

Facility ID: 0857040217 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

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.

[Go to Part II for Emissions Unit P024](#)  
[Go to Part II for Emissions Unit P025](#)  
[Go to Part II for Emissions Unit P035](#)

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

Facility ID: 0857040217 Emissions Unit ID: P024 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>
Hard chrome plating tank, with fume suppressant and composite mesh pad control shared by emissions units P024, P025, P026, and P035 (Tanks: AC.SF.CR.526 and AC.EP.HC.845)	OAC rule 3745-31-05(A)(3) PTI 08-3274	0.000659 lb/hour and 0.00206 TPY chromium total combined emissions from P024, P025, P026, and P035;
	40 CFR Part 63, Subpart N	0.00005 lb/hour and 0.000156 TPY sulfuric acid total combined emissions from P024, P025, P026, and P035 The permittee shall not allow the concentration of total chromium in the exhaust gases discharged to the atmosphere to exceed 0.015 mg/dscfm (6.6x10 <sup>-6</sup> gr/dscf).
	OAC rule 3745-17-11(B)(1) OAC rule 3745-17-07(A)(1)	0.551 lb/hour particulates Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided 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 appropriate Ohio EPA District Office or local air agency, 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 appropriate Ohio EPA District Office or local air agency 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 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
  - 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 prepare an operation and maintenance plan to be implemented no later than January 25, 1997. The plan shall be incorporated by reference into the Title V permit, if and when a Title V permit is

required, and 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 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.
  - v. 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:
    - (a) Backflush with water, or remove from the duct and rinse with fresh water.
    - (b) Replace in the duct and rotate 180 degrees to ensure that the same zero reading is obtained.
    - (c) Check pitot tube ends for damage. Replace pitot tube if cracked or fatigued.
      - 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 by phone 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 appropriate Ohio EPA District Office or local air agency.
      - 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 appropriate Ohio EPA District Office or local air agency for the life of the emission unit. If the operation and maintenance plan is revised, the permittee shall keep previous versions of the plan on record to be made available for inspection, upon request, by the appropriate Ohio EPA District Office or local air agency for a period of five years after each revision to the plan.
      - 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.
5. The maximum annual operating hours for this emissions unit shall not exceed 6,240.
- C. Monitoring and/or Record Keeping Requirements**
1. Composite mesh-pad (CMP) system monitoring requirements to demonstrate continuous compliance
 

The permittee shall monitor and record the pressure drop across the composite mesh-pad system once each day that the emission unit is operating. To be in compliance, the composite mesh-pad system shall be operated within plus or minus 1 inch of water column of the pressure drop value (1.5 inch of water) established during the initial performance test conducted on September 6, 1995.
  2. The permittee shall fulfill all recordkeeping requirements in the General Provisions to 40 CFR Part 63, according to the applicability of Subpart A as identified in Table 1 to Subpart N.
  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 emission 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.

- 4. The permittee shall maintain monthly records of the operating hours for this emissions unit.

**D. Reporting Requirements**

- 1. The permittee shall fulfill all reporting requirement as outlined in 40 CFR Part 63 Subpart A as identified in Table 1 to Subpart N. These reports shall be made to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency on or before the specified date.
- 2. The permittee shall prepare an ongoing compliance status report annually (unless a request to reduce frequency of ongoing compliance status reports has been approved) to the appropriate Ohio EPA District Office or local air agency 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.
  - l. The report shall be completed annually and retained on site, and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.
- 3. The permittee shall submit semiannual reports if the following conditions are met:
  - 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 monitoring equipment is 5 percent or greater of the total operating time.
- 4. The appropriate Ohio EPA District Office or local air agency 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 emissions unit.

5. 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:
- 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.
  - The permittee continues to comply with all applicable recordkeeping and monitoring requirements of 40 CFR Part 63, Subpart A and this permit.
  - The appropriate Ohio EPA District Office or local air agency 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:
    - The permittee notifies the appropriate Ohio EPA District Office or local air agency in writing of its intentions to make such a change. The appropriate Ohio EPA district office or local air agency 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 appropriate Ohio EPA District Office or local air 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.
    - 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.
6. The permittee shall submit annual reports which identify any exceedances of the annual operating hours limitation as well as any corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

