



Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

October 20, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Tower Automotive / MSOP 061-18858-00014

FROM: Paul Dubenetzky
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 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, 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 and IC 13-15-6-1 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 of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, 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.dot 9/16/03



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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 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 061-18858-00014	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: October 20, 2004 Expiration Date: October 20, 2009

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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 truck frame coating and preparation operation.

Authorized Individual: Facilities Manager
Source Address: 3301 Cline Road, Corydon, Indiana 47112
Mailing Address: Same as above
General Source Phone: (812) 738-5608
SIC Code: 3711
County Location: Harrison
Source Location Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit
Minor Source, under PSD and 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 operate the following emissions units and pollution control devices:

- (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) welding stations, with a total maximum wire consumption rate of 1328pounds of wire per hour (lb wire/hr), and exhausting to nine (9) stacks 21, 22, 23, 24, 25, 26, 28, 29, and 31;
- (b) One (1) E Dip Coater, with a maximum design throughput of 144 units per hour;
- (c) 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;
- (d) 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 11.5 MMBtu/hr, and exhausting to stacks 13 and 14, respectively;
- (e) 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/hr, and exhausting to stacks 15 and 16, respectively;
- (f) Seven (7) 4.675 MMBtu/hr natural gas fired make-up air units;
- (g) Five (5) 4.109 MMBtu/hr natural gas fired make-up air units;
- (h) Three (3) 3.85 MMBtu/hr natural gas fired make-up air units;
- (i) One (1) 3.0 MMBtu/hr natural gas fired immersion heater;
- (j) Five (5) 2.592 MMBtu/hr natural gas fired building heater units;

- (k) One (1) 2.0 MMBtu/hr natural gas fired make-up air unit;
- (l) One (1) 2.0 MMBtu/hr natural gas fired Mini E-Coat oven;
- (m) One (1) 2.0 MMBtu/hr natural gas fired Powder Coat oven;
- (n) One (1) 1.8 MMBtu/hr natural gas fired immersion heater;
- (o) One (1) 1.5 MMBtu/hr natural gas fired oven;
- (p) One (1) 0.4 MMBtu/hr natural gas fired unit heater;
- (q) One (1) 0.35 MMBtu/hr natural gas fired maintenance steam cleaner;
- (r) Two (2) 0.3 MMBtu/hr natural gas fired unit heaters;
- (s) Three (3) 0.25 MMBtu/hr natural gas fired unit heaters;
- (t) Four (4) 0.2 MMBtu/hr natural gas fired unit heaters;
- (u) Two (2) 0.175 MMBtu/hr natural gas fired unit heaters;
- (v) One (1) 0.15 MMBtu/hr natural gas fired unit heater; and
- (w) One (1) 0.125 MMBtu/hr natural gas fired unit heater.

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to operate 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.

B.2 Definitions

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.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Permit Term and Renewal [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5]

This permit 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 of this permit do not affect the expiration date.

The Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date. If a timely and sufficient permit application for a renewal has been made, this permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

B.5 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted 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) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

- (d) 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.7 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) 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.
- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) 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 or potential to emit. The PMP does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) 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.8 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) Permit revisions are governed by the requirements of 326 IAC 2-6.1-6.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1.
- (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)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a non-road engine, as defined in 40 CFR 89.2.

B.9 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]
[IC13-17-3-2][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 this title or the conditions of this permit or any operating permit revisions;
- (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 processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (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.10 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)]:

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

B.11 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.
- (b) 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.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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 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 5-1-3 (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 non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 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
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-7-1(34).

- (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 Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements

C.5 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

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 date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ (and local agency) not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, (and local agency), 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.6 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.

Record Keeping and Reporting Requirements

C.7 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.8 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, all record keeping requirements not already legally required shall be implemented when operation begins.

