



8/13/2014

Certified Mail

Vince Kuty  
 CHROMIUM CORPORATION OF AMERICA  
 8701 UNION AVE.  
 CLEVELAND, OH 44105

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE  
 Facility ID: 1318001788  
 Permit Number: P0117272  
 Permit Type: Administrative Modification  
 County: Cuyahoga

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

**How to appeal this permit**

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
 77 South High Street, 17th Floor  
 Columbus, OH 43215

## **How to save money, reduce pollution and reduce energy consumption**

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: [www.ohioairquality.org/clean\\_air](http://www.ohioairquality.org/clean_air)

## **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/survey.aspx](http://www.epa.ohio.gov/survey.aspx) and give us feedback on your permitting experience. We value your opinion.

## **How to get an electronic copy of your permit**

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: CDAQ



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
CHROMIUM CORPORATION OF AMERICA**

Facility ID:	1318001788
Permit Number:	P0117272
Permit Type:	Administrative Modification
Issued:	8/13/2014
Effective:	8/13/2014
Expiration:	5/16/2023





**Division of Air Pollution Control**  
**Permit-to-Install and Operate**  
for  
CHROMIUM CORPORATION OF AMERICA

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## Authorization

Facility ID: 1318001788  
Application Number(s): M0002865  
Permit Number: P0117272  
Permit Description: PTIO administrative modification for hard chrome plating lines P008 - P022 and P025 - P027 to reflect the control equipment monitoring parameters on the basis of the manufacturer's specifications as an alternative of the pressure drop values established during initial compliance demonstration.  
Permit Type: Administrative Modification  
Permit Fee: \$1,800.00  
Issue Date: 8/13/2014  
Effective Date: 8/13/2014  
Expiration Date: 5/16/2023  
Permit Evaluation Report (PER) Annual Date: Oct 1 - Sept 30, Due Nov 15

This document constitutes issuance to:

CHROMIUM CORPORATION OF AMERICA  
8701 UNION AVE.  
CLEVELAND, OH 44105

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Cleveland Division of Air Quality  
2nd Floor  
75 Erieview Plaza  
Cleveland, OH 44114  
(216)664-2297

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Craig W. Butler  
Director



## Authorization (continued)

Permit Number: P0117272

Permit Description: PTIO administrative modification for hard chrome plating lines P008 - P022 and P025 - P027 to reflect the control equipment monitoring parameters on the basis of the manufacturer's specifications as an alternative of the pressure drop values established during initial compliance demonstration.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

**Group Name: P008-P022**

<b>Emissions Unit ID:</b>	<b>P008</b>
Company Equipment ID:	Bay No.1, Plating Tank 4
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P009</b>
Company Equipment ID:	Bay No.1, Plating Tank 5
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P010</b>
Company Equipment ID:	Bay No.1, Plating Tank 6
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P011</b>
Company Equipment ID:	Bay No.1, Plating Tank #7
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P012</b>
Company Equipment ID:	Bay No.1, Plating Tank #8
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P013</b>
Company Equipment ID:	Bay No.1, Plating Tank #9
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P014</b>
Company Equipment ID:	Bay No.2, Plating Tank #13
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P015</b>
Company Equipment ID:	Bay No.2, Plating Tank #14
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P016</b>
Company Equipment ID:	Bay No.2, Plating Tank #15
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P017</b>
Company Equipment ID:	Bay No.3, Plating Tank #16
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable



<b>Emissions Unit ID:</b>	<b>P018</b>
Company Equipment ID:	Bay No.3, Plating Tank #17
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P019</b>
Company Equipment ID:	Bay No.3, Plating Tank #18
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P020</b>
Company Equipment ID:	Bay No.3, Plating Tank #19
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P021</b>
Company Equipment ID:	Bay No.3, Plating Tank #20
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P022</b>
Company Equipment ID:	Bay No.3, Plating Tank #21
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable

**Group Name: P025-P027**

<b>Emissions Unit ID:</b>	<b>P025</b>
Company Equipment ID:	Bay No.2, Plating Tank 10
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P026</b>
Company Equipment ID:	Bay No.2, Plating Tank 11
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P027</b>
Company Equipment ID:	Bay No.2, Plating Tank 12
Superseded Permit Number:	P0112039
General Permit Category andType:	Not Applicable



**Final Permit-to-Install and Operate**  
CHROMIUM CORPORATION OF AMERICA  
**Permit Number:** P0117272  
**Facility ID:** 1318001788  
**Effective Date:** 8/13/2014

## **A. Standard Terms and Conditions**



**1. What does this permit-to-install and operate ("PTIO") allow me to do?**

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

**2. Who is responsible for complying with this permit?**

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

**3. What records must I keep under this permit?**

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

**4. What are my permit fees and when do I pay them?**

There are two fees associated with permitted air contaminant sources in Ohio:

PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

**5. When does my PTIO expire, and when do I need to submit my renewal application?**

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

**6. What happens to this permit if my project is delayed or I do not install or modify my source?**

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

**7. What reports must I submit under this permit?**

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

**8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?**

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

**9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?**

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



**10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?**

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

**11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?**

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

**12. What happens if one or more emissions units operated under this permit is/are shut down permanently?**

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.



**13. Can I transfer this permit to a new owner or operator?**

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

**14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?**

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

**15. What happens if a portion of this permit is determined to be invalid?**

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



**Final Permit-to-Install and Operate**  
CHROMIUM CORPORATION OF AMERICA  
**Permit Number:** P0117272  
**Facility ID:** 1318001788  
**Effective Date:** 8/13/2014

## **B. Facility-Wide Terms and Conditions**



1. 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).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.
2. The following emissions units contained in this permit are subject to 40 CFR Part 63, Subpart N, National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks: P008-P022 and P025 to P027. The complete NESHAP requirements, including the Subpart A General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website at <http://www.ecfr.gov> or by contacting the Cleveland Division of Air Quality (Cleveland DAQ).