#### 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(s):
- Emission Limitation -  
0.000659 lb/hour chromium combined emissions from P024, P025, P026, and P035
- Applicable Compliance Method -  
Compliance with this allowable emission rate was demonstrated in a performance test conducted on September 6, 1995 with results showing an average total chromium emission rate of 0.000347 lb/hour. Compliance is also based upon additional performance testing as specified in E.2. Ongoing compliance shall be based upon the established operating parameters for the pressure drop across the composite mesh pad control system.
- Emission Limitation -  
0.00206 TPY chromium combined emissions from P024, P025, P026 and P035
- Applicable Compliance Method -  
The 0.00206 TPY emissions limitation was developed by multiplying the 0.000659 lb/hour by a maximum annual operating schedule of 6240 hours/year. Therefore, compliance shall be based upon the 12-month summation of the operating hours times the 0.000659 lb/hour emission limitation, divided by 2,000 pounds per ton.
- Emission Limitation -  
0.00005 lb/hour sulfuric acid combined emissions from P024, P025, P026, and P035
- Applicable Compliance Method -  
Compliance with this allowable emission rate shall be determined by multiplying the maximum amount of sulfuric acid added to each of the plating tanks in emissions units P024, P025, P026, and P035 by a gassing rate of 10% and a composite mesh pad control efficiency of 90% (1 - 0.90).
- Emission Limitation -  
0.000156 TPY sulfuric acid combined emissions from P024, P025, P026 and P035
- Applicable Compliance Method -  
The 0.000156 TPY emission limitation was developed by multiplying the 0.00005 lb/hour by a maximum operating schedule of 6240 hours per year. Therefore, compliance shall be based upon the 12-month summation of the operating hours times the 0.00005 lb/hour emission limitation, divided by 2,000 pounds per ton.
- Emission Limitation -  
0.015 mg/dscm (6.6 E-06 gr/dscf) total chromium in exhaust gases
- Applicable Compliance Method -  
A performance test was conducted on September 6, 1995 with results showing a chromium emission rate of 0.0063 mg/dscm. Compliance is also based upon additional performance testing as specified in E.2. Ongoing compliance shall be based upon the established operating parameters for the pressure drop across the composite mesh pad control system.
- Emission Limitation -  
0.551 lb/hour particulates
- Applicable Compliance Method -  
Compliance shall be determined by multiplying the AP-42 Table 12.20-1 (7/96) emission factor for hard chromium electroplating (0.25 gr/A-hr) by the maximum current of the plating bath (6425 A). This grain per hour emission rate is then divided by 7000 grains per pound to obtain the mass particulate emissions. If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with OAC rule 3745-17-03(B)(10).
- Emission Limitation -

20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined by visible emission evaluations performed in accordance with procedures specified in OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within six months after permit issuance.
  - b. The emission testing shall be conducted to demonstrate compliance with the chromium emission limitation.
  - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations" shall be used to determine the chromium concentration from hard or decorative chromium electroplating tanks or chromium anodizing tanks.
    - i. The sampling time and sample volume for each run of Methods 306 and 306A shall be at least 120 minutes and 1.7 dscm (60 dscf), respectively.
    - ii. Methods 306 and 306A allow the measurement of either total chromium or hexavalent chromium emissions. Emissions units using chromic acid baths can demonstrate compliance with the emission limits by measuring either the total chromium or hexavalent chromium concentration. Hence, the hexavalent chromium concentration measured by these methods is equal to the total chromium concentration for the affected operations.  
Or, in the alternative, the California Air Resources Board (CARB) Method 425 may be used to determine the chromium concentration from hard and decorative chromium electroplating tanks and chromium anodizing tanks if the following conditions are met:
      - i. If a colorimetric analysis method is used, the sampling time and volume shall be sufficient to result in 33-66 micrograms of catch in the sampling train.
      - ii. If an Atomic Absorption Graphite Furnace (AAGF) or Ion Chromatography (with a Post-column Reactor (ICPCR) analyses) is used, the sampling time and volume should be sufficient to result in a sample catch that is 5 to 10 times the minimum detection limit of the analytical method (i.e., 1.0 microgram per liter of sample for AAGF and 0.5 microgram per liter of sample for ICPCR).
      - iii. A minimum of three separate runs must be conducted. The other requirements of 40 CFR Part 63.7, Subpart A must also be met.
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time (s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

