INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
*We make Indiana a cleaner, healthier place to live.*

*Mitchell E. Daniels, Jr.*
*Governor*

*Thomas W. Easterly*
*Commissioner*

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

TO: Interested Parties / Applicant

DATE: May 1, 2006

RE: Technical Tool and Design / 145-21676-00029

FROM: Nisha Sizemore
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 03/23/06

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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# MINOR SOURCE OPERATING PERMIT RENEWAL
# OFFICE OF AIR QUALITY

## Technical Tool & Design, LLC
## 1004 W. Washington St.
## Shelbyville, Indiana 46176

(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 145-21676-00029 | |
|---|---|
| Issued by: Original Signed By:<br>Nisha Sizemore, Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: May 1, 2006<br><br>Expiration Date: May 1, 2011 |

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## SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a Hard Chromium Electroplating manufacturing plant.

| | |
|---|---|
| Authorized Individual: | Site Manager |
| Source Address: | 1004 W. Washington St., Shelbyville, IN 46176 |
| Mailing Address: | 1004 W. Washington St., Shelbyville, IN 46176 |
| General Source Phone: | 317-392-0847 |
| SIC Code: | 3471 |
| County Location: | Shelby |
| Source Location Status: | Basic Nonattainment area for 8-hour Ozone<br>Attainment area for all other criteria pollutants |
| Source Status: | Minor Source Operating Permit<br>Minor Source, under PSD;<br>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) one (1) Hard Chromium Electroplating Operation with a maximum cumulative potential rectifier capacity of 11,760,000 Ampere-hours (A-hr) per year consisting of:

(1) one (1) hard chromium electroplating tank, identified as T3, equipped with a composite mesh-pad system for control, exhausting to one (1) stack, identified as S1;

Under NESHAP, Subpart N, the hard chromium electroplating tank, identified as T3 is considered an existing affected source because the construction of the source commenced prior to December 16, 1993 and the source is not reconstructed.

(b) welding operation; one (1) metal inert gas (MIG) station, with a maximum wire consumption rate of 0.0023 pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of 0.0023 lb wire/hr, and one (1) stick welding station, with a maximum wire consumption rate of 0.0057 lb wire/hr;

(c) three (3) pneumatic blasters, identified as 23A, 23B and 23C using a baghouse as control, and exhausting inside the building;

(d) one (1) alkaline stripping tank, identified as T2, exhausting to the single mesh pad mist eliminator;

(e) one (1) alkaline rinse tank, identified as T1, exhausting inside the building;

(f) three (3) chrome rinse tanks, identified as T4, exhausting inside the building;

(g) various machining equipment including:

(1) surface grinding;

(2) pedestal grinding; and

(3) fiberboard cutting.

(h) Five (5) Okuma lathe for metal finishing, identified as Lathe Nos. 28, 29, 45, 50, 62 and 65, using liquid coolant;

(i) Three (3) mills for metal finishing, identified as Mill Nos. 29, 59 and 60 using liquid coolant; and

(j) one (1) coolant recycling unit.

(k) natural gas-fired heating units with a total capacity less than 10 MMBtu/hr; and

(l) one (1) parts washer.

## 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 [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, M145-21676-00029, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

### B.6 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.7 Minor Source Operating Permit [326 IAC 2-6.1]

The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).

### B.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

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

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

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, IN 46204-2251

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

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) The Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), for the source as described in 326 IAC 1-6-3. At a minimum, the PMPs shall include:

(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) 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 PMPs do not require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

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

B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M145-21676-00029 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

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

B.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least ninety (90) days prior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

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

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

(1) Submitted at least ninety (90) days prior to the date of the expiration of this permit; and

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

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

B.13 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
Indianapolis, Indiana 46204-2251

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)]

B.14 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.15 Transfer of Ownership or Operation [326 IAC 2-6.1-6]

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

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

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

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

B.16 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.

B.17 Credible Evidence [326 IAC 1-1-6]

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

**SECTION C SOURCE OPERATION CONDITIONS**

Entire Source

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 Fugitive Dust Emissions [326 IAC 6-4]

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

C.5 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
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. 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.6 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 than180 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
Indianapolis, Indiana 46204-2251

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14 days) prior to the actual 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.7 Compliance Requirements [326 IAC 2-1.1-11]

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

**Compliance Monitoring Requirements**

C.8 Compliance Monitoring [326 IAC 2-1.1-11]

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

C.9 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.10 Instrument Specifications [326 IAC 2-1.1-11]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

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

C.11 Response to Excursions or Exceedances

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

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

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

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

(1) monitoring results;

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

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

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

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.12 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected emissions unit while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that re-testing in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the re-testing deadline.

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

The response action documents submitted pursuant to this condition do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1.

**Record Keeping and Reporting Requirements**

C.13 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.14 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.15 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-5] [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
Indianapolis, Indiana 46204-2251

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

(c) 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 reports do 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 EMISSIONS UNITS OPERATION CONDITIONS**

**Emissions Unit Description:**

(a) One (1) Hard Chromium Electroplating Operation with a maximum cumulative potential rectifier capacity of 11,760,000 Ampere-hours (A-hr) per year consisting of:
(1) One (1) hard chromium electroplating tank, identified as T3, equipped with a composite mesh pad system for control, exhausting to one (1) stack, identified as S1.

Under NESHAP, Subpart N, the hard chromium electroplating tank, identified as T3 is considered an existing affected source because the construction of the source commenced prior to December 16, 1993 and the source is not reconstructed.

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

**Emission Limitations and Standards**

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-6.1-5]**

D.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart N. The permittee shall comply with the requirements of this condition on and after the compliance date for the tank T3.

D.1.2 Chromium Electroplating NESHAP [326 IAC 20-8-1] [40 CFR Part 63, Subpart N]

The provisions of 40 CFR 63, Subpart N - National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks, which are incorporated by reference as 326 IAC 20-8-1, apply to tank T3 as specified as follows:

***§ 63.340 Applicability and designation of sources.***

(a) The affected source to which the provisions of this subpart apply is each chromium electroplating or chromium anodizing tank at facilities performing hard chromium electroplating, decorative chromium electroplating, or chromium anodizing.

(b) Owners or operators of affected sources subject to the provisions of this subpart must also comply with the requirements of subpart A of this part, according to the applicability of subpart A of this part to such sources, as identified in Table 1 of this subpart.

(c) Process tanks associated with a chromium electroplating or chromium anodizing process, but in which neither chromium electroplating nor chromium anodizing is taking place, are not subject to the provisions of this subpart. Examples of such tanks include, but are not limited to, rinse tanks, etching tanks, and cleaning tanks. Likewise, tanks that contain a chromium solution, but in which no electrolytic process occurs, are not subject to this subpart. An example of such a tank is a chrome conversion coating tank where no electrical current is applied.

(e) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

[60 FR 4963, Jan. 25, 1995, as amended at 61 FR 27787, June 3, 1996; 64 FR 69643, Dec. 14, 1999; 70 FR 75345, Dec. 19, 2005]

**§ 63.341 Definitions and nomenclature.**

(a) *Definitions.* Terms used in this subpart are defined in the Act, in subpart A of this part, or in this section. For the purposes of subpart N of this part, if the same term is defined in subpart A of this part and in this section, it shall have the meaning given in this section.

*Add-on air pollution control device* means equipment installed in the ventilation system of chromium electroplating and anodizing tanks for the purposes of collecting and containing chromium emissions from the tank(s).

*Air pollution control technique* means any method, such as an add-on air pollution control device or a chemical fume suppressant, that is used to reduce chromium emissions from chromium electroplating and chromium anodizing tanks.

*Base metal* means the metal or metal alloy that comprises the workpiece.

*Bath component* means the trade or brand name of each component(s) in trivalent chromium plating baths. For trivalent chromium baths, the bath composition is proprietary in most cases. Therefore, the trade or brand name for each component(s) can be used; however, the chemical name of the wetting agent contained in that component must be identified.

*Chemical fume suppressant* means any chemical agent that reduces or suppresses fumes or mists at the surface of an electroplating or anodizing bath; another term for fume suppressant is mist suppressant.

*Chromic acid* means the common name for chromium anhydride (CrO3).

*Chromium anodizing* means the electrolytic process by which an oxide layer is produced on the surface of a base metal for functional purposes (e.g., corrosion resistance or electrical insulation) using a chromic acid solution. In chromium anodizing, the part to be anodized acts as the anode in the electrical circuit, and the chromic acid solution, with a concentration typically ranging from 50 to 100 grams per liter (g/L), serves as the electrolyte.

*Chromium anodizing tank* means the receptacle or container along with the following accompanying internal and external components needed for chromium anodizing: rectifiers fitted with controls to allow for voltage adjustments, heat exchanger equipment, circulation pumps, and air agitation systems.

*Chromium electroplating tank* means the receptacle or container along with the following internal and external components needed for chromium electroplating: Rectifiers, anodes, heat exchanger equipment, circulation pumps, and air agitation systems.

*Composite mesh-pad system* means an add-on air pollution control device typically consisting of several mesh-pad stages. The purpose of the first stage is to remove large particles. Smaller particles are removed in the second stage, which consists of the composite mesh pad. A final stage may remove any reentrained particles not collected by the composite mesh pad.

*Electroplating or anodizing bath* means the electrolytic solution used as the conducting medium in which the flow of current is accompanied by movement of metal ions for the purposes of electroplating metal out of the solution onto a workpiece or for oxidizing the base material.

*Emission limitation* means, for the purposes of this subpart, the concentration of total chromium allowed to be emitted expressed in milligrams per dry standard cubic meter (mg/dscm), or the allowable surface tension expressed in dynes per centimeter (dynes/cm).

*Facility* means the major or area source at which chromium electroplating or chromium anodizing is performed.