C.9 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 Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (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) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) The first report shall cover the period commencing on the date of issuance of this permit 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

EMMISSIONS UNITS OPERATION CONDITIONS

Emissions Unit Description:

- (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 1328 pounds of wire per hour (lb wire/hr), and exhausting to nine (9) stacks 21, 22, 23, 24, 25, 26, 28, 29, and 31;
- (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 11.5 MMBtu/hr, 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/hr, and exhausting to stacks 15 and 16, respectively;
- (d) Seven (7) 4.675 MMBtu/hr natural gas fired make-up air units;
- (e) Five (5) 4.109 MMBtu/hr natural gas fired make-up air units;
- (f) Three (3) 3.85 MMBtu/hr natural gas fired make-up air units;
- (g) One (1) 3.0 MMBtu/hr natural gas fired immersion heater;
- (h) Five (5) 2.592 MMBtu/hr natural gas fired building heater units;
- (i) One (1) 2.0 MMBtu/hr natural gas fired make-up air unit;
- (j) One (1) 2.0 MMBtu/hr natural gas fired Mini E-Coat oven;
- (k) One (1) 2.0 MMBtu/hr natural gas fired Powder Coat oven;
- (l) One (1) 1.8 MMBtu/hr natural gas fired immersion heater; and
- (m) One (1) 1.5 MMBtu/hr natural gas fired oven.

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

D.1.1 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 each MIG welding station 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.

D.1.2 Particulate Matter (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitation for facilities specified in 326 IAC 6-2-1(d)), the PM from each 11.5 MMBtu per hour hot water generator shall be limited to 0.48 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.
Q = Total source maximum operating capacity rating in MMBtu/hr
= 23 MMBtu/hr

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

D.1.3 Record Keeping Requirements [326 IAC 12] [40 CFR Part 60.48c]

Pursuant to 326 IAC 12 and 40 CFR Part 60.48c (g) and (i), (Subpart Dc), the Permittee shall comply as follows for the hot water generators, E-Coat #1 and E-Coat #2:

- (a) The Permittee shall record and maintain records of the amounts of each fuel combusted during each day.
- (b) All records shall be maintained by the Permittee for a period of two (2) years following the date of such records.

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emission Limitations and Standards

Emissions Unit Description:

- (a) One (1) E Dip Coater, with a maximum design throughput of 144 units per hour;
- (b) 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;
- (c) One (1) 0.4 MMBtu/hr natural gas fired unit heater;
- (d) One (1) 0.35 MMBtu/hr natural gas fired maintenance steam cleaner;
- (e) Two (2) 0.3 MMBtu/hr natural gas fired unit heaters;
- (f) Three (3) 0.25 MMBtu/hr natural gas fired unit heaters;
- (g) Four (4) 0.2 MMBtu/hr natural gas fired unit heaters;
- (h) Two (2) 0.175 MMBtu/hr natural gas fired unit heaters;
- (i) One (1) 0.15 MMBtu/hr natural gas fired unit heater; and
- (j) One (1) 0.125 MMBtu/hr natural gas fired unit heater.

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

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, the Permittee shall not allow the discharge into the atmosphere VOC in excess of, for extreme performance coatings, three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the E-dip coater.

D.2.2 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

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

D.2.3 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 the powder coat process that is not exempt under 326 IAC 6-3-1(b) or (c) and 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.

D.2.4 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 facility and any control devices.

Compliance Determination Requirements

D.2.5 Volatile Organic Compounds (VOC)[326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC content contained in condition D.2.1 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.

D.2.6 Particulate Matter (PM)

In order to comply with condition D.2.3, the dry filters for PM control shall be in operation and control emissions from the spray booths at all times that the spray booths are in operation.

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

D.2.7 Record Keeping Requirements

- (a) In order to comply with condition D.2.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit established in condition D.2.1.
- (1) The VOC content of each coating material and solvent used less water.
 - (2) The amount of coating material and solvent used on 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;
 - (3) The monthly cleanup solvent usage; and
 - (4) The total VOC 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
COMPLIANCE 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:	Tower Automotive
Address:	3301 Cline Road
City:	Corydon, IN 47112
Phone #:	(812) 738-5608
MSOP #:	061-18858-00014

I hereby certify that Tower Automotive is still in operation.
 no longer in operation.

I hereby certify that Tower Automotive is in compliance with the requirements of MSOP 061-18858-00014.
 not in compliance with the requirements of MSOP 061-18858-00014.