The permittee must comply with all applicable requirements of 40 CFR Part 63, Subpart N. The permittee shall also comply with all applicable requirements of 40 CFR Part 63, Subpart N (General Provisions) as identified in Table 1 of 40 CFR Part 63, Subpart N. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 63, Subpart N, and Subpart A.



**Final Permit-to-Install and Operate**  
CHROMIUM CORPORATION OF AMERICA  
**Permit Number:** P0117272  
**Facility ID:** 1318001788  
**Effective Date:** 8/13/2014

## **C. Emissions Unit Terms and Conditions**



1. Emissions Unit Group -P008-P022: P008, P009, P010, P011, P012, P013, P014, P015, P016, P017, P018, P019, P020, P021, P022

EU ID	Operations, Property and/or Equipment Description
P008	Hard Chrome Plating Tank #4 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P009	Hard Chrome Plating Tank #5 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P010	Hard Chrome Plating Tank #6 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P011	Hard Chrome Plating Tank #7 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P012	Hard Chrome Plating Tank #8 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P013	Hard Chrome Plating Tank #9 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P014	Hard Chrome Plating Tank #13 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P015	Hard Chrome Plating Tank #14 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P016	Hard Chrome Plating Tank #15 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P017	Hard Chrome Plating Tank #16 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P018	Hard Chrome Plating Tank #17 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P019	Hard Chrome Plating Tank #18 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P020	Hard Chrome Plating Tank #19 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P021	Hard Chrome Plating Tank #20 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter
P022	Hard Chrome Plating Tank #21 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter

a) 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.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) PTI 13-3597 issued on 12/15/1999.	0.00113 lb/hr and 0.005 tpy Cr as mist from each emissions unit P008 – P022.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	The particulate emission limitation specified by this rule is less stringent than the emission limitation established under 40 CFR Part 63, Subpart N.
d.	40 CFR 63 Subpart N 40 CFR 63.340 – 63.348	These emissions units shall comply with all the applicable sections of 40 CFR Part 63, Subpart N.  See b)(2)a. below.
e.	40 CFR Part 63, Subpart A 40 CFR 63.1 – 63.16	Appendix containing Table 1 to Subpart N of 40 CFR Part 63 – Applicability of General Provisions to Subpart N shows which parts of the General Provisions in 40 CFR 63.1 – 63.16 apply.

(2) Additional Terms and Conditions

a. Until 9/19/14, the permittee shall not allow the concentration of total chromium emissions in the exhaust gas stream discharged from the enclosed, hard chromium electroplating tank(s), located at the large hard chromium electroplating facility, to exceed 0.015 mg/dscm ( $6.6 \times 10^{-6}$  gr/dscf). On and after 9/19/14, the permittee shall not allow the concentration of total chromium



emissions in the exhaust gas stream discharged from the enclosed, hard chromium electroplating tank(s) to exceed 0.011 mg/dscm ( $4.8 \times 10^{-6}$  gr/dscf). This limitation also applies during startup and shutdown operations.

c) Operational Restrictions

- (1) The permittee shall implement the following operational, maintenance, and work practices standards for the chromium electroplating and anodizing tanks, excluding those using a trivalent chromium bath containing a wetting agent as a component ingredient in the bath:
  - a. at all times, including periods of startup, shutdown, and malfunction, the permittee shall operate and maintain the chromium electroplating or anodizing tanks, including associated air pollution control devices and monitoring equipment, in a manner consistent with good air pollution control practices;
  - b. malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the operation and maintenance plan;
  - c. the determination of whether acceptable operation and maintenance procedures are being used shall be based on the facility records, which shall be made available to the Cleveland Division of Air Quality (Cleveland DAQ) upon request, and which may include, but is not limited to, monitoring results; review of the operation and maintenance plan, operational procedures, and records; and inspection of the tanks. Based on this information, the Cleveland DAQ may require that the permittee make changes to the operation and maintenance plan if that plan:
    - i. does not address a malfunction that has occurred;
    - ii. fails to provide for the operation of the emission units, the air pollution control techniques, or the control system and process monitoring equipment during a malfunction in a manner consistent with good air pollution practices; or
    - iii. does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques, or monitoring equipment as quickly as practicable.
  - d. the standards and limitations that apply to chromic acid baths shall not be met by using a reducing agent to change the form of chromium from hexavalent to trivalent; and
  - e. these operation and maintenance standards are enforceable independent of the emission standards.
- (2) The permittee shall utilize an operation and maintenance plan to be implemented no later than the startup of the unit or the compliance date. The plan shall include the following elements:



- a. the plan shall specify the operation and maintenance criteria for the affected source, the add-on air pollution control device, and the process and control system monitoring equipment, and shall include a standardized checklist to document the operation and maintenance of the equipment;
- b. the plan shall incorporate the operation and maintenance practices for the add-on air pollution control device(s) and monitoring equipment as identified in Table 1 to Subpart N; or if the equipment is not identified in Table 1, the operation and maintenance plan shall incorporate operation and maintenance practices;
- 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 device(s), and process and control system monitoring equipment, and for implementing corrective actions to address any malfunctions;
- e. the plan shall include housekeeping procedures as specified in Table 2 to Subpart N;
- f. 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. The revised plan shall include procedures for operating and maintaining the process equipment, add-on air pollution control device, or monitoring equipment during similar malfunction events, and a program for corrective action for such events;
- g. 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 to the regulating agency (appropriate Ohio EPA Division of Air Pollution Control, District Office or local air agency) within 2 working days following the actions performed inconsistent with the plan. This verbal report shall be followed by a letter within 7 working days following the event, unless the permittee makes alternative reporting arrangements, in advance, with the regulating agency;
- h. the permittee shall maintain the written operation and maintenance plan on record at the facility; and it shall be made readily available for inspection, at the request of the regulating agency and for the life of the tank(s). If the operation and maintenance plan is revised, the permittee shall maintain previous versions of the plan at the facility for a period of 5 years following each revision; the superseded version(s) of the plan shall also be made available for inspection, if so requested by the regulating agency; and
- 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 operation and maintenance plan requirements, as long as the alternative plans meet the requirements of 40 CFR 63.342(f)(3).