*Enclosed hard chromium electroplating tank* means a chromium electroplating tank that is equipped with an enclosing hood and ventilated at half the rate or less that of an open surface tank of the same surface area.

*Fiber-bed mist eliminator* means an add-on air pollution control device that removes contaminants from a gas stream through the mechanisms of inertial impaction and Brownian diffusion. These devices are typically installed downstream of another control device, which serves to prevent plugging, and consist of one or more fiber beds. Each bed consists of a hollow cylinder formed from two concentric screens; the fiber between the screens may be fabricated from glass, ceramic plastic, or metal.

*Foam blanket* means the type of chemical fume suppressant that generates a layer of foam across the surface of a solution when current is applied to that solution.

*Fresh water* means water, such as tap water, that has not been previously used in a process operation or, if the water has been recycled from a process operation, it has been treated and meets the effluent guidelines for chromium wastewater.

*Hard chromium electroplating* or industrial chromium electroplating means a process by which a thick layer of chromium (typically 1.3 to 760 microns) is electrodeposited on a base material to provide a surface with functional properties such as wear resistance, a low coefficient of friction, hardness, and corrosion resistance. In this process, the part serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. Hard chromium electroplating process is performed at current densities typically ranging from 1,600 to 6,500 A/m2 for total plating times ranging from 20 minutes to 36 hours depending upon the desired plate thickness.

*Hexavalent chromium* means the form of chromium in a valence state of +6.

*Large, hard chromium electroplating facility* means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity greater than or equal to 60 million ampere-hours per year (amp-hr/yr).

*Maximum cumulative potential rectifier capacity* means the summation of the total installed rectifier capacity associated with the hard chromium electroplating tanks at a facility, expressed in amperes, multiplied by the maximum potential operating schedule of 8,400 hours per year and 0.7, which assumes that electrodes are energized 70 percent of the total operating time. The maximum potential operating schedule is based on operating 24 hours per day, 7 days per week, 50 weeks per year.

*Open surface hard chromium electroplating tank* means a chromium electroplating tank that is ventilated at a rate consistent with good ventilation practices for open tanks.

*Operating parameter value* means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator is in continual compliance with the applicable emission limitation or standard.

*Packed-bed scrubber* means an add-on air pollution control device consisting of a single or double packed bed that contains packing media on which the chromic acid droplets impinge. The packed-bed section of the scrubber is followed by a mist eliminator to remove any water entrained from the packed-bed section.

*Research or laboratory operation* means an operation whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and that is not involved in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

*Small, hard chromium electroplating facility* means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity less than 60 million amp-hr/yr.

*Stalagmometer* means an instrument used to measure the surface tension of a solution by determining the mass of a drop of liquid by weighing a known number of drops or by counting the number of drops obtained from a given volume of liquid.

*Surface tension* means the property, due to molecular forces, that exists in the surface film of all liquids and tends to prevent liquid from spreading.

*Tank operation* means the time in which current and/or voltage is being applied to a chromium electroplating tank or a chromium anodizing tank.

*Tensiometer* means an instrument used to measure the surface tension of a solution by determining the amount of force needed to pull a ring from the liquid surface. The amount of force is proportional to the surface tension.

*Wetting agent* means the type of chemical fume suppressant that reduces the surface tension of a liquid.

(b) *Nomenclature.* The nomenclature used in this subpart has the following meaning:

(1) AMR=the allowable mass emission rate from each type of affected source subject to the same emission limitation in milligrams per hour (mg/hr).

(2) AMRsys=the allowable mass emission rate from affected sources controlled by an add-on air pollution control device controlling emissions from multiple sources in mg/hr.

(3) EL=the applicable emission limitation from § 63.342 in milligrams per dry standard cubic meter (mg/dscm).

(4) IAtotal=the sum of all inlet duct areas from both affected and nonaffected sources in meters squared.

(5) IDAi=the total inlet area for all ducts associated with affected sources in meters squared.

(6) IDAi,a=the total inlet duct area for all ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation in meters squared.

(7) VR=the total of ventilation rates for each type of affected source subject to the same emission limitation in dry standard cubic meters per minute (dscm/min).

(8) VRinlet=the total ventilation rate from all inlet ducts associated with affected sources in dscm/min.

(9) VRinlet,a=the total ventilation rate from all inlet ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation in dscm/min.

(10) VRtot=the average total ventilation rate for the three test runs as determined at the outlet by means of the Method 306 in appendix A of this part testing in dscm/min.

**§ 63.342 Standards**

(a) Each owner or operator of an affected source subject to the provisions of this subpart shall comply with these requirements on and after the compliance dates specified in § 63.343(a). All affected sources are regulated by applying maximum achievable control technology.

(b) *Applicability of emission limits.* (1) The emission limitations in this section apply during tank operation as defined in Sec. 63.341, and during periods of startup and shutdown as these are routine occurrences for affected sources subject to this subpart. The emission limitations do not apply during periods of malfunction, but the work practice standards that address operation and maintenance and that are required by paragraph (f) of this section must be followed during malfunctions.

(c) (1) *Standards for open surface hard chromium electroplating tanks.* During tank operation, each owner or operator of an existing, new, or reconstructed affected source shall control chromium emissions discharged to the atmosphere from that affected source by:

(ii) Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.03 mg/dscm (1.3 x 10-5 gr/dscf) if the open surface hard chromium electroplating tank is an existing affected source and is located at a small, hard chromium electroplating facility;

(f) *Operation and maintenance practices.* All owners or operators subject to the standards in paragraphs (c) and (d) of this section are subject to these operation and maintenance practices.

(1) (i) At all times, including periods of startup, shutdown, and malfunction, owners or operators shall operate and maintain any affected source, including associated air pollution control devices and monitoring equipment, in a manner consistent with good air pollution control practices, consistent with the operation and maintenance plan required by paragraph (f)(3) of this section.

(ii) Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the operation and maintenance plan required by paragraph (f)(3) of this section.

(iii) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

(2) (i) Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results; review of the operation and maintenance plan, procedures, and records; and inspection of the source.

(ii) Based on the results of a determination made under paragraph (f)(2)(i) of this section, the Administrator may require that an owner or operator of an affected source make changes to the operation and maintenance plan required by paragraph (f)(3) of this section for that source. Revisions may be required if the Administrator finds that the plan:

(A) Does not address a malfunction that has occurred;

(B) Fails to provide for the proper operation of the affected source, the air pollution control techniques, or the control system and process monitoring equipment during a malfunction in a manner consistent with good air pollution control practices; or

(C) Does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques, or monitoring equipment as quickly as practicable.

(3) *Operation and maintenance plan.*
(i) The owner or operator of an affected source subject to paragraph (f) of this section shall prepare an operation and maintenance plan to be implemented no later than the compliance date, except for hard chromium electroplaters and the chromium anodizing operations in California which have until January 25, 1998. The plan shall be incorporated by reference into the source's title V permit, if and when a title V permit is required. The plan shall include the following elements:

(A) The plan shall specify the operation and maintenance criteria for the affected source, the add-on air pollution control device (if such a device is used to comply with the emission limits), and the process and control system monitoring equipment, and shall include a standardized checklist to document the operation and maintenance of this equipment;

(B) For sources using an add-on control device or monitoring equipment to comply with this subpart, the plan shall incorporate the operation and maintenance practices for that device or monitoring equipment, as identified in Table 1 of this section, if the specific equipment used is identified in Table 1 of this section;

(C) If the specific equipment used is not identified in Table 1 of this section, the plan shall incorporate proposed operation and maintenance practices. These proposed operation and maintenance practices shall be submitted for approval as part of the submittal required under Sec. 63.343(d);

(D) The plan shall specify procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur; and

(E) The plan shall include a systematic procedure for identifying malfunctions of process equipment, add-on air pollution control devices, and process and control system monitoring equipment and for implementing corrective actions to address such malfunctions.

(ii) If the operation and maintenance plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the operation and maintenance plan within 45 days after such an event occurs. The revised plan shall include procedures for operating and maintaining the process equipment, add-on air pollution control device, or monitoring equipment during similar malfunction events, and a program for corrective action for such events.

(iii) Recordkeeping associated with the operation and maintenance plan is identified in § 63.346(b). Reporting associated with the operation and maintenance plan is identified in § 63.347 (g) and (h) and paragraph (f)(3)(iv) of this section.

(iv) If actions taken by the owner or operator during periods of malfunction are inconsistent with the procedures specified in the operation and maintenance plan required by paragraph (f)(3)(i) of this section, the owner or operator shall record the actions taken for that event and shall report by phone such actions within 2 working days after commencing actions inconsistent with the plan. This report shall be followed by a letter within 7 working days after the end of the event, unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator.

(v) The owner or operator shall keep the written operation and maintenance plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the source is no longer subject to the provisions of this subpart. In addition, if the operation and maintenance plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the operation and maintenance plan on record to be made available for inspection, upon request, by the Administrator for a period of 5 years after each revision to the plan.

(vi) To satisfy the requirements of paragraph (f)(3) of this section, the owner or operator may use applicable standard operating procedure (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans, provided the alternative plans meet the requirements of this section.