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:

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:

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

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

Source Background and Description

Source Name:	Tower Automotive
Source Location:	3301 Cline Road, Corydon, IN 47112
County:	Harrison
SIC Code:	3711
Operation Permit No.:	061-10826-00014
Operation Permit Issuance Date:	TBD
Permit Renewal No.:	061-18858-00014
Permit Reviewer:	Gaurav Shil/EVP

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

Permitted Emission Units and Pollution Control Equipment

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

- (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) welding stations, with a total maximum wire consumption rate of 1328 pounds of wire per hour (lb wire/hr), and exhausting to nine (9) stacks 21, 22, 23, 24, 25, 26, 28, 29, and 31;
- (b) One (1) E Dip Coater, with a maximum design throughput of 144 units per hour;
- (c) 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;
- (d) 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 11.5 MMBtu/hr, and exhausting to stacks 13 and 14, respectively;
- (e) 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/hr, and exhausting to stacks 15 and 16, respectively;
- (f) Seven (7) 4.675 MMBtu/hr natural gas fired make-up air units;
- (g) Five (5) 4.109 MMBtu/hr natural gas fired make-up air units;
- (h) Three (3) 3.85 MMBtu/hr natural gas fired make-up air units;
- (i) One (1) 3.0 MMBtu/hr natural gas fired immersion heater;
- (j) Five (5) 2.592 MMBtu/hr natural gas fired building heater units;
- (k) One (1) 2.0 MMBtu/hr natural gas fired make-up air unit;

- (l) One (1) 2.0 MMBtu/hr natural gas fired Mini E-Coat oven;
- (m) One (1) 2.0 MMBtu/hr natural gas fired Powder Coat oven;
- (n) One (1) 1.8 MMBtu/hr natural gas fired immersion heater;
- (o) One (1) 1.5 MMBtu/hr natural gas fired oven;
- (p) One (1) 0.4 MMBtu/hr natural gas fired unit heater;
- (q) One (1) 0.35 MMBtu/hr natural gas fired maintenance steam cleaner;
- (r) Two (2) 0.3 MMBtu/hr natural gas fired unit heaters;
- (s) Three (3) 0.25 MMBtu/hr natural gas fired unit heaters;
- (t) Four (4) 0.2 MMBtu/hr natural gas fired unit heaters;
- (u) Two (2) 0.175 MMBtu/hr natural gas fired unit heaters;
- (v) One (1) 0.15 MMBtu/hr natural gas fired unit heater; and
- (w) Three (3) 0.125 MMBtu/hr natural gas fired unit heater.

Unpermitted Emission Units and Pollution Control Equipment

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

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; and
- (b) Minor Permit Revision 061-12306-00014 issued on March 26, 2001.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit.

The following conditions from MSOP No. 061-10826-00014, issued on July 16, 1999, and revised in First Minor Permit Revision No. 061-12306-00014, issued on March 26, 2001 have been determined no longer applicable; therefore, these conditions were not incorporated into this MSOP:

1. Section D.3, Emission Unit Operation Conditions, in MSOP No. 061-10826-00014.

Reason not incorporated: The wax coat system, identified as Wax Coat, and touch up paint operation were decommissioned and removed from the source. Hence the conditions in Section D.3 of MSOP No. 061-10826-00014 are no longer necessary. The powder coat system, identified as Powder Coat, is still operational and conditions for this facility are included in Section D.2 of MSOP No. 061-18858-00014.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
E-Coat	E-Coat Line	42	2.25	30,000	150
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
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 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 16, 2004.

Emission Calculations

See Appendix A of this document for detailed emission calculations (Pages 1 through 6).

Potential to Emit of the Source Before Controls

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

Pollutant	Potential to Emit (tons/yr)
PM	43.25
PM-10	43.25
SO ₂	0.30
VOC	9.12
CO	46.60
NO _x	55.50

HAPs	Potential to Emit (tons/yr)
Manganese	1.85
Hexane	1.0
Chromium	0.01
Other HAPs	0.05
Total	2.91

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. An MSOP will be issued.
- (b) 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.

County Attainment Status

The source is located in Harrison County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) 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 emissions and NOx are considered when evaluating the rule applicability relating to ozone. Harrison County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

- (b) Harrison County has been classified as attainment or unclassifiable in Indiana for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (c) Fugitive Emissions
Since this type of operation is not one of the 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 applicability.

Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	35.33
PM-10	35.33
SO ₂	0.30
VOC	9.12
CO	46.60
NO _x	55.50
Single HAP	1.38
Combination HAPs	2.91

- (a) This existing source is not a major stationary source because no attainment regulated 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, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit 061-18858-00014, is still 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 per year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

- (a) Pursuant to 40 CFR 60.40c, steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term does not include process heaters as defined in 40 CFR 60.40c. The purpose of E-Coat #1 and E-Coat #2 is to heat water within a closed vessel. E-Coat #1 and E-Coat #2 are not used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst. Hence, they do not fit the definition of process heaters as defined in 40 CFR 60.40c and will be classified as steam generating units.