- (3) The operation and maintenance plan shall incorporate the following work practice standards for the composite mesh-pad control system; the plan shall provide procedures for:
  - a. quarterly visual inspections of the composite mesh-pad system, 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;
  - b. quarterly visual inspections of the back portion of the mesh pad closest to the fan, to ensure there is no breakthrough of chromic acid mist;
  - c. quarterly visual inspections of the ductwork from tank to the composite mesh-pad system, to ensure there are no leaks; and
  - d. washdown of the composite mesh-pads in accordance with the manufacturer's recommendations.
- (4) If a pitot tube is used for monitoring emissions, the operation and maintenance plan shall incorporate the necessary work practice standards to ensure the accuracy of the instrument. These work practice standards shall be performed at least once per quarter and shall include:
  - a. inspection of the pitot tube for damage or cracks, with replacement if any are found;
  - b. cleaning of the pitot tube, backflush or rinse with fresh water;
  - c. verification of a zero reading with a 180 degree rotation within the duct; and
  - d. a record of the findings of each inspection.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall perform the following monitoring and record keeping requirements in order to demonstrate compliance through the use of the composite mesh-pad and HEPA systems:
  - 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 limitation 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;
  - b. the permittee may conduct multiple performance tests to establish 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  $\pm 1$  inch of water column from this value as the compliant range;

- c. 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 a pressure drop range of 0.10 to 5.0 inches of water, and the CMP prefilter shall be removed for cleaning or replacement when the pressure drop exceeds 5.0 inches of water column; alternatively, the pressure drop may be operated within the range of the compliant values for pressure drop established according to b. above; and
  - d. in order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the HEPA is between 0.5 to 6.0 inches of water, and across the HEPA prefilter is a pressure drop of 0.05 to 0.5 inches of water column. The HEPA prefilter will be removed for cleaning or replacement when the pressure drop exceeds 0.5 inches of water column.
- (2) All monitoring equipment shall be operated such that representative measurements of emissions or process parameters from the affected emissions unit are obtained.

For monitoring equipment purchased from a vendor, verification of the operational status of the monitoring equipment shall include execution of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. Specifications for differential pressure measurement devices used to measure pressure drop across a control system shall be in accordance with the manufacturer's accuracy specifications.

- (3) In addition to fulfilling all record keeping requirements contained in the General Provisions to 40 CFR Part 63, Subpart A, as they apply to the chromium electroplating tank(s), the permittee shall also maintain the following records:
- a. inspection records for the add-on air pollution control device and monitoring equipment, to document that the inspection and maintenance required by the work practice standards of 40 CFR 63.342(f) and Table 1 of 40 CFR 63.342 have been performed. 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 tank(s), add-on air pollution control device, and monitoring equipment, except routine housekeeping practices;
  - 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 to minimize emissions in accordance with 40 CFR 63.342(a)(1), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation;



- e. other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the operation and maintenance plan required by 40 CFR 63.342(f)(3);
- f. test reports documenting results of all performance tests;
- g. all measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance for multiple sources controlled by a common add-on air pollution control device in accordance with the special compliance procedures of 40 CFR 63.344(e);
- h. records of monitoring data, required by 40 CFR 63.343(c) 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 chromium electroplating tank(s) during the reporting period;
- l. all documentation supporting the notifications and reports as outlined in the "Reporting Requirements" section of this permit and the general reporting requirements in 40 CFR 63.9 and 40 CFR 63.10, from Subpart A and 40 CFR 63.347; and
- m. for each tank, records of the actual cumulative rectifier capacity of hard chromium electroplating tanks expended during each month of the reporting period, and the total capacity expended to date for a reporting period, if the actual cumulative rectifier capacity is used to determine the facility size in accordance with 40 CFR 63.342(c)(2).

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

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland Division of Air Quality (Cleveland DAQ) by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.



- (2) The permittee shall fulfill all reporting requirement as outlined in 40 CFR part 63 subpart A and subpart N. These reports shall be made the USEPA-Region V Administrator, with a copy to the Cleveland DAQ 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 USEPA-Region V Administrator and the Cleveland DAQ on or before the specified date.
  
- (3) The permittee has submitted or shall submit to the USEPA-Region V Administrator, with a copy to the Cleveland DAQ an initial notification report, upon issuance of this permit. The Initial Notification Reporting shall include the following information:
  - a. the permittee's name, title, and address;
  - b. the address (i.e., physical location) or proposed address of the affected chromium electroplating tank(s) if different from the permittee's;
  - c. a notification of intention to construct or make any physical or operational changes to an affected tank that may meet or has been determined to meet the criteria for a reconstruction as defined in 40 CFR 63.2;
  - d. an identification of 40 CFR Part 63, Subpart N as the basis for the notification and if the facility is a major or area source;
  - e. identification of the applicable emission limitations and compliance date;
  - f. the expected commencement and completion dates of the construction or reconstruction, or the date of installation if installed;
  - g. the anticipated date of (initial) startup, or date of startup if installed;
  - h. a description of each tank and the type of process operation to be performed (hard or decorative chromium electroplating or chromium anodizing);
  - i. a description of the air pollution control method to be used to control emissions, such as preliminary design drawings and design capacity if an add-on air pollution control device is used;
  - j. an estimate of emissions based on engineering calculations and vendor information on control device efficiency, expressed in units consistent with the emissions limits of 40 CFR Part 63, Subpart N (calculations of emission estimates should be in sufficient detail to permit assessment of the validity of the calculations);
  - k. the maximum potential cumulative potential rectifier capacity;
  - l. a statement of whether the tank(s) is/are located at a small or a large, hard chromium electroplating facility and whether this will be demonstrated through actual or maximum potential cumulative rectifier capacity;