Table 1 to § 63.342_Summary of Operation and Maintenance Practices

| Control technique | Operation and maintenance practices | Frequency |
|---|---|---|
| Composite mesh-pad (CMP) system. | 1. Visually inspect device to ensure there is proper drainage, no chronic acid buildup on the pads, and no evidence of chemical attack on the structural integrity of the device. | 1. 1/quarter. |
| | 2. Visually inspect back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist. | 2. 1/quarter. |
| | 3. Visually inspect ductwork from tank to the control device to ensure there are no leaks. | 3. 1/quarter. |
| | 4. Perform washdown of the composite mesh-pads in accordance with manufacturers recommendations. | 4. Per manufacturer. |
| Monitoring Equipment | | |
| Pitot tube..... | Backflush with water, or remove from the duct and rinse with fresh water. Replace in the duct and rotate 180 degrees to ensure that the same zero reading is obtained. Check pitot tube ends for damage. Replace | 1/quarter. |

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                                pitot tube if cracked
                                or fatigued.
Stalagmometer.............  Follow manufacturers
                                recommendations.
-------------------------------------------------------------------------
a If greater than 50 percent of the scrubber water is drained (e.g., for
  maintenance purposes), makeup water may be added to the scrubber
  basin.
b For horizontal-flow scrubbers, top is defined as the section of the
  unit directly above the packing media such that the makeup water would
  flow perpendicular to the air flow through the packing. For vertical-
  flow units, the top is defined as the area downstream of the packing
  material such that the makeup water would flow countercurrent to the
  air flow through the unit.
c Work practice standards for the control device installed upstream of
  the fiber-bed mist eliminator to prevent plugging do not apply as long
  as the work practice standards for the fiber-bed unit are followed.
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**§ 63.343 Compliance provisions.**

(a) *Compliance dates.*

(1) The owner or operator of an existing affected source shall comply with the emission limitation in § 63.342 as follows:

(ii) No later than 2 years after January 25, 1995, if the affected source is a hard chromium electroplating tank or a chromium anodizing tank.

(3) The owner or operator of an existing area source that increases actual or potential emissions of hazardous air pollutants such that the area source becomes a major source must comply with the provisions for existing major sources, including the reporting provisions of §63.347(g), immediately upon becoming a major source.

(5) An owner or operator of an existing hard chromium electroplating tank or tanks located at a small, hard chromium electroplating facility that increases its maximum cumulative potential rectifier capacity, or its actual cumulative rectifier capacity, such that the facility becomes a large, hard chromium electroplating facility must comply with the requirements of § 63.342(c)(1)(i) for all hard chromium electroplating tanks at the facility no later than 1 year after the month in which monthly records required by §§ 63.342(c)(2) and 63.346(b)(12) show that the large designation is met, or by the compliance date specified in paragraph (a)(1)(ii) of this section, whichever is later.

(b) *Methods to demonstrate initial compliance.*

(1) Except as provided in paragraphs (b)(2) and (b)(3) of this section, an owner or operator of an affected source subject to the requirements of this subpart is required to conduct an initial performance test as required under § 63.7, except for hard chromium electroplaters and chromium anodizing operations in California which have until January 25, 1998, using the procedures and test methods listed in §§ 63.7 and 63.344.

(2) If the owner or operator of an affected source meets all of the following criteria, an initial performance test is not required to be conducted under this subpart:

(i) The affected source is a hard chromium electroplating tank, a decorative chromium electroplating tank or a chromium anodizing tank; and

(ii) A wetting agent is used in the plating or anodizing bath to inhibit chromium emissions from the affected source; and

(iii) The owner or operator complies with the applicable surface tension limit of Sec. 63.342(c)(1)(iii), (c)(2)(iii), or (d)(2) as demonstrated through the continuous compliance monitoring required by paragraph (c)(5)(ii) of this section.

(c) *Monitoring to demonstrate continuous compliance.* The owner or operator of an affected source subject to the emission limitations of this subpart shall conduct monitoring according to the type of air pollution control technique that is used to comply with the emission limitation. The monitoring required to demonstrate continuous compliance with the emission limitations is identified in this section for the air pollution control techniques expected to be used by the owners or operators of affected sources.

(1) Composite mesh-pad systems.

(i) During the initial performance test, the owner or operator of an affected source, or a group of affected sources under common control, complying with the emission limitations in Sec. 63.342 through the use of a composite mesh-pad system shall determine the outlet chromium concentration using the test methods and procedures in Sec. 63.344(c), and shall establish as a site-specific operating parameter the pressure drop across the system, setting the value that corresponds to compliance with the applicable emission limitation, using the procedures in Sec. 63.344(d)(5). An owner or operator may conduct multiple performance tests to establish a range of compliant pressure drop values, or may set as the compliant value the average pressure drop measured over the three test runs of one performance test and accept 2 inches of water column from this value as the compliant range.

(ii) On and after the date on which the initial performance test is required to be completed under Sec. 63.7, except for hard chromium electroplaters and chromium anodizing operations in California, which have until January 25, 1998, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the composite mesh-pad system once each day that any affected source is operating. To be in compliance with the standards, the composite mesh-pad system shall be operated within 2 inches of water column of the pressure drop value established during the initial performance test, or shall be operated within the range of compliant values for pressure drop established during multiple performance tests.

(iii) The owner or operator of an affected source complying with the emission limitations in Sec. 63.343 through the use of a composite mesh-pad system may repeat the performance test and establish as a new site-specific operating parameter the pressure drop across the composite mesh-pad system according to the requirements in paragraphs (c)(1)(i) or (ii) of this section. To establish a new site-specific operating parameter for pressure drop, the owner or operator shall satisfy the requirements specified in paragraphs (c)(1)(iii)(A) through (D) of this section.

(A) Determine the outlet chromium concentration using the test methods and procedures in Sec. 63.344(c);

(B) Establish the site-specific operating parameter value using the procedures Sec. 63.344(d)(5);

(C) Satisfy the recordkeeping requirements in Sec. 63.346(b)(6) through (8); and

(D) Satisfy the reporting requirements in Sec. 63.347(d) and (f).

(iv) The requirement to operate a composite mesh-pad system within the range of pressure drop values established under paragraphs (c)(1)(i) through (iii) of this section does not apply during automatic washdown cycles of the composite mesh-pad system.

**§ 63.346 Recordkeeping requirements.**

(a) The owner or operator of each affected source subject to these standards shall fulfill all recordkeeping requirements outlined in this section and in the General Provisions to 40 CFR part 63, according to the applicability of subpart A of this part as identified in Table 1 of this subpart.

(b) The owner or operator of an affected source subject to the provisions of this subpart shall maintain the following records for such source:

(1) Inspection records for the add-on air pollution control device, if such a device is used, and monitoring equipment, to document that the inspection and maintenance required by the work practice standards of § 63.342(f) and Table 1 of § 63.342 have taken place. The record can take the form of a checklist and should identify the device inspected, the date of inspection, a brief description of the working condition of the device during the inspection, and any actions taken to correct deficiencies found during the inspection.

(2) Records of all maintenance performed on the affected source, the add-on air pollution control device, and monitoring equipment;

(3) Records of the occurrence, duration, and cause (if known) of each malfunction of process, add-on air pollution control, and monitoring equipment;

(4) Records of actions taken during periods of malfunction when such actions are inconsistent with the operation and maintenance plan;

(5) Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the operation and maintenance plan required by § 63.342(f)(3);

(6) Test reports documenting results of all performance tests;

(7) All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance with the special compliance procedures of § 63.344(e);

(8) Records of monitoring data required by § 63.343(c) that are used to demonstrate compliance with the standard including the date and time the data are collected;

(9) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data, that occurs during malfunction of the process, add-on air pollution control, or monitoring equipment;

(10) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, as indicated by monitoring data, that occurs during periods other than malfunction of the process, add-on air pollution control, or monitoring equipment;

(11) The total process operating time of the affected source during the reporting period;

(12) Records of the actual cumulative rectifier capacity of hard chromium electroplating tanks at a facility expended during each month of the reporting period, and the total capacity expended to date for a reporting period, if the owner or operator is using the actual cumulative rectifier capacity to determine facility size in accordance with § 63.342(c)(2);

(13) For sources using fume suppressants to comply with the standards, records of the date and time that fume suppressants are added to the electroplating or anodizing bath;

(14) For sources complying with § 63.342(e), records of the bath components purchased, with the wetting agent clearly identified as a bath constituent contained in one of the components;

(15) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements, if the source has been granted a waiver under § 63.10(f); and

(16) All documentation supporting the notifications and reports required by § 63.9, § 63.10, and § 63.347.

(c) All records shall be maintained for a period of 5 years in accordance with § 63.10(b)(1).

**§ 63.347 Reporting requirements.**

(a) The owner or operator of each affected source subject to these standards shall fulfill all reporting requirements outlined in this section and in the General Provisions to 40 CFR part 63, according to the applicability of subpart A as identified in Table 1 of this subpart. These reports shall be made to the Administrator at the appropriate address as identified in § 63.13 or to the delegated State authority.

(1) Reports required by subpart A of this part and this section may be sent by U.S. mail, fax, or by another courier.

(i) Submittals sent by U.S. mail shall be postmarked on or before the specified date.

(ii) Submittals sent by other methods shall be received by the Administrator on or before the specified date.

(2) If acceptable to both the Administrator and the owner or operator of an affected source, reports may be submitted on electronic media.

(b) The reporting requirements of this section apply to the owner or operator of an affected source when such source becomes subject to the provisions of this subpart.

(c) *Initial notifications.*

(1) The owner or operator of an affected source that has an initial startup before January 25, 1995, shall notify the Administrator in writing that the source is subject to this subpart. The notification shall be submitted no later than 180 calendar days after January 25, 1995, and shall contain the following information:

(i) The name, title, and address of the owner or operator;

(ii) The address (i.e., physical location) of each affected source;

(iii) A statement that subpart N of this part is the basis for this notification;

(iv) Identification of the applicable emission limitation and compliance date for each affected source;

(v) A brief description of each affected source, including the type of process operation performed;

(vi) For sources performing hard chromium electroplating, the maximum potential cumulative potential rectifier capacity;

(vii) For sources performing hard chromium electroplating, a statement of whether the affected source(s) is located at a small or a large, hard chromium electroplating facility and whether this will be demonstrated through actual or maximum potential cumulative rectifier capacity;

(viii) For sources performing hard chromium electroplating, a statement of whether the owner or operator of an affected source(s) will limit the maximum potential cumulative rectifier capacity in accordance with Sec. 63.342(c)(2) such that the hard chromium electroplating facility is considered small; and

(ix) A statement of whether the affected source is located at a major source or an area source as defined in § 63.2.

