

Facility ID: 1318000005 Issuance type: Final State Permit To Operate

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In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 131800005 Emissions Unit ID: P004 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Decorative chrome plating tank employing fume suppressant with wetting agent and packed bed scrubber	OAC rule 3745-31-05(A)(3) (PTI #13-03917)	Emissions of chromium shall not exceed 0.00088 ton per year.
	40 CFR Part 63, Subpart N	See Additional Terms and Conditions, Section 2.a below.
	OAC rule 3745-17-07(B)(1)	Visible particulate emissions shall not exceed 20% opacity as a 3-minute average, except as provided by rule.
	OAC rule 3745-17-08(B)	The control measures specified by this rule are less stringent than the control measures established pursuant to 40 CFR Part 63, Subpart N.

2. Additional Terms and Conditions

- (a) The permittee shall control chromium emissions discharged to the atmosphere by not allowing the surface tension of the electroplating or anodizing bath to exceed 45 dynes per centimeter (3.1x10⁻³ pound-force per foot) at any time during operation of the tank.

B. Operational Restrictions

1. The permittee shall implement the following work practices:

At all times, including periods of startup, shutdown, and malfunction, the permittee shall operate and maintain any chromium electroplating or anodizing tank, including associated air pollution control devices and monitoring equipment, in a manner consistent with the operation and maintenance plan required by these terms and conditions.

Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the operation and maintenance plan.

Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Cleveland Division of Air Quality (Cleveland DAQ), which may include, but is not limited to, monitoring results; review of the operation and maintenance plan, procedures, and records; and inspection of the emission unit. Based on this information, the Cleveland DAQ may require that the permittee make changes to the operation and maintenance plan if that plan:

 - i. does not address a malfunction that has occurred;
 - ii. fails to provide for the operation of the emission units, the air pollution control techniques, or the control system and process monitoring equipment during a malfunction in a manner consistent with good air pollution practices; or
 - iii. does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques, or monitoring equipment as quickly as practicable.
2. The permittee shall prepare an operation and maintenance plan to be implemented no later than the startup of the emission unit. 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, and the process and control system monitoring equipment, and shall include a standardized checklist to document the operation and maintenance of the equipment.