- m. a statement of whether the permittee will limit the maximum potential cumulative rectifier capacity, in accordance with 40 CFR 63.342(c)(2), such that the hard chromium electroplating facility is considered small;
  - n. if the tank(s) is/are undergoing reconstruction, a brief description of the affected tank(s) and the components to be replaced; and
  - o. a brief description of the present and proposed emission control method.
- (4) The permittee shall submit a "Notification of Performance Test" or "Intent to Test" to the Cleveland DAQ at least 60 calendar days before the performance test is scheduled. The permittee shall notify the Cleveland DAQ as soon as practicable if the performance test cannot be conducted as scheduled, and shall specify the date it will be rescheduled (provisions of 40 CFR 63.7(b)(2)).
- (5) The permittee shall submit a "Notification of Compliance Status Report" to USEPA-Region V Administrator, with a copy to the Cleveland DAQ 90 days after the performance test is completed, signed by the responsible official who shall certify its accuracy, attesting to whether the affected chromium electroplating tanks are in compliance. The notification shall include the following information for each chromium electroplating tank subject to the NESHAP:
- a. the applicable emission limitations and the methods that were used to determine compliance with this limitation;
  - b. if a performance test is required, the test report documenting the results of the performance test, which includes the elements required in the Test Requirements section of this permit, including measurements and calculations to support special compliance provisions for multiple emissions units controlled by a common add-on air pollution control device;
  - c. if multiple emissions units are controlled by a common add-on air pollution control device, the calculations used to demonstrate compliance for multiple sources controlled by a common add-on air pollution control device, i.e., the type and quantity of hazardous air pollutants emitted by each emission unit, using the special provisions of 40 CFR 63.344(e), reported in mg/dscm or mg/hr;
  - d. the rectifier capacity of the tank;
  - e. for each monitored parameter for which a compliant value was established, the specific operating parameter value, or range of values, that corresponds to compliance with the applicable emission limit;
  - f. the methods that will be used to determine continuous compliance;
  - g. a description of the air pollution control technique used for each emission point;
  - h. a statement that the permittee has completed and has on file the operation and maintenance plan as required by the work practice standards; and
  - i. a statement by the permittee as to whether the tanks are in compliance.



The permittee shall have sufficient data to establish the operating parameter value(s) that corresponds to compliance as required for continuous compliance monitoring. Reports of performance test results shall be submitted in the "Notification of Compliance Status Report" no later than 90 days following the completion of the compliance demonstration required by 40 CFR 63.7 and 40 CFR 63.343(b). Sources not required to complete a performance test shall submit the compliance status report no later than 30 days following the applicable compliance date identified in 40 CFR 63.343(a).

- (6) The permittee shall report to the USEPA-Region V Administrator, with a copy to the Cleveland DAQ, the results of any performance test conducted. The report shall be submitted no later than 90 days following the completion of the performance test, and shall be submitted as part of the notification of compliance status report required by this section.
- (7) The permittee shall prepare an ongoing compliance status report annually to document the ongoing compliance status of the emissions unit. The report shall be completed annually and retained on site, and made available to the Cleveland DAQ upon request. 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. a description of the type of process performed in the emissions units;
  - f. the total operating time of the emissions unit during the reporting period;
  - g. a summary of operating parameter values, including the total duration of excess emissions during the reporting period as indicated by those values, the total duration of excess emissions expressed as a percent of the total emissions unit operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to process upsets, control equipment malfunctions, other known causes, and unknown causes;
  - h. 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;
  - i. 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;
- j. a description of any changes in monitoring, processes or controls since the last reporting period;
  - k. the name, title, and signature, of the responsible official who is certifying the accuracy of the report;
  - l. the date of the report;
  - m. the actual cumulative amperage/generator capacity expended during the reporting period, on a month-by-month basis; and
  - n. the report shall be completed annually and retained on site, and made available to the Cleveland DAQ upon request.
- (8) 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.
- (9) Once the permittee reports an exceedance, ongoing compliance status reports shall be submitted semiannually until a request to reduce reporting frequency is approved.
- (10) The USEPA-Region V Administrator or Cleveland DAQ 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 units.
- (11) 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; and
  - c. the Cleveland DAQ 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 Cleveland DAQ in writing of its intentions to make such a change. The Cleveland DAQ 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 Cleveland DAQ 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; and
  - 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.
- (12) The permittee shall submit a notification of construction or reconstruction as soon as practicable before the construction or reconstruction has commenced to the Cleveland DAQ which includes the following:
  - a. the permittee's name, title, and address;
  - b. the address (i.e., physical location) or proposed address of the affected emissions unit if different from the permittee's;
  - c. a notification of intention to construct or make any physical or operational changes to an affected emissions unit that may meet or has been determined to meet the criteria for a reconstruction as defined in 40 CFR part 63.2;
  - d. an identification of 40 CFR part 63, subpart N as the basis for the notification;
  - e. the expected commencement and completion dates of the construction or reconstruction;
  - f. the anticipated date of (initial) startup;
  - g. the type of process operation to be performed (hard or decorative chromium electroplating or chromium anodizing);
  - h. a description of the air pollution control technique to be used to control emissions such as preliminary design drawings and design capacity if an add-on air pollution control device is used; and
  - i. an estimate of emissions based on engineering calculations and vendor information on control device efficiency, expressed in units consistent with the



emissions limits of 40.CFR Part 63, subpart N. Calculations of emission estimates should be in sufficient detail to permit assessment of the validity of the calculations.