3. When multiple affected emissions units performing the same type of operation and subject to the same emission limitation are controlled with a common add-on air pollution control device that is also controlling emissions from emissions units not affected by the Chromium Electroplating MACT, the following procedure shall be followed to determine compliance with the emission limitation of 0.015 mg/dscm (6.6x10<sup>-6</sup> gr/dscf):
  - a. Calculate the cross-sectional area of each inlet duct (i.e., uptakes from each hood) including those emissions units not subject to 40 CFR Part 63 Subpart N.
  - b. Determine the total sample time per test run by dividing the total inlet area from all tanks connected to the control system by the total inlet area for all ducts associated with subject emissions units, and then multiply this number by 2 hours. The calculated time is the minimum sample time required per test run.
  - c. Perform Method 306 testing and calculate an outlet mass emission rate.
  - d. Determine the total ventilation rate from the affected tanks by using the following equation:

$$VR(\text{tot}) \times [(IDA(i))/(\sum IA(\text{total}))] = VR(\text{inlet})$$

where:

VR(tot) is the average total ventilation rate in dscm/min for the three test runs as determined at the outlet by means of the Method 306 testing;

IDA(i) is the total inlet area for all ducts associated with affected tanks;

[sum] IA(total) is the sum of all inlet duct areas from both affected and nonaffected tanks; and,

VR(inlet) is the total ventilation rate from all inlet ducts associated with affected tanks.

e. Establish the allowable mass emission rate of the system (AMR(sys)) in milligrams of total chromium per hour (mg/hr) using the following equation:

$$[\text{sum}] \text{VR}(\text{inlet}) \times \text{EL} \times 60 \text{ minutes/hour} = \text{AMR}(\text{sys})$$

where:

[sum] VR(inlet) is the total ventilation rate in dscm/min from the affected tanks, and EL is the applicable emission limitation. The allowable mass emission rate (AMR(sys)) should be equal to or greater than the outlet three-run average mass emission rate determined from Method 306 testing for the tank to be in compliance.

**F. Miscellaneous Requirements**

- 1. None

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  - (a) None.
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  - (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>
Hard chrome plating tank, with fume suppressant and composite mesh pad control shared by emissions units P024, P025, P026, and P035 (Tank AC.EP.HC.S51)	OAC rule 3745-31-05(A)(3)	0.000659 lb/hour and 0.00206 TPY chromium total combined emissions from P024, P025, P026, and P035;
	PTI 08-3274	
	40 CFR Part 63, Subpart N	0.00005 lb/hour and 0.000156 TPY sulfuric acid total combined emissions from P024, P025, P026, and P035 The permittee shall not allow the concentration of total chromium in the exhaust gases discharged to the atmosphere to exceed 0.015 mg/dscm (6.6x10 <sup>-6</sup> gr/dscf).
	OAC rule 3745-17-11(B)(1)	0.551 lb/hour particulates
	OAC rule 3745-17-07(A)(1)	Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided 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 appropriate Ohio EPA District Office or local air agency, 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 appropriate Ohio EPA District Office or local air agency 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 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
  - c. does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques, or monitoring equipment as quickly as practicable.
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- 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 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.
    - v. 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:
      - (a) Backflush with water, or remove from the duct and rinse with fresh water.
      - (b) Replace in the duct and rotate 180 degrees to ensure that the same zero reading is obtained.
      - (c) Check pitot tube ends for damage. Replace pitot tube if cracked or fatigued.
    - 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 by phone 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 appropriate Ohio EPA District Office or local air agency.
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- C. Monitoring and/or Record Keeping Requirements**
- 1. Composite mesh-pad (CMP) system monitoring requirements to demonstrate continuous compliance

The permittee shall monitor and record the pressure drop across the composite mesh-pad system once each day that the emission unit is operating. To be in compliance, the composite mesh-pad system shall be operated within plus or minus 1 inch of water column of the pressure drop value (1.5 inch of water) established during the initial performance test conducted on September 6, 1995.
  - 2. The permittee shall fulfill all recordkeeping requirements in the General Provisions to 40 CFR Part 63, according to the applicability of Subpart A as identified in Table 1 to Subpart N.
  - 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 emission 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.