The two (2) hot water generators, identified as E-Coat #1 and E-Coat #2, are subject to the requirements of New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because each of them was installed after the June 9, 1989 rule applicability date and has a maximum design heat input capacity of 11.5 MMBtu/hr. This heat input capacity is between the rule applicability thresholds of 10 and 100 MMBtu per hour, inclusive. However, these units are natural gas fired, and 40 CFR 60.40c, Subpart Dc does not have any applicable emission limitations or opacity standard. This notwithstanding, Subpart Dc does require the Permittee to record and report fuel usage, as follows:

- (1) The Permittee shall record and maintain records of the amounts of each fuel combusted during each day.
 - (2) All records shall be maintained by the Permittee for a period of two (2) years following the date of such records.
- (b) The requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60.390), Subpart MM, Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations, are not included in the permit for the E-Coater and powder coat operation because this rule applies to automobile or light duty truck assembly plants and this source is not an automobile or light duty truck assembly plant.
- (c) (1) Pursuant to 40 CFR 60.451, large appliance surface coating line means that portion of large appliance assembly plant engaged in the application and curing of organic surface coatings on large appliance parts or products. Large appliance part means any organic surface-coated metal lid, door, casing, panel, or other interior or exterior metal part or accessory that is assembled to form any large appliance product like organic surface-coated metal range, oven, microwave oven, refrigerator, freezer, washer, dryer, dishwasher, water heater, or trash compactor manufactured for household, commercial, or recreational use. The requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60.450), Subpart SS, Standards of Performance for Industrial Surface Coating: Large Appliances apply to each surface coating operation in a large appliance surface coating line that commenced construction, modification, or reconstruction after December 24, 1980. The source does not have any large appliance surface coating line and hence the requirements of 40 CFR 60.450, Subpart SS are not included in the permit.
- (2) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart NNNN are not included in the permit since the source is not a major HAP source as defined in 40 CFR 63, subpart A.
 - (3) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart IIII are not included in the permit since the source is not an automobile or light-duty truck assembly plant, and it is not a major source of HAPs.
 - (4) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart MMMM are not included in the permit since this regulation is applicable to surface coating of miscellaneous metal parts or products, as described in 40 CFR 63.3881 (a)(1) at a major source of HAPs. This regulation does not apply to this source since the source is not a major source of HAPs.

State Rule Applicability – Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Harrison County and the potential to emit of all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

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 Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

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

326 IAC 8-6 (Organic Solvent Emission Limitations)

The source is located in Harrison County and the potential to emit VOC from the entire source is less than one hundred (100) tons per year. Therefore, pursuant to 326 IAC 8-6-1 (2), the requirements of this rule do not apply.

State Rule Applicability – Individual Facilities

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

Pursuant to 326 IAC 1-2-19, the combustion for indirect heating is defined as the combustion of fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion. The purpose of hot water generators is heat ambient temperature water to higher temperatures. Heated water does not come in contact with the products of combustion. Therefore, hot water generators, identified as E-Coat #1 and E-Coat #2 are indirect heating facilities.

The particulate matter (PM) emissions from the each hot water generator shall be limited by the following:

The hot water generator, with a maximum heat input capacity of 11.5 MMBtu per hour, constructed in 2001, is subject to 326 IAC 6-2-4. Pursuant to this rule, particulate emissions from indirect heating facilities constructed after September 21, 1983, shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where: Pt = pounds of PM emitted per MMBtu (lb/MMBtu) heat input
Q = total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input = 11.5 + 11.5 = 23 MMBtu/hr

Pt for each hot water generator is based on the two generators, with a total heat input of 23.0 MMBtu/hr.

$$Pt = \frac{1.09}{(23.0)^{0.26}} = 0.48 \text{ lb/MMBtu}$$

The allowable particulate emission rate from each hot water generator, based on the above equation, is 0.48 pounds per MMBtu heat input. Each generator has a potential PM emission rate of 0.0038 pounds per MMBtu heat input, therefore, E-Coat #1 and #2 will comply with 326 IAC 6-2-4 (see Appendix A, page 3, for detailed compliance calculations).

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

- (1) Particulate from the powder coat system, identified as Powder Coat, shall be controlled by a dry particulate filter and the Permittee shall operate the control device in accordance with manufacturer's specifications.