(2) The owner or operator of a new or reconstructed affected source that has an initial startup after January 25, 1995 shall submit an initial notification (in addition to the notification of construction or reconstruction required by § 63.345(b) as follows:

(i) A notification of the date when construction or reconstruction was commenced, shall be submitted simultaneously with the notification of construction or reconstruction, if construction or reconstruction was commenced before January 25, 1995;

(ii) A notification of the date when construction or reconstruction was commenced, shall be submitted no later than 30 calendar days after such date, if construction or reconstruction was commenced after January 25, 1995; and

(iii) A notification of the actual date of startup of the source shall be submitted within 30 calendar days after such date.

(d) *Notification of performance test.*

(1) The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the test is scheduled to begin to allow the Administrator to have an observer present during the test. Observation of the performance test by the Administrator is optional.

(2) In the event the owner or operator is unable to conduct the performance test as scheduled, the provisions of § 63.7(b)(2) apply.

(e) *Notification of compliance status.*

(1) A notification of compliance status is required each time that an affected source becomes subject to the requirements of this subpart.

(2) If the State in which the source is located has not been delegated the authority to implement the rule, each time a notification of compliance status is required under this part, the owner or operator of an affected source shall submit to the Administrator a notification of compliance status, signed by the responsible official (as defined in § 63.2) who shall certify its accuracy, attesting to whether the affected source has complied with this subpart. If the State has been delegated the authority, the notification of compliance status shall be submitted to the appropriate authority. The notification shall list for each affected source:

(i) The applicable emission limitation and the methods that were used to determine compliance with this limitation;

(ii) If a performance test is required by this subpart, the test report documenting the results of the performance test, which contains the elements required by § 63.344(a), including measurements and calculations to support the special compliance provisions of § 63.344(e) if these are being followed;

(iii) The type and quantity of hazardous air pollutants emitted by the source reported in mg/dscm or mg/hr if the source is using the special provisions of § 63.344(e) to comply with the standards. (If the owner or operator is subject to the construction and reconstruction provisions of § 63.345 and had previously submitted emission estimates, the owner or operator shall state that this report corrects or verifies the previous estimate.) For sources not required to conduct a performance test in accordance with § 63.343(b), the surface tension measurement may fulfill this requirement;

(iv) For each monitored parameter for which a compliant value is to be established under § 63.343(c), the specific operating parameter value, or range of values, that corresponds to compliance with the applicable emission limit;

(v) The methods that will be used to determine continuous compliance, including a description of monitoring and reporting requirements, if methods differ from those identified in this subpart;

(vi) A description of the air pollution control technique for each emission point;

(vii) A statement that the owner or operator has completed and has on file the operation and maintenance plan as required by the work practice standards in § 63.342(f);

(viii) If the owner or operator is determining facility size based on actual cumulative rectifier capacity in accordance with § 63.342(c)(2), records to support that the facility is small. For existing sources, records from any 12-month period preceding the compliance date shall be used or a description of how operations will change to meet a small designation shall be provided. For new sources, records of projected rectifier capacity for the first 12-month period of tank operation shall be used;

(ix) A statement by the owner or operator of the affected source as to whether the source has complied with the provisions of this subpart.

(3) For sources required to conduct a performance test by § 63.343(b), the notification of compliance status shall be submitted to the Administrator no later than 90 calendar days following completion of the compliance demonstration required by § 63.7 and § 63.343(b).

(4) For sources that are not required to complete a performance test in accordance with § 63.343(b), the notification of compliance status shall be submitted to the Administrator no later than 30 days after the compliance date specified in § 63.343(a), except the date on which sources in California shall monitor the surface tension of the anodizing bath is extended to January 25, 1998.

(f) *Reports of performance test results.*

(1) If the State in which the source is located has not been delegated the authority to implement the rule, the owner or operator of an affected source shall report to the Administrator the results of any performance test conducted as required by § 63.7 or § 63.343(b). If the State has been delegated the authority, the owner or operator of an affected source should report performance test results to the appropriate authority.

(2) Reports of performance test results shall be submitted no later than 90 days following the completion of the performance test, and shall be submitted as part of the notification of compliance status required by paragraph (e) of this section.

(h) Ongoing compliance status reports for area sources. The requirements of this paragraph do not alleviate affected area sources from complying with the requirements of State or Federal operating permit programs under 40 CFR part 71.

(1) The owner or operator of an affected source that is located at an area source site shall prepare a summary report to document the ongoing compliance status of the affected source. The report shall contain the information identified in paragraph (g)(3) of this section, shall be completed annually and retained on site, and made available to the Administrator upon request. The report shall be completed annually except as provided in paragraph (h)(2) of this section.

(2) Reports of exceedances.

(i) If both of the following conditions are met, semiannual reports shall be prepared and submitted to the Administrator:

(A) The total duration of excess emissions (as indicated by the monitoring data collected by the owner or operator of the affected source in accordance with § 63.343(c)) is 1 percent or greater of the total operating time for the reporting period; and

(B) The total duration of malfunctions of the add-on air pollution control device and monitoring equipment is 5 percent or greater of the total operating time.

(ii) Once an owner or operator of an affected source reports an exceedance as defined in paragraph (h)(2)(i) of this section, ongoing compliance status reports shall be submitted semiannually until a request to reduce reporting frequency under paragraph (h)(3) of this section is approved.

(iii) The Administrator may determine on a case-by-case basis that the summary report shall be completed more frequently and submitted, or that the annual report shall be submitted instead of being retained on site, if these measures are necessary to accurately assess the compliance status of the source.

(3) Request to reduce frequency of ongoing compliance status reports.

(i) An owner or operator who is required to submit ongoing compliance status reports on a semiannual (or more frequent) basis, or is required to submit its annual report instead of retaining it on site, may reduce the frequency of reporting to annual and/or be allowed to maintain the annual report onsite if all of the following conditions are met:

(A) For 1 full year (e.g., 2 semiannual or 4 quarterly reporting periods), the ongoing compliance status reports demonstrate that the affected source is in compliance with the relevant emission limit;

(B) The owner or operator continues to comply with all applicable recordkeeping and monitoring requirements of subpart A of this part and this subpart; and

(C) The Administrator does not object to a reduced reporting frequency for the affected source, as provided in paragraphs (h)(3) (ii) and (iii) of this section.

(ii) The frequency of submitting ongoing compliance status reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change, and the Administrator does not object to the intended change. In deciding whether to approve a reduced reporting frequency, the Administrator may review information concerning the source's previous performance history during the 5-year recordkeeping period prior to the intended change, or the recordkeeping period since the source's compliance date, whichever is shorter. Records subject to review may include performance test results, monitoring data, and evaluations of an owner or operator's conformance with emission limitations and work practice standards. Such information may be used by the Administrator to make a judgement about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce reporting frequency, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(iii) As soon as the monitoring data required by § 63.343(c) show that the source is not in compliance with the relevant emission limit, the frequency of reporting shall revert to semiannual, and the owner shall state this exceedance in the ongoing compliance status report for the next reporting period. After demonstrating ongoing compliance with the relevant emission limit for another full year, the owner or operator may again request approval from the Administrator to reduce the reporting frequency as allowed by paragraph (h)(3) of this section.

***§ 63.348 Implementation and enforcement.***

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.340, 63.342(a) through (e) and (g), and 63.343(a).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37347, June 23, 2003]

D.1.3 State Only National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks Requirements [326 IAC 20-8]

Pursuant to 326 IAC 20-8, the Permittee shall comply with the provisions of the July 1, 2002 version of 40 CFR Part 63, Subpart N, which are incorporated by reference as 326 IAC 20-8, for the decorative chromium electroplating tank, identified as T3. The Permittee shall comply with the provisions of 40 CFR Part 63, Subpart N, as listed in Condition D.1.2, except the Permittee shall also follow the requirements of the July 1, 2002 version, as incorporated into 326 IAC 20-8, as follows.

**§ 63.342 Standards.**

* * * * *

(f) * * *

(2) * * *

(ii) * * *

(B) Fails to provide for the operation of the affected source, the air pollution control techniques, or the control system and process monitoring equipment during a malfunction in a manner consistent with good air pollution control practices; or

**§ 63.343 Compliance provisions.**

* * * * *

(c) * * *

* * * * *

(1) Composite mesh-pad systems.

(i) During the initial performance test, the owner or operator of an affected source, or a group of affected sources under common control, complying with the emission limitations in Sec. 63.342 through the use of a composite mesh-pad system shall determine the outlet chromium concentration using the test methods and procedures in Sec. 63.344(c), and shall establish as a site-specific operating parameter the pressure drop across the system, setting the value that corresponds to compliance with the applicable emission limitation, using the procedures in Sec. 63.344(d)(5). An owner or operator may conduct multiple performance tests to establish a range of compliant pressure drop values, or may set as the compliant value the average pressure drop measured over the three test runs of one performance test and accept 1 inch of water column from this value as the compliant range.

(ii) On and after the date on which the initial performance test is required to be completed under Sec. 63.7, except for hard chromium electroplaters and chromium anodizing operations in California, which have until January 25, 1998, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the composite mesh-pad system once each day that any affected source is operating. To be in compliance with the standards, the composite mesh-pad system shall be operated within 1 inch of water column of the pressure drop value established during the initial performance test, or shall be operated within the range of compliant values for pressure drop established during multiple performance tests.

**SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

(a) welding operation; one (1) metal inert gas (MIG) station, with a maximum wire consumption rate of 0.0023 pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of 0.0023 lb wire/hr, and one (1) stick welding station, with a maximum wire consumption rate of 0.0057 lb wire/hr;

(b) three (3) pneumatic blasters, identified as 23A, 23B and 23C using a baghouse as control, and exhausting inside the building;

(c) various machining equipment including:

(1) surface grinding;

(2) pedestal grinding; and

(3) fiberboard cutting.

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

**Emission Limitations and Standards**

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

(a) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from the welding operation not already regulated by 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.

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the two (2) pneumatic blasters, identified as 23A and 23B shall each not exceed 0.45 pounds per hour when operating at a process weight rate of 75 pounds per hour, each.

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

Interpolation 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

(c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) pneumatic blaster, identified as 23C shall not exceed 0.62 pounds per hour when operating at a process weight rate of 120 pounds per hour.

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

Interpolation 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

(d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the grinding and cutting operations shall not exceed the pounds per hour limitation calculated with the following equation:

Interpolation 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

**Compliance Determination Requirements**

D.2.2 Particulate Control

In order to comply with condition D.2.1, the baghouse for particulate control shall be in operation and control emissions from the pneumatic blasting operation at all times that the facility is in operation.

**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:** | **Technical Tool & Design, LLC** |
| **Address:** | **1004 W. Washington St., Shelbyville, IN 46176** |
| **City:** | **Shelbyville** |
| **Phone #:** | **317-392-0847** |
| **MSOP #:** | **145-21676-00029** |

I hereby certify that **Technical Tool & Design** is ☐ still in operation.
☐ no longer in operation.

I hereby certify that **Technical Tool & Design** is ☐ in compliance with the requirements of MSOP **145-21676-00029**.
☐ not in compliance with the requirements of MSOP **145-21676-00029**.

| |
|---|
| **Authorized Individual (typed):** |
| **Title:** |
| **Signature:** |
| **Date:** |

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

| |
|---|
| **Noncompliance:** |
| |
| |
| |
| |
| |

# MALFUNCTION REPORT

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
## OFFICE OF AIR QUALITY
**FAX NUMBER - 317 233-5967**

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

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

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

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

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

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

DATE/TIME MALFUNCTION STARTED: _____/_____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM/PM

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____

_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

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

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

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

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

**326 IAC 1-6-1 Applicability of rule**

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

**326 IAC 1-2-39 "Malfunction" definition**

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

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

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

_____
_____

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE DATA SECTION

## MINOR SOURCE OPERATING PERMIT
## CHROMIUM ELECTROPLATING AND ANODIZING NESHAP
## ONGOING COMPLIANCE STATUS REPORT

Source Name: Technical Tool & Design, LLC.
Source Address: 1004 W. Washington St., Shelbyville, IN 46176
Mailing Address: 1004 W. Washington St., Shelbyville, IN 46176
MSOP Permit No.: 145-21676-00029
Tank ID #: T3
Type of process: Hard
Monitoring Parameter: Pressure drop across the composite mesh pad system
Parameter Value:
Limits: Total chromium concentration may not exceed 0.03 mg/dscm

This form is to be used to report compliance for the Chromium Electroplating and Anodizing NESHAP only.
The frequency for completing this report may be altered by IDEM, OAQ, Compliance Branch.

***Companies classified as a major source:*** ***Submit this report no later than 30 days after the end of the reporting period.***
***Companies classified as an area source:*** ***Complete this report no later than 30 days after the end of the reporting period, and retain on site unless otherwise notified.***

**This form consists of 2 pages** **Page 1 of 2**

| |
|---|
| BEGINNING AND ENDING DATES OF THE REPORTING PERIOD: |
| TOTAL OPERATING TIME OF THE TANK DURING THE REPORTING PERIOD: |

| **MAJOR AND AREA SOURCES: CHECK ONE** |
|---|
| NO DEVIATIONS OF THE MONITORING PARAMETER ASSOCIATED WITH THIS TANK FROM THE COMPLIANT VALUE OR RANGE OF VALUES OCCURRED DURING THIS REPORTING PERIOD. |
| THE MONITORING PARAMETER DEVIATED FROM THE COMPLIANT VALUE OR RANGE OF VALUES DURING THIS REPORTING PERIOD (THUS INDICATING THE EMISSION LIMITATION MAY HAVE BEEN EXCEEDED, WHICH COULD RESULT IN MORE FREQUENT REPORTING). |

| **AREA (I.E., NON-MAJOR) SOURCES OF HAP ONLY**: IF DEVIATIONS OCCURRED, LIST THE AMOUNT OF TANK OPERATING TIME EACH MONTH THAT MONITORING RECORDS SHOW THE MONITORING PARAMETER DEVIATED FROM THE COMPLIANT VALUE OR RANGE OF VALUES. | | | |
|---|---|---|---|
| JAN | APR | JUL | OCT |
| FEB | MAY | AUG | NOV |
| MAR | JUN | SEP | DEC |

| **HARD CHROME TANKS / MAXIMUM RECTIFIER CAPACITY LIMITED IN ACCORDANCE WITH 40 CFR 63.342(c)(2) ONLY:** LIST THE ACTUAL AMPERE-HOURS CONSUMED (BASED ON AN AMP-HR METER) BY THE INDIVIDUAL TANK. | | | |
|---|---|---|---|
| JAN | APR | JUL | OCT |
| FEB | MAY | AUG | NOV |
| MAR | JUN | SEP | DEC |

# CHROMIUM ELECTROPLATING AND ANODIZING NESHAP ONGOING COMPLIANCE STATUS REPORT

ATTACH A SEPARATE PAGE IF NEEDED **Page 2 of 2**

| IF THE OPERATION AND MAINTENANCE PLAN REQUIRED BY 40 CFR 63.342 (f)(3) WAS NOT FOLLOWED, PROVIDE AN EXPLANATION OF THE REASONS FOR NOT FOLLOWING THE PLAN AND DESCRIBE THE ACTIONS TAKEN FOR THAT EVENT: |
|---|
| DESCRIBE ANY CHANGES IN TANKS, RECTIFIERS, CONTROL DEVICES, MONITORING, ETC. SINCE THE LAST STATUS REPORT: |
| ADDITIONAL COMMENTS: |

| **ALL SOURCES: CHECK ONE** |
|---|
| I CERTIFY THAT THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE; AND, THAT THE INFORMATION CONTAINED IN THIS REPORT IS ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE. |
| THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE NOT FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE, AS EXPLAINED ABOVE AND/OR ON ATTACHED. |

Submitted by:

Title/Position:

Signature:

Date:

Phone: _____

Attach a signed certification to complete this report.

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

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

**Source Background and Description**

| | |
|---|---|
| **Source Name:** | Technical Tool & Design, LLC |
| **Source Location:** | 1004 W. Washington St., Shelbyville, IN 46176 |
| **County:** | Shelby |
| **SIC Code:** | 3471 |
| **Operation Permit No.:** | MSOP145-21676-00029 |
| **Permit Reviewer:** | Alic Bent/EVP |

On February 17, 2006, the Office of Air Quality (OAQ) had a notice published in the Shelbyville News in Shelbyville, Indiana, stating that Technical Tool & Design, LLC had applied for a Minor Source Operating Permit Renewal for the operation of a Hard Chromium Electroplating manufacturing facility. The notice also stated that OAQ proposed to issue a Minor Source Operating Permit Renewal for this operation and provided information on how the public could review the proposed Minor Source Operating Permit Renewal 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 Minor Source Operating Permit Renewal should be issued as proposed.

Upon further review, the OAQ has decided to make the following change to the Minor Source Operating Permit Renewal. Bolded language has been added and the language with a line through it has been deleted.

1. The cover page of the permit has been revised to add the word 'RENEWAL' to the permit title and to change the signature delegation.

# MINOR SOURCE OPERATING PERMIT RENEWAL OFFICE OF AIR QUALITY

## Technical Tool & Design, LLC
## 1004 W. Washington St.
## Shelbyville, Indiana 46176

(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 145-21676-00029 | |
|---|---|
| Issued by:<br>~~Paul Dubenetzky~~<br>~~Assistant Commissioner~~<br>**Nisha Sizemore, Chief**<br>**Permits Branch**<br>Office of Air Quality | Issuance Date:<br><br>Expiration Date: |

2. The descriptive information in Sections A.2(a) and D.1(a) of the permit have been revised to add the rule applicability determination for the hard chromium electroplating tank.

   (a) one (1) Hard Chromium Electroplating Operation with a maximum cumulative potential rectifier capacity of 11,760,000 Ampere-hours (A-hr) per year consisting of:

      (1) one (1) hard chromium electroplating tank, identified as T3, equipped with a composite mesh-pad system for control, exhausting to one (1) stack, identified as S1;

   **Under NESHAP, Subpart N, the hard chromium electroplating tank, identified as T3 is considered an existing affected facility because the construction of the source commenced prior to December 16, 1993 and the source is not reconstructed.**

3. IDEM has decided to include the following updates to address and clarify the permit term and the term of the conditions. This includes the addition of the condition: Term of Conditions [326 IAC 2-1.1-9.5] and changes to the following condition: Permit Term.

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

**(a)** This permit**, M145-21676-00029,** is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions**, modifications, or amendments** of this permit do not affect the expiration date **of this permit**.

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

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

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

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

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

4. B.7 Annual Notification (now re-numbered B.8) was revised to reflect the requirements of 326 IAC 2-6.1-5(a)(5).

B.~~7~~**8** Annual Notification [326 IAC 2-6.1-5(a)(5)]

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

~~(b) 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)~~**(b)** 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
Indianapolis, IN 46204-2251

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

5. IDEM has decided to remove (d) concerning nonroad engines from B.9 Permit Revision (now re-numbered B.13). 40 CFR 89, Appendix A specifically indicates that states are not precluded from regulating the use and operation of nonroad engines, such as regulations on hours of usage, daily mass emission limits, or sulfur limits on fuel; nor are permits regulating such operations precluded, once the engine is no longer new.