- 4. The permittee shall maintain monthly records of the operating hours for this emissions unit.
- D. Reporting Requirements**
- 1. The permittee shall fulfill all reporting requirement as outlined in 40 CFR Part 63 Subpart A as identified in Table 1 to Subpart N. These reports shall be made to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency on or before the specified date.
  - 2. The permittee shall prepare an ongoing compliance status report annually (unless a request to reduce frequency of ongoing compliance status reports has been approved) to the appropriate Ohio EPA District Office or local air agency 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.
    - l. The report shall be completed annually and retained on site, and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.
  - 3. The permittee shall submit semiannual reports if the following conditions are met:

- 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 monitoring equipment is 5 percent or greater of the total operating time.
4. The appropriate Ohio EPA District Office or local air agency 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 emissions unit.
5. 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency in writing of its intentions to make such a change. The appropriate Ohio EPA district office or local air agency 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 appropriate Ohio EPA District Office or local air 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.
    - 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.
6. The permittee shall submit annual reports which identify any exceedances of the annual operating hours limitation as well as any corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

#### 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(s):
 

Emission Limitation -  
0.000659 lb/hour chromium combined emissions from P024, P025, P026, and P035

Applicable Compliance Method -  
Compliance with this allowable emission rate was demonstrated in a performance test conducted on September 6, 1995 with results showing an average total chromium emission rate of 0.000347 lb/hour. Compliance is also based upon additional performance testing as specified in E.2. Ongoing compliance shall be based upon the established operating parameters for the pressure drop across the composite mesh pad control system.

Emission Limitation -  
0.00206 TPY chromium combined emissions from P024, P025, P026 and P035

Applicable Compliance Method -  
The 0.00206 TPY emissions limitation was developed by multiplying the 0.000659 lb/hour by a maximum annual operating schedule of 6240 hours/year. Therefore, compliance shall be based upon the 12-month summation of the operating hours times the 0.000659 lb/hour emission limitation, divided by 2,000 pounds per ton.

Emission Limitation -  
0.00005 lb/hour sulfuric acid combined emissions from P024, P025, P026, and P035

Applicable Compliance Method -  
Compliance with this allowable emission rate shall be determined by multiplying the maximum amount of sulfuric acid added to each of the plating tanks in emissions units P024, P025, P026, and P035 by a gassing rate of 10% and a composite mesh pad control efficiency of 90% (1 - 0.90).

Emission Limitation -  
0.000156 TPY sulfuric acid combined emissions from P024, P025, P026 and P035

Applicable Compliance Method -  
The 0.000156 TPY emission limitation was developed by multiplying the 0.00005 lb/hour by a maximum operating schedule of 6240 hours per year. Therefore, compliance shall be based upon the 12-month summation of the operating hours times the 0.00005 lb/hour emission limitation, divided by 2,000 pounds per ton.

Emission Limitation -  
0.015 mg/dscm (6.6 E-06 gr/dscf) total chromium in exhaust gases

Applicable Compliance Method -  
A performance test was conducted on September 6, 1995 with results showing a chromium emission rate of 0.0063 mg/dscm. Compliance is also based upon additional performance testing as specified in E.2. Ongoing compliance shall be based upon the established operating parameters for the pressure drop across the composite mesh pad control system.

Emission Limitation -  
0.551 lb/hour particulates

Applicable Compliance Method -

Compliance shall be determined by multiplying the AP-42 Table 12.20-1 (7/96) emission factor for hard chromium electroplating (0.25 gr/A-hr) by the maximum current of the plating bath (6425 A). This grain per hour emission rate is then divided by 7000 grains per pound to obtain the mass particulate emissions. If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with OAC rule 3745-17-03(B)(10).

Emission Limitation -  
20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance shall be determined by visible emission evaluations performed in accordance with procedures specified in OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within six months after permit issuance.
  - b. The emission testing shall be conducted to demonstrate compliance with the chromium emission limitation.
  - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations" shall be used to determine the chromium concentration from hard or decorative chromium electroplating tanks or chromium anodizing tanks.
    - i. The sampling time and sample volume for each run of Methods 306 and 306A shall be at least 120 minutes and 1.7 dscm (60 dscf), respectively.
    - ii. Methods 306 and 306A allow the measurement of either total chromium or hexavalent chromium emissions. Emissions units using chromic acid baths can demonstrate compliance with the emission limits by measuring either the total chromium or hexavalent chromium concentration. Hence, the hexavalent chromium concentration measured by these methods is equal to the total chromium concentration for the affected operations.  
Or, in the alternative, the California Air Resources Board (CARB) Method 425 may be used to determine the chromium concentration from hard and decorative chromium electroplating tanks and chromium anodizing tanks if the following conditions are met:
      - i. If a colorimetric analysis method is used, the sampling time and volume shall be sufficient to result in 33-66 micrograms of catch in the sampling train.
      - ii. If an Atomic Absorption Graphite Furnace (AAGF) or Ion Chromatography (with a Post-column Reactor (ICPCR) analyses) is used, the sampling time and volume should be sufficient to result in a sample catch that is 5 to 10 times the minimum detection limit of the analytical method (i.e., 1.0 microgram per liter of sample for AAGF and 0.5 microgram per liter for ICPCR).
      - iii. A minimum of three separate runs must be conducted. The other requirements of 40 CFR Part 63.7, Subpart A must also be met.
    - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.  
Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time (s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).  
  
Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.  
  
A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.
3. When multiple affected emissions units performing the same type of operation and subject to the same emission limitation are controlled with a common add-on air pollution control device that is also controlling emissions from emissions units not affected by the Chromium Electroplating MACT, the following procedure shall be followed to determine compliance with the emission limitation of 0.015 mg/dscm (6.6x10<sup>-6</sup> gr/dscf):
  - a. Calculate the cross-sectional area of each inlet duct (i.e., uptakes from each hood) including those emissions units not subject to 40 CFR Part 63 Subpart N.
  - b. Determine the total sample time per test run by dividing the total inlet area from all tanks connected to the control system by the total inlet area for all ducts associated with subject emissions units, and then multiply this number by 2 hours. The calculated time is the minimum sample time required per test run.
  - c. Perform Method 306 testing and calculate an outlet mass emission rate.
  - d. Determine the total ventilation rate from the affected tanks by using the following equation:

$$VR(\text{tot}) \times [(IDA(i))/(\sum IA(\text{total}))] = VR(\text{inlet})$$

where:

VR(tot) is the average total ventilation rate in dscm/min for the three test runs as determined at the outlet by means of the Method 306 testing;

IDA(i) is the total inlet area for all ducts associated with affected tanks;

[sum] IA(total) is the sum of all inlet duct areas from both affected and nonaffected tanks; and,

VR(inlet) is the total ventilation rate from all inlet ducts associated with affected tanks.

e. Establish the allowable mass emission rate of the system (AMR(sys)) in milligrams of total chromium per hour (mg/hr) using the following equation:

$$[\text{sum}] VR(\text{inlet}) \times EL \times 60 \text{ minutes/hour} = \text{AMR}(\text{sys})$$

where:

[sum] VR(inlet) is the total ventilation rate in dscm/min from the affected tanks, and EL is the applicable emission limitation. The allowable mass emission rate (AMR(sys)) should be equal to or greater than the outlet three-run average mass emission rate determined from Method 306 testing for the tank to be in compliance.

**F. Miscellaneous Requirements**

1. None

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

Facility ID: 0857040217 Emissions Unit ID: P035 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>
Hard chrome plating tank, with fume suppressant and composite mesh pad control shared by emissions units P024, P025, P026, and P035 (Tank: AC.EP.HC.N08)	OAC rule 3745-31-05(A)(3)	0.000659 lb/hour and 0.00206 TPY chromium total combined emissions from P024, P025, P026, and P035;
	40 CFR Part 63, Subpart N	0.00005 lb/hour and 0.000156 TPY sulfuric acid total combined emissions from P024, P025, P026, and P035 The permittee shall not allow the concentration of total chromium in the exhaust gases discharged to the atmosphere to exceed 0.015 mg/dscm (6.6x10-6 gr/dscf).
	OAC rule 3745-17-11(B)(1) OAC rule 3745-17-07(A)(1)	0.551 lb/hour particulates Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided 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 appropriate Ohio EPA District Office or local air agency, 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 appropriate Ohio EPA District Office or local air agency 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 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
    - 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 prepare an operation and maintenance plan to be implemented no later than January 25, 1997. The plan shall be incorporated by reference into the Title V permit, if and when a Title V permit is required, and 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 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.
      - v. 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:
        - (a) Backflush with water, or remove from the duct and rinse with fresh water.
        - (b) Replace in the duct and rotate 180 degrees to ensure that the same zero reading is obtained.
        - (c) Check pitot tube ends for damage. Replace pitot tube if cracked or fatigued.
          - 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 by phone 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 appropriate Ohio EPA District Office or local air agency.
          - 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 appropriate Ohio EPA District Office or local air agency for the life of the emission unit. If the operation and maintenance plan is revised, the permittee shall keep previous versions of the plan on record to be made available for inspection, upon request, by the appropriate Ohio EPA District Office or local air agency for a period of five years after each revision to the plan.
          - 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.
  5. The maximum annual operating hours for this emissions unit shall not exceed 6,240.
- C. Monitoring and/or Record Keeping Requirements**
1. Composite mesh-pad (CMP) system monitoring requirements to demonstrate continuous compliance
 