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

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

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

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

The particulate emissions from the powder coat system are controlled by dry filters which shall be operational at all times in order to comply with 326 IAC 6-3-2 (e).

- (2) 325 IAC 6-3 does not apply to the E-Coater because the E-Coater is a dip-coating process with an estimated transfer efficiency of 100% which results in no PM overspray emissions.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

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. Hence, the particulate emissions from each Metal Inert Gas (MIG) welding station with a maximum process weight rate of 41.5 pounds per hour shall not exceed 0.551 pounds per hour.

The potential particulate emission rate from each welding station is 0.22 pounds per hour. Hence, the welding operation is in compliance with 326 IAC 6-3-2.

326 IAC 8-2-2 (Automobile and light duty truck coating operations)

326 IAC 8-2-2 (Automobile and light duty truck coating operations) establishes emission limitations for automobile and light duty truck surface coating operations which include all passenger car or passenger car derivatives capable of seating twelve (12) or fewer passengers and any motor vehicle rated at 3,864 kilograms (eight thousand five hundred (8,500 pounds) gross weight or less which are designed primarily for the purpose of transportation or are derivatives of such vehicles. No facility at this source applies coatings on automobile and light duty truck bodies, hoods, fenders, cargo boxes, doors and grill opening panels. Hence, 326 IAC 8-2-9 does not apply to any facility.

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 the coating delivered at the E-Coater shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings.

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

The pounds VOC per gallon of coating less water of the coatings applied by the E-Coater are determined to be 0.08 and 0.26, respectively which are less than the limit of 3.5 lb/gal. Thus, based on the MSDS submitted by the source and calculations made, the E-Coater is in compliance with this requirement.

Conclusion

The operation of this truck frame coating and preparation source shall be subject to the conditions of the Minor Source Operating Permit 061-18858-00014.

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

Addendum to the Technical Support Document (TSD) for a Minor Source
Operating Permit Renewal

Source Name:	Tower Automotive
Source Location:	3301 Cline Road, Corydon, IN 47112
County:	Harrison
SIC Code:	3711
Operation Permit No.:	061-10826-00014
Operation Permit Issuance Date:	TBD
Permit Renewal No.:	061-18858-00014
Permit Reviewer:	Gaurav Shil/EVP

On August 11, 2004, the Office of Air Quality (OAQ) had a notice published in the Corydon Democrat, Corydon, Indiana, stating that Tower Automotive had applied for renewal of a Minor Source Operating Permit (MSOP) to operate a truck frame coating and preparation operation. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On August 17, 2004, OAQ received comments from Tower Automotive on the proposed MSOP. The summary of the comments and corresponding responses is shown below. Changes made to the permit as a result of the comments are shown in bold and deleted permit language is shown with a line through it. Any permit changes affecting the permit's Table of Contents are also revised and typographical corrections are made without replication herein.

Comment 1:

The Draft Permit and associated Technical Support Document (TSD) refer to three (3) 0.125 MMBtu/hr natural gas fired unit heaters. The MSOP Renewal Application submitted on April 13, 2004 by AEE on behalf of Tower listed only one (1) 0.125 MMBtu/hr natural gas fired unit heater. The MSOP Renewal Application accurately represents operations at the Tower facility. Tower respectfully requests that the Draft Permit be revised to indicate one (1) 0.125 MMBtu/hr natural gas fired unit heater at the facility.

Response to Comment 1:

IDEM agrees with the proposed change and Section A.2 of the permit is revised as follows:

A.2 Emissions Units and Pollution Control Equipment Summary

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

- (w) ~~Three (3)~~ **One (1)** 0.125 MMBtu/hr natural gas fired unit heater.

Section D.2, Emissions Unit description is revised as follows:

Emissions Unit Description:

- (j) ~~Three (3)~~ **One (1) 0.125** MMBtu/hr natural gas fired unit heater.

The following descriptive changes are also made to the Technical Support Document with this addendum. However IDEM prefers that the Technical Support Document reflects the permit that was on public notice. Changes to the Technical Support Document that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that all comments and responses are documented and part of the records regarding this permit decision.

IDEM agrees that TSD should have read as follows:

Permitted Emission Units and Pollution Control Equipment

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

- (w) ~~Three (3)~~ **One (1) 0.125** MMBtu/hr natural gas fired unit heater.