- (13) If a reconstruction is to occur, the permittee shall submit as soon as practicable the following information to the Cleveland DAQ:
- 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; and
  - 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 Cleveland DAQ satisfaction that the technical or economic limitations affected the emissions unit ability to comply with the relevant standard and how they do so.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emission Limitation:  
0.005 TPY of chromium emissions  
  
Applicable Compliance Method:  
Compliance shall be demonstrated through calculation of annual chromium emissions using the lbs/hr emission rate determined during the most recent compliance performance test (or the allowable lbs/hrs if testing has not yet been conducted) times the actual operating hours of a calendar year divided by 2000 pounds/ton.
  - b. Emission Limitation:  
Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.  
  
Applicable Compliance Method:  
If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.



c. Emission Limitation:

Before 9/19/14:

0.015 mg/dscm ( $6.6 \times 10^{-6}$  gr/dscf); or the maximum allowable mass emission rate calculated for MAMER in accordance with 40 CFR 63.344(f)(1)(i):  
 $MAMER = ETSA \times K \times 0.015 \text{ mg/dscm}$

On and after 9/19/14:

0.011 mg/dscm ( $4.8 \times 10^{-6}$  gr/dscf); or the maximum allowable mass emission rate calculated for MAMER in accordance with 40 CFR 63.344(f)(1)(i):  
 $MAMER = ETSA \times K \times 0.011 \text{ mg/dscm}$

Where:

MAMER = the alternative emission rate for enclosed hard chromium electroplating tanks in mg/hr.

ETSA = the hard chromium electroplating tank surface area in square feet ( $\text{ft}^2$ ).

K = a conversion factor,  $425 \text{ dscm}/(\text{ft}^2 \times \text{hr})$ .

Applicable Compliance Method:

The permittee has conducted stack tests in 1997 and 2000, and demonstrated compliance with the rule requirements according to paragraph 63.344 of 40 CFR Part 63 Subpart N. A stack test is not required at this time. If required, the permittee shall conduct, emission testing for this emissions unit in accordance with the following requirements, in order to demonstrate compliance with the chromium emission limitation contained in this permit:

One of the following test methods shall be employed to demonstrate compliance:

- i. Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations", from Appendix A of Part 63, shall be used to determine the chromium concentration from the chromium electroplating tank(s), and testing must meet the following requirements:
  - (a) the sampling time and sample volume for each run of Methods 306 and 306A shall be at least 120 minutes and 1.70 dscm (60 dscf), respectively;
  - (b) Methods 306 and 306A allow the measurement of either total chromium or hexavalent chromium emissions;
  - (c) for chromic acid baths compliance must be demonstrated by measuring total chromium; and
  - (d) A minimum of three separate runs of the test method must be conducted in order to demonstrate compliance. All the applicable



performance testing requirements of 40 CFR 63.7 must also be met.

- ii. The California Air Resources Board (CARB) Method 425 shall be used to determine the chromium concentration from the electroplating tank(s) if the following conditions are met:
    - (a) 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;
    - (b) 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); and
    - (c) a minimum of three separate runs of the test method must be conducted in order to demonstrate compliance. All the applicable performance testing requirements of 40 CFR 63.7 must also be met.
- (2) Performance test results shall be documented in complete test reports that contain the following information:
- a. a brief process description;
  - b. sampling location description(s);
  - c. a description of sampling and analytical procedures and any modifications to standard procedures;
  - d. test results;
  - e. quality assurance procedures and results;
  - f. records of operating conditions during testing, preparation of standards, and calibration procedures;
  - g. raw data sheets for field sampling and field and laboratory analyses;
  - h. documentation of calculations; and
  - i. any other information required by the test method.

The test plan shall be made available to the Cleveland DAQ prior to testing, if requested.

The results of tests conducted prior to December 1991, in which Method 306A was used to demonstrate the performance of a control technique, are not acceptable.



- (3) All monitoring equipment shall be operated such that representative measurements of emissions or process parameters from the affected emissions unit are obtained. For monitoring equipment purchased from a vendor, verification of the operational status of the monitoring equipment shall include execution of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.
- (4) The permittee shall measure the pressure drop across the add-on air pollution control device in accordance with the following guidelines:
  - a. Pressure taps shall be installed at any of the following locations:
    - i. at the inlet and outlet of the control system. The inlet tap should be installed in the ductwork just prior to the control device and the corresponding outlet pressure tap should be installed on the outlet side of the control device prior to the blower or on the downstream side of the blower;
    - ii. on each side of the packed bed within the control system or on each side of each mesh pad within the control system; and
    - iii. on the front side of the first mesh pad and back side of the last mesh pad within the control system.
  - b. Pressure taps shall be sited at locations that are:
    - i. as free from pluggage as possible and away from any flow disturbances such as cyclonic demisters; and
    - ii. situated such that no air infiltration at the measurement site will occur that could bias the measurement;
  - c. pressure taps shall be constructed of either polyethylene, polybutylene, or other nonreactive materials;
  - d. nonreactive plastic tubing shall be used to connect the pressure taps to the device used to measure pressure drop;
  - e. any of the following pressure gauges can be used to monitor pressure drop: a magnehelic gauge, an included manometer, or a "U" tube manometer; and
  - f. prior to connecting any pressure lines to the pressure gauge(s), each gauge shall be zeroed. No calibration of the pressure gauges is required.
- (5) When multiple affected emissions units performing the same type of operation (e.g., all are performing hard chromium electroplating), and subject to the same emission limitations, are controlled with an add-on air pollution control device that is not controlling emissions from any other type of affected operation or from any nonaffected emissions unit, the emission limitation of 0.015 mg/dscm ( $6.6 \times 10^{-6}$  gr/dscf) must be met at the outlet of the add-on air pollution control device.



g) Miscellaneous Requirements

(1) Stack test was performed on:

- a. June 13, 1997 Bay #2 (tanks 10, 11 & 12) stack and the emission rate was determined to be 0.0001367 lbs/hr and 0.0027531 mg/dscm(0.000001167 gr/dscfm).
- b. June 20-22, 2000, [Bay 1, Bay 2 and By 3, on stacks designated as A and B for each Bay - P008-P022 & P025-P027(the then P003)] and the emission rate was determined to be as follows:

Bay	Stack	Average Chromium concentration (mg/dscm)	Average Chromium Emission Rate (lbs/hr)
#1 P008-P013 (tanks 4-9)	A	0.00086	0.000042
	B	0.00127	0.000048
#2 P003, P014-P016 (tanks 10-15)	A	0.00125	0.000049
	B	0.00099	0.000043
#3 P017-P022 (tanks 16-21)	A	0.00086	0.000031
	B	0.00079	0.000028

- (2) Emissions units P008 - P022 were installed in 1999.