The permittee shall monitor and record the pressure drop across the composite mesh-pad system once each day that the emission unit is operating. To be in compliance, the composite mesh-pad system shall be operated within plus or minus 1 inch of water column of the pressure drop value (1.5 inch of water) established during the initial performance test conducted on September 6, 1995.

2. The permittee shall fulfill all recordkeeping requirements in the General Provisions to 40 CFR Part 63, according to the applicability of Subpart A as identified in Table 1 to Subpart N.
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 emission 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.

4. The permittee shall maintain monthly records of the operating hours for this emissions unit.
- D. Reporting Requirements**

1. The permittee shall fulfill all reporting requirement as outlined in 40 CFR Part 63 Subpart A as identified in Table 1 to Subpart N. These reports shall be made to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency on or before the specified date.
2. The permittee shall prepare an ongoing compliance status report annually (unless a request to reduce frequency of ongoing compliance status reports has been approved) to the appropriate Ohio EPA District Office or local air agency 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.
  - l. The report shall be completed annually and retained on site, and made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.
3. The permittee shall submit semiannual reports if the following conditions are met:
- 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 monitoring equipment is 5 percent or greater of the total operating time.
4. The appropriate Ohio EPA District Office or local air agency 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 emissions unit.
5. 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency in writing of its intentions to make such a change. The appropriate Ohio EPA district office or local air agency 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 appropriate Ohio EPA District Office or local air 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.
    - 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.
6. The permittee shall submit annual reports which identify any exceedances of the annual operating hours limitation as well as any corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

**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(s):
- Emission Limitation -  
0.000659 lb/hour chromium combined emissions from P024, P025, P026, and P035
- Applicable Compliance Method -  
Compliance with this allowable emission rate was demonstrated in a performance test conducted on September 6, 1995 with results showing an average total chromium emission rate of 0.000347 lb/hour. Compliance is also based upon additional performance testing as specified in E.2. Ongoing compliance shall be based upon the established operating parameters for the pressure drop across the composite mesh pad control system.
- Emission Limitation -  
0.00206 TPY chromium combined emissions from P024, P025, P026 and P035
- Applicable Compliance Method -  
The 0.00206 TPY emissions limitation was developed by multiplying the 0.000659 lb/hour by a maximum annual operating schedule of 6240 hours/year. Therefore, compliance shall be based upon the 12-month summation of the operating hours times the 0.000659 lb/hour emission limitation, divided by 2,000 pounds per ton.
- Emission Limitation -  
0.00005 lb/hour sulfuric acid combined emissions from P024, P025, P026, and P035
- Applicable Compliance Method -  
Compliance with this allowable emission rate shall be determined by multiplying the maximum amount of sulfuric acid added to each of the plating tanks in emissions units P024, P025, P026, and P035 by a gassing rate of 10% and a composite mesh pad control efficiency of 90% (1 - 0.90).
- Emission Limitation -  
0.000156 TPY sulfuric acid combined emissions from P024, P025, P026 and P035
- Applicable Compliance Method -  
The 0.000156 TPY emission limitation was developed by multiplying the 0.00005 lb/hour by a maximum operating schedule of 6240 hours per year. Therefore, compliance shall be based upon the 12-month

summation of the operating hours times the 0.00005 lb/hour emission limitation, divided by 2,000 pounds per ton.

Emission Limitation -  
0.015 mg/dscm (6.6 E-06 gr/dscf) total chromium in exhaust gases

Applicable Compliance Method -  
A performance test was conducted on September 6, 1995 with results showing a chromium emission rate of 0.0063 mg/dscm. Compliance is also based upon additional performance testing as specified in E.2. Ongoing compliance shall be based upon the established operating parameters for the pressure drop across the composite mesh pad control system.