No change is made to Appendix A: Emission Calculations since the emission calculations performed with the permit on public notice lists one (1) MMBtu/hr natural gas fired unit heater.

Comment 2:

Condition D.2.3 of the Draft Permit references 326 IAC 6-3-2(d) as its basis. 326 IAC 6-3-2(d) applies to surface coating. 326 IAC 6-3-1.5 defines surface coating as "...the application of a solvent or waterbased coating to a surface that imparts protective, functional, or decorative films in which the application emits, or has the potential to emit, particulate." The powder applied in the Powder Coat process is not a solvent or waterbased coating. Therefore the process does not fit the definition of surface coating as defined in the applicable regulations, and 326 IAC 6-3-2(d) is not applicable to the Powder Coat process. 326 IAC 6-3-2(a) states that "Any manufacturing process listed in subsections (b) through (d) shall follow the work practices and control technologies contained therein. All other manufacturing processes subject to this rule shall calculate emission limitations according to requirements in subsection (e)." The Powder Coat process is not a manufacturing process listed in subsections (b) through (d) of 326 IAC 6-3-2. Therefore, subsection (e) is applicable to the process. Subsection (e) was the basis of particulate emission limitations applied to the Powder Coat process under the existing permit.

In light of the above information, Tower respectfully requests that Condition D.2.3 be revised to reflect the requirements of 326 IAC 6-3-2(e) instead of 326 IAC 6-3-2(d). Furthermore, Tower respectfully requests that the second paragraph (a) under Condition D.2.7 regarding weekly overspray observations and daily and monthly inspections be removed from the permit. These observations and inspections were included in the Draft Permit to comply with 326 IAC 6-3-2(d) and are not required by 326 IAC 6-3-2(e).

Response to Comment 2:

IDEM agrees that 326 IAC 6-3-1.5 defines surface coating as "...the application of a solvent or waterbased coating to a surface that imparts protective, functional, or decorative films in which the application emits, or has the potential to emit, particulate." The powder applied in the Powder Coat process at the source is not a solvent or waterbased coating. Therefore the process does not fit the definition of surface coating as defined in the applicable regulations, and 326 IAC 6-3-2 (d) is not applicable to the Powder Coat process. Pursuant to 326 IAC 6-3-2 manufacturing processes to which control methods in 326 IAC 6-3-2 (b) through (d) do not apply shall calculate allowable emissions in accordance with 326 IAC 6-3-2 (e). IDEM agrees that the Powder Coat

process is not a manufacturing process listed in 326 IAC 6-3-2 (b) through (d). Hence, 326 IAC 6-3-2 (e) shall apply to the powder coat process.

Condition D.2.3 is deleted from the permit and replaced with condition pursuant to 326 IAC 6-3-2 (e). Since the maximum process weight rate for the Powder Coat Process is 5 lbs/hr 326 IAC 6-3-2 (e)(2) is applicable to the emissions unit and the allowable emission from the Powder Coat Process shall be 0.551 lb/hr. The permit is revised as follows:

~~D.2.3 Particulate [326 IAC 6-3-2(d)]~~

- ~~(a) Particulate from the powder coat system shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, and the Permittee shall operate the control device 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.2.3 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 the powder coat process that is not exempt under 326 IAC 6-3-1(b) or (c) and 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.

IDEM agrees that the second paragraph under Condition D.2.7 regarding weekly overspray observations and daily and monthly inspections were included in the Permit to comply with 326 IAC 6-3-2(d) and are not required by 326 IAC 6-3-2(e). Hence the recordkeeping requirement is deleted from the permit.

~~D.2.7 Record Keeping Requirements~~

- ~~(a) In order to comply with Condition D.2.3, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.~~

Pursuant to Comment 2 following changes are also made to the Technical Support Document with this addendum.

IDEM agrees that TSD should have read as follows:

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

- ~~(1) Particulate from the powder coat system, identified as Powder Coat, shall be controlled by a dry particulate filter and the Permittee shall operate the control device in accordance with manufacturer's specifications.~~

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

- ~~— Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.~~
 - ~~— Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.~~
 - ~~— If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.~~
 - ~~— The particulate emissions from the powder coat system are controlled by dry filters which shall be operational at all times in order to comply with 326 IAC 6-3-2 (e).~~
- (2) 3256 IAC 6-3 does not apply to the E-Coater because the E-Coater is a dip-coating process with an estimated transfer efficiency of 100% which results in no PM overspray emissions.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

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. Hence, the particulate emissions from each Metal Inert Gas (MIG) welding station **and the powder coat process with which have** a maximum process weight rate of 41.5 pounds per hour **and 5 pounds per hour, respectively** shall **each** not exceed 0.551 pounds per hour.