- b. The plan shall incorporate the work practice standards for the add-on air pollution control device and monitoring equipment required to demonstrate compliance with the standard.
 - c. 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.
 - d. 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.
 - e. 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 permittee shall revise the operation and maintenance plan within 45 days after such an event occurs.
 - f. If actions taken by the permittee during periods of malfunction are inconsistent with the procedures specified in the operation and maintenance plan, the permittee shall record the actions taken for that event and shall report 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 permittee makes alternative reporting arrangements, in advance, with the Cleveland DAQ.
 - g. The permittee shall keep the written operation and maintenance plan on record after it is developed to be made available for inspection, upon request, by the Cleveland DAQ for the life of the emissions unit. If the operation and maintenance plan is revised, the permittee shall maintain previous versions of the plan at the facility for a period of five years following each revision; this/these superceded versions of the plan shall also be made available for inspection, if so requested by the Cleveland DAQ.
 - h. The permittee may use applicable standard operating procedure (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans to meet the operation and maintenance plan requirements as long as the alternative plans meet the requirements of 40 CFR 63.342(f)(3).
3. If a stalagmometer or tensiometer is used to measure surface tension of the electroplating or anodizing bath, the permittee shall incorporate the maintenance and operational practices recommended by the manufacturer into the operation and maintenance plan for the instrument. These maintenance and operational practices shall be conducted at least once per quarter, unless a shorter schedule is suggested by the manufacturer.
- C. Monitoring and/or Record Keeping Requirements**
- 1. The surface tension shall be monitored according to the following schedule:
 - a. The surface tension shall be measured once every four hours during operation of the tank with a stalagmometer or a tensiometer as specified in Method 306B of 40 CFR Part 63, Subpart N.
 - b. The time between monitoring can be increased if there have been no exceedances. The surface tension shall be measured once every four hours of tank operation for the first 40 hours of tank operation after the compliance date. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 8 hours of tank operation. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. The minimum frequency of monitoring allowed is once every 40 hours of tank operation.
 - c. Once an exceedance occurs, as indicated through surface tension monitoring, the original monitoring schedule of once every four hours must be resumed. A subsequent decrease in frequency shall follow the schedule in paragraph (b) above.
 - d. Once a bath solution is drained from the affected tank and a new solution added, the original monitoring schedule of once every four hours must be resumed, with a decrease in monitoring frequency allowed as in paragraph (b) above.
 - 2. In addition to fulfilling all record keeping requirements contained in the General Provisions to 40 CFR Part 63, Subpart A, as they apply to the emissions unit, the permittee also shall maintain the following records:
 - a. 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 this permit 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;
 - b. records of all maintenance performed on the emissions unit, add-on air pollution control device, and monitoring equipment;
 - c. records of the occurrence, duration, and cause (if known) of each malfunction of process, add-on air pollution control device, and monitoring equipment;
 - d. records of actions taken during periods of malfunction when such actions are inconsistent with the operation and maintenance plan;
 - e. other records, which may take the form of checklists, necessary to demonstrate consistence with the provisions of the operation and maintenance plan;
 - f. test reports documenting results of all performance tests;
 - g. all measurements as may be necessary to determine the conditions of performance tests;
 - h. records of monitoring data that are used to demonstrate compliance with the standard including the date and time the data are collected;
 - i. 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 device, or monitoring equipment;
- j. 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 device, or monitoring equipment;
- k. the total process operating time of the emission unit during the reporting period;
- l. all documentation supporting the notifications and reports as outlined in the Reporting Requirements of this permit and 63.9 and 63.10 of 40 CFR Part 63, subpart A; and
- m. records of the date and time that the fume suppressants are added to the electroplating or anodizing bath.
- All records shall be maintained for a period of five years.

D. Reporting Requirements

1. The permittee shall submit a Notification of Compliance Status to the Cleveland DAQ, signed by the responsible official who shall certify its accuracy, attesting to whether the affected emissions unit is in compliance. The notification shall include the following information for each affected emissions unit:
 - a. the applicable emission limitations and the methods that were used to determine compliance with this limitation;
 - b. the surface tension measurement and frequency of each measurement during the reporting period.
 - c. for each monitored parameter for which a compliant value was established, the specific operating parameter value, or range of values, that corresponds to compliance with the applicable emission limit;
 - d. the methods that shall be used to determine continuous compliance;
 - e. a description of the air pollution control method(s) used for each emission point;
 - f. a statement that the permittee has completed and has on file the operation and maintenance plan as required by the work practice standards; and
 - g. a statement by the owner or operator as to whether the emissions unit is in compliance.
2. The permittee shall submit a Notification of Performance Test to the Cleveland DAQ at least 60 calendar days before a performance test is scheduled. In the event that the permittee is unable to conduct the performance test as scheduled, the provisions of 63.7(b)(2) of 40 CFR Part 63, subpart A shall apply to the emissions unit.
3. The permittee shall report, to the Cleveland DAQ, the results of any performance test conducted within 30 days of completion of such test. Reports of performance test results shall also be submitted in the notification of compliance status report, no later than 90 days following the completion of the performance test.
4. The permittee shall prepare and submit annual compliance status reports (unless a more frequent reporting frequency has been determined) to the Cleveland DAQ in order to document the ongoing compliance status of the emissions unit. This report shall include the following:
 - a. the company name and address of the emissions unit;
 - b. a description of the source, type of process performed, and the air pollution control method and monitoring device(s) that is/are/shall be used to demonstrate continuous compliance;
 - c. an identification of the operating parameter(s) that is/are/shall be monitored for compliance determination;
 - d. the relevant emission limitation for the emissions unit, and the operating parameter value(s), or range of values, established during compliance testing and reported in the Notification of Compliance;
 - e. the beginning and ending dates of the reporting period;
 - f. the total operating time of the emissions unit during the reporting period; and
 - g. a summary of operating parameter values, including the total duration of excess emissions during the reporting period as indicated by those values, the total duration of excess emissions expressed as a percent of the total emissions unit operating time during that reporting period; and a breakdown of the total duration of excess emissions during the reporting period into those that are due to process upsets, control equipment malfunctions, other known causes, and unknown causes.
5. The permittee shall submit annual ongoing compliance summary reports, unless both of the following conditions demonstrate that more frequent reporting is required:
 - a. the total duration of excess emissions is one 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/or monitoring equipment is 5 percent or greater of the total operating time.

