Facility ID: 1431073851 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: 1431073851 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Hard chrome plating operation tank 4 with composite mesh pad emission control system	OAC rule 3745-31-05 (PTI 14-3778)	0.001 lb/hr of total chromium
	40 CFR, Part 63, Subpart N	0.015 mg/dscm (6.6 E-06 gr/dscf) of total chromium
	OAC rule 3745-17-11(B)(1)	The emission limitation established by this rule is less stringent than that established by 40 CFR, Part 63, Subpart N.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as specified by rule.

2. **Additional Terms and Conditions**

   (a) None

B. **Operational Restrictions**

1. 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.

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

3. Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Hamilton County Department of Environmental Services, which may include, but is not limited to, monitoring results; review of the operation and maintenance plan, procedures, and records; and inspection of the emissions unit. Based on this information, the Hamilton County Department of Environmental Services may require that the permittee make changes to the operation and maintenance plan if that plan:

   a. Does not address a malfunction that has occurred;

   b. Fails to provide for the operation of the emissions unit, 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

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

4. The permittee shall implement an operation and maintenance plan that includes the following elements:

   a. The plan shall specify the operation and maintenance (O&M) criteria for the affected source, the add-on air pollution control device (if such a device is used to comply with the emissions limits), 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 O&M plan shall incorporate the following work practice standards:

      i. Visually inspect the device at least once per quarter to ensure there is proper drainage, no chromic acid

buildup on the pads, and no evidence of chemical attack on the structural integrity of the device.

ii. Visually inspect at least once per quarter the back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.

iii. Visually inspect at least once per quarter the ductwork from tank to the control device to ensure there are no leaks.

iv. Perform washdown of the composite mesh pads in accordance with the manufacturer's recommendations.

c. If a pitot tube is used for monitoring, the O&M plan shall incorporate the following work practice standards to be performed at least once per quarter:

i. Backflush with water, or remove from the duct and rinse with fresh water.

ii. Replace in the duct and rotate 180 degrees to ensure that the same zero reading is obtained.

iii. Check pitot tube ends for damage. Replace pitot tube if cracked or fatigued.
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.

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.

f. If the O&M 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.

g. If actions taken by the permittee during periods of malfunction are inconsistent with the procedures specified in the O&M 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 Hamilton County Department of Environmental Services.

h. The permittee shall keep the written O&M plan on record after it is developed to be made available for inspection, upon request, by the Hamilton County Department of Environmental Services for the life of the emissions unit. If the O&M plan is revised, the permittee shall keep previous versions of the plan on record to be made available for inspection, upon request, by the Hamilton County Department of Environmental Services for a period of five years after each revision to the plan.

i. The permittee may use applicable standard operating procedure (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans to meet the O&M plan requirements as long as the alternative plans meet the requirements.

C. **Monitoring and/or Record Keeping Requirements**

1. Composite mesh pad (CMP) system monitoring requirements to demonstrate continuous compliance:

a. During the initial performance test, the permittee shall determine the outlet chromium concentration using the methods as described in the "Testing Requirements" section of this permit to comply with the emission limitations through the use of a composite mesh-pad system. The permittee 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 the "Testing Requirements" section of this permit. The initial performance testing was conducted on March 12, 1997 (System II). The established pressure drop ranges were as follows:
System I
Mist Eliminator = 0.10 to 1.20 inches water column
Composite Mesh Pad = 1.5 to 3.5 inches water column

b. The permittee may conduct multiple performance tests to stablish a range of compliant pressure drop values, or may set as the compliance value the average pressure drop measured over the three test runs of one performance test and accept plus or minus 1 inch of water column from this value as the compliant range.

c. On and after the date on which the initial performance test is required to be completed under Section 63.7 of 40 CFR, Part 63, Subpart A, the permittee shall monitor and record the pressure drop across the composite mesh-pad system and the mist eliminator once each day that the emission unit is operating. To be in compliance, the composite mesh-pad system shall be operated within the range of compliant values for pressure drop established during performance tests conducted on March 12, 1997.

2. The permittee shall fulfill all recordkeeping requirements in the General Provisions to 40 CFR, Part 63, according to the applicability of Subpart A.

3. 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 consistency 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 emissions unit during the reporting period.

l. All documentation supporting the notifications and reports as outlined in the Reporting Requirements of this permit and Sections 63.9 and 63.10 of 40 CFR, Part 63, Subpart A.