The potential particulate emission rate from each welding station is 0.22 pounds per hour. Hence, the welding operation is in compliance with 326 IAC 6-3-2.

The potential particulate emission rate from the powder coat process is 0.2 pounds per hour which is less than the allowable particulate emission rate of 0.551 pounds per hour. Hence, the powder coat process is in compliance with 326 IAC 6-3-2. The dry filters for PM control shall be in operation and control emissions from the powder coat booth at all times that the booth is in operation.

IDEM, OAQ also has decided to make the following change to the permit:

1. A clarification of the term "Calendar Year" has been added to section (d) of C.9 General Reporting Requirements.
 - (d) The first report shall cover the period commencing on the date of issuance of this permit 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.**

Appendix A: Emission Calculations

Company Name: Tower Automotive
Address City IN Zip: 3301 Cline Road, Corydon, Indiana 47112
MSOP Renewal: 061-18858-00014
Reviewer: Gaurav Shil/EVP
Date: 10/20/2004

Uncontrolled Potential Emissions (tons/year)				
Emissions Generating Activity				
Pollutant	Surface Coating	Welding Operation	Natural Gas Combustion	TOTAL
PM	8.80	30.25	4.20	43.25
PM10	8.80	30.25	4.20	43.25
SO2	0.00	0.00	0.30	0.30
NOx	0.00	0.00	55.50	55.50
VOC	6.12	0.00	3.00	9.12
CO	0.00	0.00	46.60	46.60
total HAPs	0.00	1.86	1.05	2.91
worst case single HAP	0.00	(Manganese) 1.85	(Hexane) 1.00	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	0.88	30.25	4.20	35.33
PM10	0.88	30.25	4.20	35.33
SO2	0.00	0.00	0.30	0.30
NOx	0.00	0.00	55.50	55.50
VOC	6.12	0.00	3.00	9.12
CO	0.00	0.00	46.60	46.60
total HAPs	0.00	1.86	1.05	2.91
worst case single HAP	0.00	(Manganese) 1.85	(Hexane) 1.00	1.38
Total emissions based on rated capacity at 8,760 hours/year, after control.				

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Source wide combustion sources (Please refer to Page 3 for complete listing)

Company Name: Tower Automotive
Address City IN Zip: 3301 Cline Road, Corydon, Indiana 47112
MSOP Renewal: 061-18858-00014
Reviewer: Gaurav Shil/EVP
Date: 10/20/2004

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
126.6	1109.1

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	7.6	7.6	0.6	100.0	5.5	84.0
				*see below		
Potential Emission in tons/yr	4.2	4.2	0.3	55.5	3.0	46.6

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

PM emission factors are condensable and filterable.

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

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

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

See page 4 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Source wide combustion sources

Compliance with 326 IAC 6-2-4 (Particulate Emissions for Sources of Indirect Heating)

Two (2) Hot Water Generators (ID # E Coat #1 and #2)

The following calculation demonstrates compliance with the allowable PM emission limit of 0.48 lb/MMBtu for both E-Coat #1 and #2 pursuant to 326 IAC 6-2-4:

Maximum heat input capacity (for E Coat #1)	23.00	MM Btu per hour	(total for hot water generators E Coat #1 (11.5 MMBtu/hr) & E Coat #2 (11.5 MMBtu/hr))
Maximum heat input capacity (for E Coat #2)	23.00	MM Btu per hour	(total for hot water generators E Coat #1 (11.5 MMBtu/hr) & E Coat #2 (11.5 MMBtu/hr))

E Coat #1 PM emissions .0038 pound per mm BTU which will comply with the allowable PM emission limit of 0.48 lb/mmBTU

E Coat #2 PM emissions .0038 pound per mm BTU which will comply with the allowable PM emission limit of 0.48 lb/mmBTU

Methodology

PM emissions (lb/mmBTU) = [(PM emission from hot water generator, tpy) * 2000 lb/ton] / [8760 hours * maximum heat input capacity, mMBTU/hr]