**2. Emissions Unit Group -P025-P027: P025, P026, P027**

EU ID	Operations, Property and/or Equipment Description
P025	Hard Chrome Plating Tank #10 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter.
P026	Hard Chrome Plating Tank #11 controlled by composite mesh-pad (CMP), HEPA prefilter, and HEPA filter
P027	Hard Chrome Plating Tank #12 controlled by composite mesh-pad (CMP), HEPA prefilter and HEPA filter

a) 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.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)	The particulate emission limitation specified by this rule is less stringent than the emission limitation established under 40 CFR Part 63, Subpart N.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	40 CFR 63 Subpart N 40 CFR 63.340 – 63.348	These emissions units shall comply with all the applicable sections of 40 CFR Part 63, Subpart N.  See b)(2)a. below.
d.	40 CFR Part 63, Subpart A 40 CFR 63.1 – 63.16	Appendix containing Table 1 to Subpart N of 40 CFR Part 63 – Applicability of General Provisions to Subpart N shows which parts of the General Provisions in 40 CFR 63.1 – 63.16 apply.

(2) Additional Terms and Conditions

a. Until 9/19/14, the permittee shall not allow the concentration of total chromium emissions in the exhaust gas stream discharged from the enclosed, hard chromium electroplating tank(s), located at the large hard chromium electroplating facility, to exceed 0.015 mg/dscm ( $6.6 \times 10^{-6}$  gr/dscf). On and after 9/19/14, the permittee shall not allow the concentration of total chromium emissions in the exhaust gas stream discharged from the enclosed, hard chromium electroplating tank(s) to exceed 0.011 mg/dscm ( $4.8 \times 10^{-6}$  gr/dscf). This limitation also applies during startup and shutdown operations.

c) Operational Restrictions

(1) The permittee shall implement the following operational, maintenance, and work practices standards for the chromium electroplating and anodizing tanks, excluding those using a trivalent chromium bath containing a wetting agent as a component ingredient in the bath:

- a. at all times, including periods of startup, shutdown, and malfunction, the permittee shall operate and maintain the chromium electroplating or anodizing tanks, including associated air pollution control devices and monitoring equipment, in a manner consistent with good air pollution control practices;
- b. malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the operation and maintenance plan;
- c. the determination of whether acceptable operation and maintenance procedures are being used shall be based on the facility records, which shall be made available to the Cleveland Division of Air Quality (Cleveland DAQ) upon request, and which may include, but is not limited to, monitoring results; review of the operation and maintenance plan, operational procedures, and records; and inspection of the tanks. Based on this information, the Cleveland DAQ may require that the permittee make changes to the operation and maintenance plan if that plan:



- i. does not address a malfunction that has occurred;
  - ii. fails to provide for the operation of the emission units, the air pollution control techniques, or the control system and process monitoring equipment during a malfunction in a manner consistent with good air pollution practices; or
  - iii. does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques, or monitoring equipment as quickly as practicable.
- d. the standards and limitations that apply to chromic acid baths shall not be met by using a reducing agent to change the form of chromium from hexavalent to trivalent; and
- e. these operation and maintenance standards are enforceable independent of the emission standards.
- (2) The permittee shall prepare an operation and maintenance plan to be implemented no later than the startup of the unit or the compliance date. The plan shall include the following elements:
- a. the plan shall specify the operation and maintenance criteria for the affected source, the add-on air pollution control device, and the process and control system monitoring equipment, and shall include a standardized checklist to document the operation and maintenance of the equipment;
  - b. the plan shall incorporate the operation and maintenance practices for the add-on air pollution control device(s) and monitoring equipment as identified in Table 1 to Subpart N; or if the equipment is not identified in Table 1, the operation and maintenance plan shall incorporate operation and maintenance practices;
  - 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 device(s), and process and control system monitoring equipment, and for implementing corrective actions to address any malfunctions;
  - e. the plan shall include housekeeping procedures as specified in Table 2 to Subpart N;
  - f. 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. The revised plan shall include procedures for operating and maintaining the process equipment, add-on air





- b. cleaning of the pitot tube, backflush or rinse with fresh water;
  - c. verification of a zero reading with a 180 degree rotation within the duct; and
  - d. a record of the findings of each inspection.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall perform the following monitoring and record keeping requirements in order to demonstrate compliance through the use of the composite mesh-pad and/or HEPA systems:
    - 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 limitation 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;
    - b. the permittee may conduct multiple performance tests to establish 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  $\pm 1$  inch of water column from this value as the compliant range;
    - c. 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 a pressure drop range of 0.10 to 5.0 inches of water, and the CMP prefilter shall be removed for cleaning or replacement when the pressure drop exceeds 5.0 inches of water column; alternatively, the pressure drop may be operated within the range of compliant values for pressure drop established according to b. above; and
    - d. in order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the HEPA is between 0.5 to 6.0 inches of water, and across the HEPA prefilter is a pressure drop of 0.05 to 0.5 inches of water column. The HEPA prefilter will be removed for cleaning or replacement when the pressure drop exceeds 0.5 inches of water column.
  - (2) All monitoring equipment shall be operated such that representative measurements of emissions or process parameters from the affected emissions unit are obtained.

For monitoring equipment purchased from a vendor, verification of the operational status of the monitoring equipment shall include execution of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. Specifications for differential pressure measurement devices used to measure pressure drop across a control system shall be in accordance with the manufacturer's accuracy specifications.