Emission Limitation -  
0.551 lb/hour particulates

Applicable Compliance Method -  
Compliance shall be determined by multiplying the AP-42 Table 12.20-1 (7/96) emission factor for hard chromium electroplating (0.25 gr/A-hr) by the maximum current of the plating bath (6425 A). This grain per hour emission rate is then divided by 7000 grains per pound to obtain the mass particulate emissions. If required, compliance with this mass emission limitation shall be based upon stack testing in accordance with OAC rule 3745-17-03(B)(10).

Emission Limitation -  
20% opacity, as a six-minute average

Applicable Compliance Method -  
Compliance shall be determined by visible emission evaluations performed in accordance with procedures specified in OAC rule 3745-17-03(B)(1) using the methods and procedures specified in USEPA Reference Method 9.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within six months after permit issuance.
- b. The emission testing shall be conducted to demonstrate compliance with the chromium emission limitation.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations" shall be used to determine the chromium concentration from hard or decorative chromium electroplating tanks or chromium anodizing tanks.

i. The sampling time and sample volume for each run of Methods 306 and 306A shall be at least 120 minutes and 1.7 dscm (60 dscf), respectively.

ii. Methods 306 and 306A allow the measurement of either total chromium or hexavalent chromium emissions. Emissions units using chromic acid baths can demonstrate compliance with the emission limits by measuring either the total chromium or hexavalent chromium concentration. Hence, the hexavalent chromium concentration measured by these methods is equal to the total chromium concentration for the affected operations.

Or, in the alternative, the California Air Resources Board (CARB) Method 425 may be used to determine the chromium concentration from hard and decorative chromium electroplating tanks and chromium anodizing tanks if the following conditions are met:

i. If a colorimetric analysis method is used, the sampling time and volume shall be sufficient to result in 33-66 micrograms of catch in the sampling train.

ii. If an Atomic Absorption Graphite Furnace (AAGF) or Ion Chromatography (with a Post-column Reactor (ICPCR) analyses) is used, the sampling time and volume should be sufficient to result in a sample catch that is 5 to 10 times the minimum detection limit of the analytical method (i.e., 1.0 microgram per liter of sample for AAGF and 0.5 microgram per liter of sample for ICPCR).

iii. A minimum of three separate runs must be conducted. The other requirements of 40 CFR Part 63.7, Subpart A must also be met.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time (s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

3. When multiple affected emissions units performing the same type of operation and subject to the same emission limitation are controlled with a common add-on air pollution control device that is also controlling emissions from emissions units not affected by the Chromium Electroplating MACT, the following procedure shall be followed to determine compliance with the emission limitation of 0.015 mg/dscm (6.6x10<sup>-6</sup> gr/dscf):

- a. Calculate the cross-sectional area of each inlet duct (i.e., uptakes from each hood) including those emissions units not subject to 40 CFR Part 63 Subpart N.

b. Determine the total sample time per test run by dividing the total inlet area from all tanks connected to the control system by the total inlet area for all ducts associated with subject emissions units, and then multiply this number by 2 hours. The calculated time is the minimum sample time required per test run.

c. Perform Method 306 testing and calculate an outlet mass emission rate.

d. Determine the total ventilation rate from the affected tanks by using the following equation:

$$VR(\text{tot}) \times [(IDA(i))/(\sum IA(\text{total}))] = VR(\text{inlet})$$

where:

VR(tot) is the average total ventilation rate in dscm/min for the three test runs as determined at the outlet by means of the Method 306 testing;

IDA(i) is the total inlet area for all ducts associated with affected tanks;

$\sum IA(\text{total})$  is the sum of all inlet duct areas from both affected and nonaffected tanks; and,

VR(inlet) is the total ventilation rate from all inlet ducts associated with affected tanks.

e. Establish the allowable mass emission rate of the system (AMR(sys)) in milligrams of total chromium per hour (mg/hr) using the following equation:

$$\sum VR(\text{inlet}) \times EL \times 60 \text{ minutes/hour} = \text{AMR}(\text{sys})$$

where:

$\sum VR(\text{inlet})$  is the total ventilation rate in dscm/min from the affected tanks, and EL is the applicable emission limitation. The allowable mass emission rate (AMR(sys)) should be equal to or greater than the outlet three-run average mass emission rate determined from Method 306 testing for the tank to be in compliance.

**F. Miscellaneous Requirements**

1. None