Once the permittee reports an exceedance or malfunction, ongoing compliance status reports shall be submitted semiannually until a request to reduce reporting frequency is approved.
6. The Cleveland DAQ may determine on a case-by-case basis if the summary report shall be completed and submitted more frequently than annually, or if the annual report may be retained on site (for inspection upon request) rather than requiring it be submitted.
7. The permittee 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 (or semi-annual if quarterly) and/or may be permitted to maintain the report on site, rather than submit an annual or semi-annual report, 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 emissions unit is in compliance with the relevant emission limit;
- b. the permittee continues to comply with all applicable record keeping and monitoring requirements of 40 CFR Part 63, subpart A and this permit; and
- c. the regulating agency does not object to a reduced reporting frequency.

In deciding whether to approve a reduced reporting frequency or to allow the report to be retained on site, the regulating agency may request to review information concerning the facility's previous performance history during the 5-year record keeping period prior to the intended change in reporting frequency, or the record keeping period since the emissions unit's compliance date, whichever is shorter. Records subject to review include performance test results, monitoring data, and evaluations of the permittee's conformance with emission limitations and work practice standards. If the permittee's request is disapproved, the regulating agency will notify the permittee in writing within 45 days after receiving notice. This notification 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.

As soon as the monitoring data show that the facility is not in compliance with the relevant emission limit, the frequency of reporting shall revert to semiannually, and the permittee 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 permittee may again request approval to reduce the reporting frequency.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method:

a. Emission Limitation:

Chromium emissions shall not exceed 0.00088 ton per year.

Applicable Compliance Method:

The following equation (based on AP-42, "Compilation of Air Pollution Emission Factors" Section 12.20) shall be used:

$$E_a = E_c \times 100 \times R_c \times 1/7000 \times H_r \times 1/2000$$

Where:

E_a = actual annual chromium emissions in ton per year;

E_c = 1.2×10^{-6} grains/dscf (emission factor for decorative chromium electroplating with fume suppressant from AP-42, Section 12.20, Table 12.20-1)(7/96);

100 = conversion factor for converting grains/dscf to grains/amp-hr;

R_c = rectifier capacity in amps;

1/7000 = 1 pound per 7000 grains to convert from grains/hr to lbs/hr;

H_r = hours per year of operation of chromium electroplating tank; and

1/2000 = 1 ton per 2000 pounds to convert from lbs/yr to ton/yr.

b. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity as a 3-minute average, except as provided by rule.

Applicable Compliance Method:

If required by the Cleveland DAQ, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using methods and procedures specified in U.S. EPA Reference Method 9.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit, in order to demonstrate compliance with the surface tension limitation contained in this permit:

a. Method 306B, "Surface Tension Measurement and Record keeping for Tanks Used at Decorative Chromium Electroplating and Anodizing Facilities," shall be used to measure the surface tension of the electroplating and/or anodizing bath.

b. The stalagmometer or tensiometer shall be operated such that representative measurements of surface tension from the affected emissions unit are obtained. Verification of the operational status of the monitoring equipment shall include execution of the manufacturer's written accuracy specifications or recommendations for operation and calibration of the system(s).

c. A representative from the Cleveland DAQ shall be permitted to witness the measurement(s), upon request.

F. Miscellaneous Requirements

1. None