B.~~9~~**13** Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

~~(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.~~

6. IDEM has decided to include the following updates to further address and clarify the permit term and the term of the conditions. This includes the addition of the following conditions: B.10 Prior Permits Superseded, B.11 Termination of Right to Operate, and B.12 Permit Renewal.

**B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

**(a) All terms and conditions of permits established prior to M145-21676-00029 and issued pursuant to permitting programs approved into the state implementation plan have been either:**

**(1) incorporated as originally stated,**

**(2) revised, or**

**(3) deleted.**

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

**B.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]**

**The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least ninety (90) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.**

**B.12 Permit Renewal [326 IAC 2-6.1-7]**

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

**Request for renewal shall be submitted to:**

**Indiana Department of Environmental Management**
**Permits Branch, Office of Air Quality**
**100 North Senate Avenue**
**Indianapolis, Indiana 46204-2251**

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

**(1) Submitted at least ninety (90) days prior to the date of the expiration of this permit; and**

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

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

7. IDEM, OAQ has clarified the Condition B.11 (Transfer of Ownership or Operational Control) (now re-numbered B.15) as follows:

B.~~11~~**15** Transfer of Ownership or Operation**al Control** [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.~~

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

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

**Indiana Department of Environmental Management**
**Permits Branch, Office of Air Quality**
**100 North Senate Avenue**
**Indianapolis, Indiana 46204-2251**

**The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).**

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

8. The permit title on the chromium electroplating and anodizing NESHAP ongoing compliance status report form has been corrected to read 'MINOR SOURCE OPERATING PERMIT'

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
## OFFICE OF AIR QUALITY
## COMPLIANCE DATA SECTION

## ~~PART 70~~ MINOR SOURCE OPERATING PERMIT
## CHROMIUM ELECTROPLATING AND ANODIZING NESHAP
## ONGOING COMPLIANCE STATUS REPORT

# 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:** | **Technical Tool & Design, LLC** |
| **Source Location:** | **1004 W. Washington St., Shelbyville, IN 46176** |
| **County:** | **Shelby** |
| **SIC Code:** | **3471** |
| **Operation Permit No.:** | **145-12108-00029** |
| **Operation Permit Issuance Date:** | **November 17, 2000** |
| **Permit Renewal No.:** | **145-21676-00029** |
| **Permit Reviewer:** | **Alic Bent/EVP** |

The Office of Air Quality (OAQ) has reviewed an application from Technical Tool & Design, LLC relating to the operation of a Hard Chromium Electroplating manufacturing facility.

### Permitted Emission Units and Pollution Control Equipment

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

(a) one (1) Hard Chromium Electroplating Operation with a maximum cumulative potential rectifier capacity of 11,760,000 Ampere-hours (A-hr) per year consisting of:

(1) one (1) hard chromium electroplating tank, identified as T3, equipped with a composite mesh-pad system for control, exhausting to one (1) stack, identified as S1;

(b) welding operation; one (1) metal inert gas (MIG) station, with a maximum wire consumption rate of 0.0023 pounds of wire per hour (lb wire/hr), one (1) tungsten inert gas (TIG) station, with a maximum wire consumption rate of 0.0023 lb wire/hr, and one (1) stick welding station, with a maximum wire consumption rate of 0.0057 lb wire/hr;

(c) three (3) pneumatic blasters, identified as 23A, 23B and 23C, with maximum capacities of 75, 75, and 120 pounds per hour, respectively, using a baghouse as control, and exhausting inside the building;

(d) one (1) alkaline stripping tank, identified as T2, exhausting to the single mesh pad mist eliminator;

(e) one (1) alkaline rinse tank, identified as T1, exhausting inside the building;

(f) three (3) chrome rinse tanks, identified as T4, exhausting inside the building;

(g) various machining equipment including:

(1) surface grinding;

(2) pedestal grinding; and

(3) fiberboard cutting.

(h) Five (5) Okuma lathe for metal finishing, identified as Lathe Nos. 28, 29, 45, 50, 62 and 65, using liquid coolant;

(i) Three (3) mills for metal finishing, identified as Mill Nos. 29, 59 and 60 using liquid coolant;

(j) one (1) coolant recycling unit;

(k) natural gas-fired heating units with a total capacity less than 10 MMBtu/hr; and

(l) one (1) parts washer.

**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) Minor Source Operating Permit No.: 145-12108-00029, issued on November 17, 2000;

(b) First Significant Permit Revision No.: 145-16682-00029, issued on March 17, 2003;

(c) First Notice-Only Change No.: 145-19037-00029, issued on May 28, 2004; and

(d) Second Notice-Only Change No.: 145-19694-00029, issued on July 27, 2004.

All conditions from previous approvals were incorporated into this permit.

**Enforcement Issue**

There are no enforcement actions pending.

**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 August 16, 2005.

**Emission Calculations**

See Appendix A: pages 1 through 10 of this document for detailed emission calculations.

**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, inclulding 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 | 9.33 |
| PM-10 | 9.34 |
| $SO_2$ | 0.00 |
| VOC | 0.48 |
| CO | 0.25 |
| $NO_x$ | 0.30 |

| HAPs | Potential to Emit (tons/yr) |
|---|---|
| Specify the HAP | |
| Chromium Compounds | Less than 10 |
| Manganese Compounds | Less than 10 |
| Total | Less than 25 |

(a) The potential to emit of all criteria/regulated pollutants is 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) The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not a major source of HAPs as defined in 326 IAC 2-7-1(22).

(c) Although this existing source is subject to 326 IAC 20-8, it is not subject to 326 IAC 2-5.5-1(b)(2) (Registration) because the source consist of a hard chromium electroplating tank instead of decorative chromium electroplating tanks that use a trivalent chromium process. Therefore, the source is subject to the provisions of 326 IAC 2-6.1-3(a).

(d) 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 Shelby County.

| Pollutant | Status |
|---|---|
| PM-10 | Attainment |
| PM-2.5 | Attainment |
| $SO_2$ | Attainment |
| $NO_2$ | Attainment |
| 1-hour Ozone | Attainment |
| 8-hour Ozone | Basic Nonattainment |
| 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 and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Shelby County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Shelby County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability for the source section.

(c) Shelby 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.

**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 | 68.56 |
| PM-10 | 68.56 |
| $SO_2$ | 0.00 |
| VOC | 0.00 |
| CO | 0.00 |
| $NO_x$ | 0.00 |
| Single HAP | Less than 10 |
| Combination HAPs | Less than 25 |

(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.

(a) These emissions were based on MSOP 145-12108-00029, issued November 17, 2000.

**Part 70 Permit Determination**

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit MSOP 145-21676-00029, 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) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this review.

(b) This source performs hard chromium electroplating and is an area source of Hazardous Air Pollutants (HAPs). Therefore, this source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20, (40 CFR 63.340-347, Subpart N). The hard chromium electroplating tank, identified as T3 is considered a small, existing hard chromium electroplating operation. Therefore, the requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20, (40 CFR 63.340-347, Subpart N) are included in the permit.

Pursuant to 40 CFR 63.343 (a)(1)(ii), this source is an existing affected source because the construction of the source commenced prior to December 16, 1993 and the source is not reconstructed. The specific affected facilities include:

(1) one (1) hard chromium electroplating tank, identified as T3, equipped with a composite mesh-pad system for control, exhausting to one (1) stack, identified as S1;

Pursuant to 40 CFR 63.340(e), any source that is an area source and is subject to this subpart is exempt from the obligation to obtain a permit under 40 CFR part 70 or 71, provided that the source is not required to obtain a permit under 40 CFR 70.3(a) or 71.3(a) for a reason other than status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

This source is subject to the following portions of Subpart N. Non applicable portions of the NESHAP will not be included in the permit.

(1) 63.340;
(2) 63.341;
(3) 63.342 (a);
(4) 63.342 (b)(1);
(5) 63.342 (c)(1)(ii);
(6) 63.342 (f);
(7) 63.343 (a)(1)(ii), (3) and (5);
(8) 63.343 (b)(1);
(9) 63.343 (c)(1)(i) and (ii);
(10) 63.346;
(11) 63.347; and
(12) 63.348.

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart N.

**State Rule Applicability – Entire Source**

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source, constructed prior to 1977, is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, and is not subject to the requirements of 326 IAC 2-2 (PSD). The potential emissions of all attainment criteria pollutants are less than 250 tons per year, therefore, this source is not a major PSD source.

326 IAC 2-3 (Emission Offset)

On April 15, 2004, the United States Environmental Protection Agency (U.S. EPA) named 23 Indiana counties and one partial county nonattainment for the new 8-hour ozone standard. The designations became effective on June 15, 2004. Shelby County has been designated as basic nonattainment for the 8-hour ozone standard. Currently, the source wide potential to emit of $NO_X$ and VOC is 0.3 and 0.48 tons per year, respectively. The source did not have any new constructions or modification after April 15, 2005. Therefore, the requirements of Emissions Offset 326 IAC 2-3 do not apply.

326 IAC 2-6 (Emission Reporting)

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

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in 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 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of this hard chromium electroplating manufacturing source will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

**State Rule Applicability – Individual Facilities**

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

(a) Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from the welding operation not already regulated by 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.

(b) The particulate from the two (2) pneumatic blasters, identified as 23A and 23B shall each be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

$E = 4.10\ (0.0375)^{0.67} = 0.45$ lbs PM/hr

Controlled Compliance calculation:
(0.287 tons PM/yr) * (yr/8,760 hrs) * (2,000 lbs/ton) = 0.07 lbs PM/hr

The baghouse shall be in operation at all times the two (2) pneumatic blasters, identified as 23A and 23B is in operation, in order to comply with this limit.