- (3) In addition to fulfilling all record keeping requirements contained in the General Provisions to 40 CFR Part 63, Subpart A, as they apply to the chromium electroplating tank(s), the permittee shall also maintain the following records:
- a. inspection records for the add-on air pollution control device and monitoring equipment, to document that the inspection and maintenance required by the work practice standards of 40 CFR 63.342(f) and Table 1 of 40 CFR 63.342 have been performed. 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 tank(s), add-on air pollution control device, and monitoring equipment, except routine housekeeping practices;
  - 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 to minimize emissions in accordance with 40 CFR 63.342(a)(1), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation;
  - e. other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the operation and maintenance plan required by 40 CFR 63.342(f)(3);
  - f. test reports documenting results of all performance tests;
  - g. all measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance for multiple sources controlled by a common add-on air pollution control device in accordance with the special compliance procedures of 40 CFR 63.344(e);
  - h. records of monitoring data, required by 40 CFR 63.343(c) 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 chromium electroplating tank(s) during the reporting period;



- I. all documentation supporting the notifications and reports as outlined in the "Reporting Requirements" section of this permit and the general reporting requirements in 40 CFR 63.9 and 40 CFR 63.10, from Subpart A and 40 CFR 63.347; and
- m. for each tank, records of the actual cumulative rectifier capacity of hard chromium electroplating tanks expended during each month of the reporting period, and the total capacity expended to date for a reporting period, if the actual cumulative rectifier capacity is used to determine the facility size in accordance with 40 CFR 63.342(c)(2). .

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

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland Division of Air Quality (Cleveland DAQ) by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall fulfill all reporting requirement as outlined in 40 CFR part 63 subpart A and subpart N. These reports shall be made the USEPA-Region V Administrator, with a copy to the Cleveland DAQ 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 USEPA-Region V Administrator and the Cleveland DAQ on or before the specified date.
- (3) The permittee has submitted or shall submit to the USEPA-Region V Administrator, with a copy to the Cleveland DAQ an initial notification report, upon issuance of this permit. The Initial Notification Reporting shall include the following information:
  - a. the permittee's name, title, and address;
  - b. the address (i.e., physical location) or proposed address of the affected chromium electroplating tank(s) if different from the permittee=s;
  - c. a notification of intention to construct or make any physical or operational changes to an affected tank that may meet or has been determined to meet the criteria for a reconstruction as defined in 40 CFR 63.2;
  - d. an identification of 40 CFR Part 63, Subpart N as the basis for the notification and if the facility is a major or area source;
  - e. identification of the applicable emission limitations and compliance date;



- f. the expected commencement and completion dates of the construction or reconstruction, or the date of installation if installed;
  - g. the anticipated date of (initial) startup, or date of startup if installed;
  - h. a description of each tank and the type of process operation to be performed (hard or decorative chromium electroplating or chromium anodizing);
  - i. a description of the air pollution control method to be used to control emissions, such as preliminary design drawings and design capacity if an add-on air pollution control device is used;
  - j. an estimate of emissions based on engineering calculations and vendor information on control device efficiency, expressed in units consistent with the emissions limits of 40 CFR Part 63, Subpart N (calculations of emission estimates should be in sufficient detail to permit assessment of the validity of the calculations);
  - k. the maximum potential cumulative potential rectifier capacity;
  - l. a statement of whether the tank(s) is/are located at a small or a large, hard chromium electroplating facility and whether this will be demonstrated through actual or maximum potential cumulative rectifier capacity;
  - m. a statement of whether the permittee will limit the maximum potential cumulative rectifier capacity, in accordance with 40 CFR 63.342(c)(2), such that the hard chromium electroplating facility is considered small;
  - n. if the tank(s) is/are undergoing reconstruction, a brief description of the affected tank(s) and the components to be replaced; and
  - o. a brief description of the present and proposed emission control method.
- (4) The permittee shall submit a "Notification of Performance Test" or "Intent to Test" to the Cleveland DAQ at least 60 calendar days before the performance test is scheduled. The permittee shall notify the Cleveland DAQ as soon as practicable if the performance test cannot be conducted as scheduled, and shall specify the date it will be rescheduled (provisions of 40 CFR 63.7(b)(2)).
- (5) The permittee shall submit a "Notification of Compliance Status Report" to USEPA-Region V Administrator, with a copy to the Cleveland DAQ 90 days after the performance test is completed, signed by the responsible official who shall certify its accuracy, attesting to whether the affected chromium electroplating tanks are in compliance. The notification shall include the following information for each chromium electroplating tank subject to the NESHAP:
- a. the applicable emission limitations and the methods that were used to determine compliance with this limitation;
  - b. if a performance test is required, the test report documenting the results of the performance test, which includes the elements required in the Test



Requirements section of this permit, including measurements and calculations to support special compliance provisions for multiple emissions units controlled by a common add-on air pollution control device;

- c. if multiple emissions units are controlled by a common add-on air pollution control device, the calculations used to demonstrate compliance for multiple sources controlled by a common add-on air pollution control device, i.e., the type and quantity of hazardous air pollutants emitted by each emission unit, using the special provisions of 40 CFR 63.344(e), reported in mg/dscm or mg/hr;
- d. the rectifier capacity of the tank;
- e. for each monitored parameter for which a compliant value was established, the specific operating parameter value, or range of values, that corresponds to compliance with the applicable emission limit;
- f. the methods that will be used to determine continuous compliance;
- g. a description of the air pollution control technique used for each emission point;
- h. a statement that the permittee has completed and has on file the operation and maintenance plan as required by the work practice standards; and
- i. a statement by the permittee as to whether the tanks are in compliance.