All records shall be maintained for a period of five years.

D. **Reporting Requirements**

1. The permittee shall fulfill all reporting requirements as outlined in 40 CFR, Part 63, Subpart A. These reports shall be made to the Hamilton County Department of Environmental Services and shall be sent by U.S. mail, fax or by another courier.

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

   b. Submittals sent by other methods shall be received by the Hamilton County Department of Environmental Services on or before the specified date.

2. The permittee shall prepare an ongoing compliance status report annually 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. An identification of the operating parameter that is monitored for compliance determination.

   c. The relevant emission limitation for the emissions unit, and the operating parameter value, or range of values, that correspond to compliance with this emission limitation as specified in the Notification of Compliance Status required by this section.

   d. The beginning and ending dates of the reporting period.

   e. The total operating time of the emissions unit during the reporting period.

   f. 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.

   g. A certification by a responsible official that the work practice standards in this permit were followed in accordance with the operation and maintenance plan for the emissions unit.

   h. If the operation and maintenance plan required by this permit was not followed, an explanation of the reasons for not following the provisions, an assessment of whether any excess emission and/or parameter monitoring exceedances are believed to have occurred, and a copy of the reports required by the work practices in this permit.

   i. A description of any changes in monitoring, processes, or controls since the last reporting period.

   j. The name, title, and signature of the responsible official who is certifying the accuracy of the report.

   k. The date of the report.

   The report shall be completed annually and retained on site, and made available to the Hamilton County Department of Environmental Services upon request.

3. The permittee shall submit semiannual compliance status reports if the following conditions are met:

   a. the total duration of excess emissions is 1% 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% or greater of the total operating time.

4. Once the permittee reports an exceedance of the total chromium limitation, ongoing compliance status reports shall be submitted semiannually until a request to reduce reporting frequency is approved.

5. The Hamilton County Department of Environmental Services may determine on a case-by-case basis that the summary report required pursuant to term and condition D.2. 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 emissions unit.

6. 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 and/or be allowed to maintain the annual report on site 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 recordkeeping and monitoring requirements of 40 CFR, Part 63, Subpart A and this permit.

   c. The Hamilton County Department of Environmental Services does not object to a reduced reporting frequency. The frequency of submitting ongoing compliance status reports may be reduced if the following requirements are met:

      i. The permittee notifies the Hamilton County Department of Environmental Services in writing of its intentions to make such a change. The Hamilton County Department of Environmental Services may review information concerning the facility's previous performance history during the 5-year recordkeeping period prior to the intended change, or the recordkeeping period since the emission 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 Hamilton County Department of Environmental Services 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.
      ii. If monitoring data show that the emissions unit is not in compliance with the relevant emission limit, the frequency of reporting shall revert to semiannual, 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.

7. If a reconstruction is to occur, the permittee shall submit as soon as practicable the following information to the Hamilton County Department of Environmental Services:

   a. A brief description of the affected emissions unit and the components to be replaced.

   b. A brief description of the present and proposed emission control technique.

   c. An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new emissions unit.

   d. The estimated life of the affected emissions unit after the replacements.

   e. A discussion of any economic or technical limitations the emissions unit may have in complying with relevant standards or other requirements after proposed replacements. The discussion shall be sufficiently detailed to demonstrate to the Hamilton County Department of Environmental Services satisfaction that the technical or economic limitations will affect the emissions unit ability to comply with the relevant standard and how they will do so.

E. **Testing Requirements**

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitations -
   0.015 mg/dscm (6.6 E-06 gr/dscf) total chromium in exhaust gases
   0.001 lb of chromium/hr

   Applicable Compliance Method -
   Performance tests were conducted on March 12, 1997 and March 13, 1997 with results showing average chromium emission rates of 2.1 E-06 gr/dscf for system I (tanks 2 & 3) and 8.3 E-07gr/dscf for system II (tanks 3 & 4). If required, additional performance testing shall be conducted in accordance with the test methods and procedures specified in 40 CFR, Part 63, Subpart N. Ongoing compliance shall be based upon the established operating parameters for the pressure drop across the composite mesh-pad emission control system.

   b. Emission Limitation:
   20% opacity, as a 6-minute average

   Applicable Compliance Method:
   Compliance with this emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix A" of 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996).

F. **Miscellaneous Requirements**

1. None