(c) The particulate from the one (1) pneumatic blaster, identified as 23C shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

$E = 4.10\ (0.06)^{0.67} = 0.62$ lbs PM/hr

Controlled Compliance calculation:
(0.287 tons PM/yr) * (yr/8,760 hrs) * (2,000 lbs/ton) = 0.07 lbs PM/hr

The baghouse shall be in operation at all times the one (1) pneumatic blaster, identified as 23C is in operation, in order to comply with this limit.

(d) The particulate from the grinding and cutting operations shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

326 IAC 20-8-1 (Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks)

The hard chrome electroplating tank, identified as T3, is subject to 326 IAC 20-8-1 (Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks). 326 IAC 20-8 incorporates by reference 40 CFR 63 Subpart N. The Permittee will comply with the provisions of 40 CFR 63 Subpart N as detailed in the Federal Rule Applicability section above.

Subpart N was revised on July 19, 2004 and December 19, 2005. However, pursuant to 326 IAC 1-1-3, the version of the rule referenced by 326 IAC 20-8 was the version in existence on July 1, 2002, which had been most recently amended on December 14, 1999. Therefore, the July 19, 2004 and December 19, 2005, amendents to the federal rule are not approved into the 326 IAC, and the chromium electroplating facilities at this source are subject to both versions of the rule. When the revised rule is incorporated into the 326 IAC, the Permittee may apply for a revision to the permit to remove any requirements from the previous version of the rule that are not present in the updated version of the rule. All of the requirements of 326 IAC 20-8 rule that are applicable to this source are the same as the requirements listed under Federal Rule Applicability except for the following:

(1) 40 CFR 63.342 (f)(2)(ii)(B);
(2) 40 CFR 63.343 (c)(1)(iii); and
(3) 40 CFR 63.343 (c).

The 326 IAC version of 40 CFR 63.342 (f)(2)(ii)(B) allowed IDEM to require the Permittee revise the Operation and Maintence Plan if the plan failed to provide for the operation of the equipment. The new version allows IDEM to require the Permittee revise the Operation and Maintence Plan if the plan failed to provide for the proper operation of the equipment. Both will be included in the permit.

Paragraph (iii) has been added to 40 CFR 63.343(c)(1). That paragraph indicates that the Permittee may repeat the performance test and establish as a new sitespecific pressure drop across the composite mesh pad system for compliance with 40 CFR 63.343, according to the requirements of 40 CFR 63.343(c)(1)(i) or (ii). This will be included in the permit.

The 326 IAC version of 40 CFR 63.343(c) has a pressure drop requirement of + 1 inch of water column. The new version has been revised to increase the compliant pressure drop range to + 2 inch of water column. Compliance with 326 IAC 20-8 (+ 1 inch of water column) will ensure compliance with the pressure drop requirement in 40 CFR 63.343(c). Both will be included in the permit.

**Conclusion**

The operation of this Hard Chromium Electroplating manufacturing facility shall be subject to the conditions of the Minor Source Operating Permit 145-21676-00029.

# Appendix A: Emission Calculations

**Company Name:** Technical Tool & Design, LLC
**Address City IN Zip:** 1004 W. Washington St., Shelbyville, IN 46176
**Permit No.:** 145-21676-00029
**Reviewer:** Alic Bent/ EVP

## Uncontrolled Potential Emissions (tons/year)

| | Emissions Generating Activity | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Pollutant | Natural Gas Combustion | Welding Operation | Pneumatic Blasting | Chromium Plating | Parts Washer | Mills & Lathes | Grinding | Fibercutting | **TOTAL** |
| PM | 0.01 | 1.03E-03 | 8.61 | 0.19 | 0.00 | 0.00 | 0.26 | 0.26 | 9.33 |
| PM10 | 0.02 | 1.03E-03 | 8.61 | 0.19 | 0.00 | 0.00 | 0.26 | 0.26 | 9.34 |
| SO2 | neg. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| NOx | 0.3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 |
| VOC | 0.02 | 0.00 | 0.00 | 0.00 | 0.19 | 0.27 | 0.00 | 0.00 | 0.48 |
| CO | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 |
| total HAPs | neg. | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 |
| worst case single HAP | neg. | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 |

Total emissions based on rated capacity at 8,760 hours/year.

## Controlled Potential Emissions (tons/year)

| | Emissions Generating Activity | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Pollutant | Natural Gas Combustion | Welding Operation | Pneumatic Blasting | Chromium Plating | Parts Washer | Mills & Lathes | Grinding | Fibercutting | **TOTAL** |
| PM | 0.01 | 1.03E-03 | 0.86 | 0.19 | 0.00 | 0.00 | 0.26 | 0.26 | 1.58 |
| PM10 | 0.02 | 1.03E-03 | 0.86 | 0.19 | 0.00 | 0.00 | 0.26 | 0.26 | 1.59 |
| SO2 | neg. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| NOx | 0.3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 |
| VOC | 0.02 | 0.00 | 0.00 | 0.00 | 0.19 | 0.27 | 0.00 | 0.00 | 0.48 |
| CO | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 |
| total HAPs | neg. | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 |
| worst case single HAP | neg. | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 |

Total emissions based on rated capacity at 8,760 hours/year, after control.

**Appendix A: Emission Calculations**
**Abrasive Blasting - Confined**
**Company Name:** Technical Tool & Design, LLC
**Address City IN Zip:** 1004 W. Washington St., Shelbyville, IN 46176
**Permit No.:** 145-21676-00029
**Reviewer:** Alic Bent/EVP

**Gritblasters**

**Source Information:**

| | | |
|---|---|---|
| Actual Operating Hours (all gritblasters combined) | 1,248 | Paul Makofla (24 hrs/wk, 52 wks/yr) |
| Actual Particulate Collected, lbs | 800 | Paul Makofla |
| Actual control Efficiency, % | 98 | Engineering Estimate |
| PM Generation Factor, lb/hr | 0.65 | Calculated Value |
| Maximum Operating Hours | 8,760 | 24 hrs/day, 365 days/yr |

**Emission Calculations:**

| Finishing Unit | Annual Particulate Generated pounds | Collector Control Efficiency (1) % | Annual Particulate Available pounds | Venting Location (Indoors/ Outdoors) | Building Control Efficiency % | Particulate Emissions (2) lbs/yr | Particulate Emissions (2) tons/yr |
|---|---|---|---|---|---|---|---|
| **Potential Emissions:** | | | | | | | |
| Gritblaster 23A | 5,730 | 0.0 | 5,730.00 | Indoors | 90 | 573.00 | 2.87E-01 |
| Gritblaster 23B | 5,730 | 0.0 | 5,730.00 | Indoors | 90 | 573.00 | 2.87E-01 |
| Gritblaster 23C | 5,730 | 0.0 | 5,730.00 | Indoors | 90 | 573.00 | 2.87E-01 |

(1) For potential emissions, assume 0% control efficiency of PM controls
(2) Assume that all particulate emitted is PM-10

**Methodology:**
Potential Particulate Generated, lbs = (PM Generation Factor, lb/hr x Maximum Operating Hours)
Particulate Available, lbs = (Particulate Generated, pounds) x ((100 - Collector Control Efficiency, %)/100)
Particulate Emitted, lbs = (Particulate Available, pounds) x ((100 - Building Control Efficiency, %)/100)

**Appendix A: Welding and Thermal Cutting**

**Company Name: Technical Tool & Design, LLC**
**Address City IN Zip: 1004 W. Washington St., Shelbyville, IN 46176**
**Permit No./Plt ID: 145-21676-00029**
**Reviewer: Alic Bent/EVP**

| PROCESS | Number of Stations | Max. electrode consumption | | EMISSION FACTORS * (lb pollutant / lb electrode) | | | | EMISSIONS (lb/hr) | | | | TOTAL HAPS (lb/hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WELDING | | (lbs/hr) | | PM = PM10 | Mn | Ni | Cr | PM = PM10 | Mn | Ni | Cr | |
| Metal Inert Gas (MIG) | 1 | 0.00228 | | 0.0055 | 0.0005 | | | 1.25E-05 | 0.00000114 | 0.000 | 0.000 | 1.14E-06 |
| Stick | 1 | 0.0057 | | 0.037 | 0.003 | | | 2.11E-04 | 1.71E-05 | 0.000 | 0.000 | 1.71E-05 |
| Tungsten Inert Gas (TIG)(carbon steel) | 1 | 0.00228 | | 0.0055 | 0.0005 | | | 1.25E-05 | 0.00000114 | 0.000 | 0.000 | 1.14E-06 |
| EMISSION TOTALS | | | | | | | | PM = PM10 | Mn | Ni | Cr | Total HAPs |
| Potential Emissions lbs/hr | | | | | | | | 2.36E-04 | 1.94E-05 | 0.00 | 0.00 | 1.94E-05 |
| Potential Emissions lbs/day | | | | | | | | 5.66E-03 | 4.65E-04 | 0.00 | 0.00 | 4.65E-04 |
| Potential Emissions tons/year | | | | | | | | 1.03E-03 | 8.49E-05 | 0.00 | 0.00 | 8.49E-05 |

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: Emission Calculations**

**Company Name:** Technical Tool & Design, LLC
**Address City IN Zip:** 1004 W. Washington St., Shelbyville, IN 46176
**Permit No.:** 145-21676-00029
**Reviewer:** Alic Bent/EVP

**Chromium Plating:**

| Parameter | Value | Basis |
|---|---|---|
| Maximum Operation of Plater, hrs/day | 24 | Maximum possible operation |
| Maximum Operation of Plater, days/year | 365 | Maximum possible operation |
| Maximum Amperage Used | 1,200 | |
| Allowable Total Chromium Emission Factor, gr/dscf | 0.000013 | 40 CFR 63.342(c)(1)(ii) |
| Uncontrolled Particulate Emission Factor, gr/A-hr | 0.25 | AP-42 Table 12.20-1 (7/96) |

