallon, only), with PM(PM10) overspray emissions controlled by a dry filter system.

One (1) powder coat system, identified as Powder Coat, utilizing an air atomization spray application system, coating a maximum of 65 metal frames per hour, using dry filters for particulate matter control, and exhausting to stack 30.

One (1) wax coat system, identified as Wax Coat, utilizing a dipping application system, coating a maximum of 60 metal frames per hour.

The following changes have been made to Section D.3.1.

Emission Limitations and Standards

D.3.1 Particulate Matter (PM) Overspray from the Touch up Booth [326 IAC 6-3]

Pursuant to 326 IAC 6-3, the PM overspray emissions from the touch up booth **and the powder coat system (identified as Powder Coat)**, shall not exceed the pound per hour emission rate established as E in the following formula:

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 following changes have been made to Section D.3.3.

D.3.3 Volatile Organic Compounds [326 IAC 8-2-9]

(a) There are no VOC emission limits that apply to the touch up booth at this time. However, any change or modification which may increase the actual VOC emissions to 15 pounds per day or more from the touch up booth must be approved by the Office of Air Quality (OAQ) before such change may occur.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the wax coat operation and powder coat operation shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

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

Condition D.3.5 has been added to include record keeping requirements.

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

D.3.5 Record Keeping Requirements

(a) To document compliance with Condition D.3.3(b), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.3.3(b).

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The volume weighted VOC content of the coatings used for each month;

(4) The cleanup solvent usage for each month;

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Conclusion

The operation of this truck frame coating and preparation facility shall be subject to the conditions of the attached proposed **Minor Permit Revision to a Minor Source Operating Permit No. 061-12306-00014**.

Appendix A: Emission Calculations

Company Name: Tower Automotive
Address City IN Zip: 3301 Cline Road, Corydon, IN 47112
Minor Permit Revision: 061-12306
Pit ID: 061-00014
Reviewer: NH/EVP

Uncontrolled Potential Emissions (tons/year)				
Emissions Generating Activity				
Pollutant	Surface Coating	Welding Operation	Natural Gas Combustion	TOTAL
PM	8.80	9.81	0.16	18.77
PM10	8.80	9.81	0.63	19.24
SO2	0.00	0.00	0.05	0.05
NOx	0.00	0.00	8.32	8.32
VOC	1.47	0.00	0.46	1.93
CO	0.00	0.00	6.99	6.99
total HAPs	0.04	1.79	0.00	1.83
worst case single HAP	(Dipropylene Glycol Methyl Ether) 0.04	(Manganese) 1.38	0.00	1.38
Total emissions based on rated capacity at 8,760 hours/year.				
Controlled Potential Emissions (tons/year)				
Emissions Generating Activity				
Pollutant	Surface Coating	Welding Operation	Natural Gas Combustion	TOTAL
PM	8.80	9.81	0.16	18.77
PM10	8.80	9.81	0.63	19.24
SO2	0.00	0.00	0.05	0.05
NOx	0.00	0.00	8.32	8.32
VOC	1.47	0.00	0.46	1.93
CO	0.00	0.00	6.99	6.99
total HAPs	0.04	1.79	0.00	1.83
worst case single HAP	(Dipropylene Glycol Methyl Ether) 0.04	(Manganese) 1.38	0.00	1.38
Total emissions based on rated capacity at 8,760 hours/year, after control.				

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Tower Automotive
Address City IN Zip: 3301 Cline Road, Corydon, IN 47112
Minor Permit Revision #: 061-12306
Pit ID: 061-00014
Permit Reviewer: NH/EVP

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Dipropylene Glycol Methyl Ether	Dipropylene Glycol Methyl Ether (ton/yr)
Rust Proofing	7.4	0.001840	60.00	1.00%	0.04

Total State Potential Emissions

0.04

METHODOLOGY

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

Company Name: Tower Automotive
 Address City IN Zip: 3301 Cline Road, Corydon, IN 47112
 Minor Permit Revision No./Plt ID: 061-12306-00014
 Reviewer: NH/EVP

PROCESS	Number of Stations	electrode consumption per station (lbs/hr)	EMISSION FACTORS * (lb pollutant / lb electrode)				EMISSIONS (lb/hr)				TOTAL HAPS (lb/hr)
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING											
Metal Inert Gas (MIG)(ER5154)	1	92.94	0.0241	0.0034	--	0.001	2.240	0.315996	0.000	0.09294	0.409
EMISSION TOTALS							PM = PM10	Mn	Ni	Cr	Total HAPs
Potential Emissions lbs/hr							2.24	0.32	0.00	0.09	0.41
Potential Emissions lbs/day							53.76	7.58	0.00	2.23	9.81
Potential Emissions tons/year							9.81	1.38	0.00	0.41	1.79

Note: The welding process consists of 32 welding stations with a total maximum electrode consumption of 92.94 lbs/hr for all stations.

METHODOLGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column. Consult AP-42 or other reference for different electrode types.

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

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

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

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

Plasma cutting emission factors are from the American Welding Society study published in Sweden (March 1994).

Welding and other flame cutting emission factors are from an internal training session document.

See AP-42, Chapter 12.19 for additional emission factors for welding.

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

Company Name: Tower Automotive
Address City IN Zip: 3301 Cline Road, Corydon, IN 47112
Minor Permit Revision: 061-12306
Plt ID: 061-00014
Reviewer: NH/EVP

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
19.0	166.4

Facilities	MMBtu/hr
Hot Water Generator (E-Coat #2)	1.15
Hot Water Generator (E-Coat #2)	1.15
Boiler (Wax Boiler #1)	3.35
Boiler (Wax Boiler #2)	3.35
Oven (E-Coat Oven #1)	5
Oven (E-Coat Oven #2)	5
Total	19

	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	0.16	0.63	0.05	8.32	0.46	6.99

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

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

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).