The Source consists of the following natural gas combustion facilities:

1. Two (2) 11.5 MMBtu/hr hot water generators
2. Two (2) 5 MMBtu/hr ovens
3. Seven (7) 4.675 MMBtu/hr makeup air units
4. Five (5) 4.109 MMBtu/hr makeup air units
5. Three (3) 3.85 MMBtu/hr makeup air units
6. One (1) 3 MMBtu/hr immersion heater
7. Five (5) 2.592 MMBtu/hr building heater units
8. One (1) 2 MMBtu/hr mini e-coat oven
9. One (1) 2 MMBtu/hr makeup air unit
10. One (1) 2 MMBtu/hr powder coat oven
11. One (1) 1.8 MMBtu/hr immersion heater
12. One (1) 1.5 MMBtu/hr oven
13. One (1) 0.4 MMBtu/hr heater
14. One (1) 0.35 MMBtu/hr maintenance steam cleaner
15. Two (2) 0.3 MMBtu/hr heaters
16. Two (2) 0.25 space heaters
17. One (1) 0.25 MMBtu/hr heater
18. Four (4) 0.2 MMBtu/hr heaters
19. Two (2) 0.175 MMBtu/hr heaters
20. One (1) 0.15 MMBtu/hr heater
21. One (1) 0.125 MMBtu/hr heater

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Source wide combustion sources
HAP Emissions

Company Name: Tower Automotive
Address City IN Zip: 3301 Cline Road, Corydon, Indiana 47112
MSOP Renewal: 061-18858-00014
Reviewer: Gaurav Shil/EVP
Date: 10/20/2004

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	0.0012	0.0007	0.0416	0.9982	0.0019

HAPs - Metals (Boiler A3)

	Lead	Barium	Chromium	Vanadium	Nickel
Emission Factor in lb/MMcf	5.0E-04	4.4E-03	1.4E-03	2.3E-03	2.1E-03
Potential Emission in tons/yr	0.0003	0.0024	0.0008	0.0013	0.0012

Methodology is the same as Page 2

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

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

Company Name: Tower Automotive
Address City IN Zip: 3301 Cline Road, Corydon, Indiana 47112
MSOP Renewal: 061-18858-00014
Reviewer: Gaurav Shil/EVP
Date: 10/20/2004
Date: 04-05-99

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
E-Dip Coater																
Resin FRMR2001	8.8	65.00%	64.7%	0.3%	66.6%	33.00%	0.23600	144.000	0.08	0.03	0.90	21.53	3.93	0.00	0.08	100%
Paste FRMP3001	11.3	40.50%	39.4%	1.1%	52.5%	46.00%	0.02800	144.000	0.26	0.12	0.50	12.03	2.20	0.00	0.27	100%
Powder Coat																
Envirocom	12.37	0.00%	0.0%	0.0%	0.0%	100.00%	0.00500	65.000	0.00	0.00	0.00	0.00	0.00	8.80	0.00	50%

State Potential Emissions	Add worst case coating to all solvents										1.40	33.56	6.12	8.80
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Controlled Potential Emissions															
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											Control Efficiency:		Controlled VOC lbs per Hour	Controlled VOC lbs per Day	Controlled VOC tons per Year	Controlled PM tons/yr
											VOC	PM				
											0.00%	90.00%	1.40	33.56	6.12	0.88

Total Controlled Potential Emissions:

Total Emissions	VOC	PM/PM10
Uncontrolled (tons/yr)	6.12	8.80
Controlled (tons/yr)	6.12	0.88

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Welding and Thermal Cutting

Company Name: Tower Automotive
Address City IN Zip: 3301 Cline Road, Corydon, Indiana 47112
MSOP Renewal: 061-18858-00014
Reviewer: Gaurav Shil/EVP
Date: 10/20/2004

PROCESS	Number of Stations	Max. 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)(E70S)	1	1328	0.0052	0.000318	--	0.000001	6.906	0.422304	0.000	0.001328	0.424
EMISSION TOTALS							PM = PM10	Mn	Ni	Cr	Total HAPs
Potential Emissions lbs/hr							6.91	0.42	0.00	0.00	0.42
Potential Emissions lbs/day							165.73	10.14	0.00	0.03	10.17
Potential Emissions tons/year							30.25	1.85	0.00	0.01	1.86

Note: The welding process consists of 32 welding stations with a total maximum electrode consumption of 1328 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.