**Calculations:**

| Potential Operation = | hrs/day X | days/year |
|---|---|---|
| | 24 X | 365 |
| | 8,760 | hours/year |

| Potential Chromium Emissions = | 1lb/7000 gr X | em. factor, gr/dscf X | flow rate, dscfm X | 60 min/hr X | 8760 hrs/yr |
|---|---|---|---|---|---|
| | 0.000143 X | 0.000013 X | 3,619 X | 60 X | 8,760 |
| | 3.53 | lbs chromium, allowable | | | |
| | 1.77E-03 | tons chromium, allowable | | | |

NOTE: AP-42 Section 12.20 (7/96) indicates that chromium compound emissions from chromium electroplating are comprised almost completely of hexavalent chromium. Therefore, calculated emissions will be represented as total chromium.

| Potential PM Emissions = | 1lb/7000 gr X | em. factor, gr/A-hr X | max amps, A X | 8760 hrs/yr |
|---|---|---|---|---|
| | 0.000143 X | 0.25 X | 1,200 X | 8,760 |
| | 375.43 | lbs particulate, uncontrolled | | |
| | 1.88E-01 | tons particulate, uncontrolled | | |

**Appendix A: Emission Calculations**
**Company Name:** Technical Tool & Design, LLC
**Address City IN Zip:** 1004 W. Washington St., Shelbyville, IN 46176
**Permit No.:** 145-21676-00029
**Reviewer:** Alic Bent/EVP

**Parts Washer**
**Source Information:**

| | | |
|---|---|---|
| Solvent Used | Mineral Spirits | |
| Solvent Density, lbs/gallon | 6.59 | MSDS Sheet |
| Solvent Used, gal/year | 60.00 | (30 gals, 2x/year) |
| Avg. Solvent Loss, % | 37.50 | USEPA Guidance |
| Actual Annual Solvent Loss, gals | 22.50 | Calculated Value |
| Potential Annual Solvent Loss, gals | 56.25 | 2.5 x Actual Loss |
| VOC Content, % | 100 | Engineering Judgement |

**Emission Calculations:**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Potential VOC Emissions = | 56.25 | gals of solvent lost/yr | X | 6.59 | lbs solvent/gal | = | 370.6 | lbs solvent lost/yr |
| | 370.6 | lbs solvent lost/yr | X | 100 | % VOC | = | 370.6 | lbs VOC emitted/yr |
| | | | | | | = | **0.19** | **tons VOC emitted/yr** |

**Appendix A: Emission Calculations**

**Company Name:** Technical Tool & Design, LLC
**Address City IN Zip:** 1004 W. Washington St., Shelbyville, IN 46176
**Permit No.:** 145-21676-00029
**Reviewer:** Alic Bent/EVP

**Mills and Lathes, Potential VOC Emissions**

**Source Information:**

| | | |
|---|---|---|
| Actual Annual Hangsterfers Usage, gallons | 165 | |
| Actual Plant Operation, hours/year | 2,080 | |
| Maximum Operating Hours | 8,760 | 24 hrs/day, 365 days/yr |

**Emission Calculations:**

| Finishing Unit | Annual Coolant Used (1) gallons | Coolant Density lb/gal | Annual Coolant Used pounds | Coolant VOC Content % | VOC Emissions lbs/yr | VOC Emissions tons/yr |
|---|---|---|---|---|---|---|
| **Potential Emissions:** | | | | | | |
| Lathe No. 28 | 92.7 | 9.1 | 843.15 | 8.6 | 72.51 | 3.63E-02 |
| Mill No. 29 | 92.7 | 9.1 | 843.15 | 8.6 | 72.51 | 3.63E-02 |
| Lathe No. 45 | 92.7 | 9.1 | 843.15 | 8.6 | 72.51 | 3.63E-02 |
| Lathe No. 62 | 92.7 | 9.1 | 843.15 | 8.6 | 72.51 | 3.63E-02 |
| Lathe No. 50 | 92.7 | 9.1 | 843.15 | 8.6 | 72.51 | 3.63E-02 |
| Mill No. 59 | 92.7 | 9.1 | 843.15 | 8.6 | 72.51 | 3.63E-02 |
| Mill No. 60 | 92.7 | 9.1 | 843.15 | 8.6 | 72.51 | 3.63E-02 |
| Lathe No. 65 | 46.3 | 9.1 | 421.58 | 8.6 | 36.26 | 1.81E-02 |
| Total Potential Usage | 694.9 | | | | | |
| Coolant Wizard Recycler (2) | 6.95 | 9.1 | 63.24 | 8.6 | 5.44 | 2.72E-03 |

(1) Conservative - neglects coolant shipped offsite as waste, assume No. 65 uses half as much as other units
(2) Assume Coolant Wizard loses 1% of total coolant during processing

**Appendix A: Emission Calculations**

**Company Name:** Technical Tool & Design, LLC
**Address City IN Zip:** 1004 W. Washington St., Shelbyville, IN 46176
**Permit No.:** 145-21676-00029
**Reviewer:** Alic Bent/EVP

**Fiber Cutting**
**Source Information:**

| | | |
|---|---|---|
| Actual Operating Hours | 520 | |
| Actual Particulate Collected, lbs | 300 | |
| Actual Control Efficiency, % | 98 | Engineering Estimate |
| PM Generation Factor, lb/hr | 0.5887 | Calculated Value |
| Maximum Operating Hours | 8,760 | 24 hrs/day, 365 days/yr |

**Emission Calculations:**

| Finishing Unit | Annual Particulate Generated pounds | Collector Control Efficiency (1) % | Annual Particulate Available pounds | Venting Location (Indoors/ Outdoors) | Building Control Efficiency % | Particulate Emissions (2) lbs/yr | Particulate Emissions (2) tons/yr |
|---|---|---|---|---|---|---|---|
| **Potential Emissions:** | | | | | | | |
| Fiberboard Cutting | 5,157 | 0 | 5,156.99 | Indoors | 90 | 515.7 | 2.58E-01 |

**Methodology:**

Particulate Generated, lbs = (PM Generation Factor, lb/hr x Operating Hours)
Particulate Available, lbs = (Particulate Generated, pounds) x ((100 - Collector Control Efficiency, %)/100)
Particulate Emitted, lbs = (Particulate Available, pounds) x ((100 - Building Control Efficiency, %)/100)

**Appendix A: Emission Calculations**
**Company Name:** Technical Tool & Design, LLC
**Address City IN Zip:** 1004 W. Washington St., Shelbyville, IN 46176
**Permit No.:** 145-21676-00029
**Reviewer:** Alic Bent/EVP

**Grinders**

**Source Information:**

| | | |
|---|---|---|
| PM Generation Factor, lb/hr | 0.04 | Emissions testing on a similar metal grinding operation |
| Maximum Operating Hours | 8,760 | 24 hrs/day, 365 days/yr |

**Emission Calculations:**

| Finishing Unit | Annual Particulate Generated pounds | Collector Control Efficiency (1) % | Annual Particulate Available pounds | Venting Location (Indoors/ Outdoors) | Building Control Efficiency % | Particulate Emissions (2) lbs/yr | Particulate Emissions (2) tons/yr |
|---|---|---|---|---|---|---|---|
| **Potential Emissions:** | | | | | | | |
| Surface Grinder TTD 230 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Surface Grinder TTD 229 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Surface Grinder TTD 237 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Surface Grinder TTD 235 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Surface Grinder TTD 220 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Surface Grinder TTD 261 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Surface Grinder TTD 266 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Surface Grinder No. 4 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Surface Grinder TTD 236 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Surface Grinder TTD 216 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Pedestal Grinder 7A | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Pedestal Grinder 7B | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Pedestal Grinder 43 | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Pedestal Grinder 43D | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |
| Pedestal Grinder 43A | 350 | 0.0 | 350.40 | Indoors | 90 | 35.04 | 1.75E-02 |

(1) For potential emissions, assume 0% control efficiency of PM controls
(2) Assume that all particulate emitted is PM-10

**Methodology:**

Potential Particulate Generated, lbs = (PM Generation Factor, lb/hr x Maximum Operating Hours)
Particulate Available, lbs = (Particulate Generated, pounds) x ((100 - Collector Control Efficiency, %)/100)
Particulate Emitted, lbs = (Particulate Available, pounds) x ((100 - Building Control Efficiency, %)/100)

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

**Company Name:** Technical Tool & Design, LLC
**Address City IN Zip:** 1004 W. Washington St., Shelbyville, IN 46176
**Permit Number:** 145-21676-00029
**Reviewer:** Alic Bent/EVP

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 0.7 | 6.0 |

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | PM* | PM10* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 0.6 | 100.0 **see below | 5.5 | 84.0 |
| Potential Emission in tons/yr | 0.01 | 0.02 | 0.00 | 0.30 | 0.02 | 0.25 |

*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

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

**Company Name:** Technical Tool & Design, LLC
**Address City IN Zip:** 1004 W. Washington St., Shelbyville, IN 46176
**Permit Number:** 145-21676-00029
**Reviewer:** Alic Bent/EVP

| | HAPs - Organics | | | | |
|---|---|---|---|---|---|
| | 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 | 6.255E-06 | 3.574E-06 | 2.234E-04 | 5.361E-03 | 1.013E-05 |

| | HAPs - Metals | | | | |
|---|---|---|---|---|---|
| | Lead | Cadmium | Chromium | Manganese | Nickel |
| Emission Factor in lb/MMcf | 5.0E-04 | 1.1E-03 | 1.4E-03 | 3.8E-04 | 2.1E-03 |
| Potential Emission in tons/yr | 1.489E-06 | 3.276E-06 | 4.170E-06 | 1.132E-06 | 6.255E-06 |

Methodology is the same as previous page.

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