The permittee shall have sufficient data to establish the operating parameter value(s) that corresponds to compliance as required for continuous compliance monitoring. Reports of performance test results shall be submitted in the "Notification of Compliance Status Report" no later than 90 days following the completion of the compliance demonstration required by 40 CFR 63.7 and 40 CFR 63.343(b). Sources not required to complete a performance test shall submit the compliance status report no later than 30 days following the applicable compliance date identified in 40 CFR 63.343(a).

- (6) The permittee shall report to the USEPA-Region V Administrator, with a copy to the Cleveland DAQ, the results of any performance test conducted. The report shall be submitted no later than 90 days following the completion of the performance test, and shall be submitted as part of the notification of compliance status report required by this section.
- (7) The permittee shall prepare an ongoing compliance status report annually to document the ongoing compliance status of the emissions unit. The report shall be completed annually and retained on site, and made available to the Cleveland DAQ upon request. 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. a description of the type of process performed in the emissions units;
  - f. the total operating time of the emissions unit during the reporting period;
  - g. a summary of operating parameter values, including the total duration of excess emissions during the reporting period as indicated by those values, the total duration of excess emissions expressed as a percent of the total emissions unit operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to process upsets, control equipment malfunctions, other known causes, and unknown causes;
  - h. 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;
  - i. 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;
  - j. a description of any changes in monitoring, processes or controls since the last reporting period;
  - k. the name, title, and signature, of the responsible official who is certifying the accuracy of the report;
  - l. the date of the report;
  - m. the actual cumulative amperage/generator capacity expended during the reporting period, on a month-by-month basis; and
  - n. the report shall be completed annually and retained on site, and made available to the Cleveland DAQ upon request.
- (8) 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.
- (9) Once the permittee reports an exceedance, ongoing compliance status reports shall be submitted semiannually until a request to reduce reporting frequency is approved.



- (10) The USEPA-Region V Administrator or Cleveland DAQ 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 units.
- (11) 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; and
  - c. the Cleveland DAQ 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 Cleveland DAQ in writing of its intentions to make such a change. The Cleveland DAQ 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 Cleveland DAQ 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; and
    - 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.
- (12) The permittee shall submit a notification of construction or reconstruction as soon as practicable before the construction or reconstruction has commenced to the Cleveland DAQ which includes the following:
- a. the permittee's name, title, and address;



- b. the address (i.e., physical location) or proposed address of the affected emissions unit if different from the permittee's;
  - c. a notification of intention to construct or make any physical or operational changes to an affected emissions unit that may meet or has been determined to meet the criteria for a reconstruction as defined in 40 CFR part 63.2;
  - d. an identification of 40 CFR part 63, subpart N as the basis for the notification;
  - e. the expected commencement and completion dates of the construction or reconstruction;
  - f. the anticipated date of (initial) startup;
  - g. the type of process operation to be performed (hard or decorative chromium electroplating or chromium anodizing);
  - h. a description of the air pollution control technique to be used to control emissions such as preliminary design drawings and design capacity if an add-on air pollution control device is used; and
  - i. an estimate of emissions based on engineering calculations and vendor information on control device efficiency, expressed in units consistent with the emissions limits of 40.CFR Part 63, subpart N. Calculations of emission estimates should be in sufficient detail to permit assessment of the validity of the calculations.
- (13) If a reconstruction is to occur, the permittee shall submit as soon as practicable the following information to the Cleveland DAQ:
- 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; and
  - 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 Cleveland DAQ satisfaction that the technical or economic limitations affected the emissions unit ability to comply with the relevant standard and how they do so.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emission Limitation:

Before 9/19/14:

0.015 mg/dscm ( $6.6 \times 10^{-6}$  gr/dscf); or the maximum allowable mass emission rate calculated for MAMER in accordance with 40 CFR 63.344(f)(1)(i):  
 $MAMER = ETSA \times K \times 0.015$  mg/dscm

On and after 9/19/14:

0.011 mg/dscm ( $4.8 \times 10^{-6}$  gr/dscf); or the maximum allowable mass emission rate calculated for MAMER in accordance with 40 CFR 63.344(f)(1)(i):  
 $MAMER = ETSA \times K \times 0.011$  mg/dscm

Where:

MAMER = the alternative emission rate for enclosed hard chromium electroplating tanks in mg/hr.

ETSA = the hard chromium electroplating tank surface area in square feet (ft<sup>2</sup>).

K = a conversion factor, 425 dscm/(ft<sup>2</sup> x hr).

Applicable Compliance Method:

The permittee has conducted stack tests in 1997 and 2000, and demonstrated compliance with the rule requirements according to paragraph 63.344 of 40 CFR Part 63 Subpart N. A stack test is not required at this time. If required, the permittee shall conduct emission testing for this emissions unit in accordance with the following requirements, in order to demonstrate compliance with the chromium emission limitation contained in this permit:

One of the following test methods shall be employed to demonstrate compliance:

- i. Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations", from Appendix A of Part 63, shall be used to determine the chromium concentration from the chromium electroplating tank(s), and testing must meet the following requirements:
  - (a) the sampling time and sample volume for each run of Methods 306 and 306A shall be at least 120 minutes and 1.70 dscm (60 dscf), respectively;
  - (b) Methods 306 and 306A allow the measurement of either total chromium or hexavalent chromium emissions;
  - (c) for chromic acid baths compliance must be demonstrated by measuring total chromium; and
  - (d) A minimum of three separate runs of the test method must be conducted in order to demonstrate compliance. All the applicable



performance testing requirements of 40 CFR 63.7 must also be met.

- ii. The California Air Resources Board (CARB) Method 425 shall be used to determine the chromium concentration from the electroplating tank(s) if the following conditions are met:
  - (a) 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;
  - (b) 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); and
  - (c) a minimum of three separate runs of the test method must be conducted in order to demonstrate compliance. All the applicable performance testing requirements of 40 CFR 63.7 must also be met.

b. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

- (2) Performance test results shall be documented in complete test reports that contain the following information:
  - a. a brief process description;
  - b. sampling location description(s);
  - c. a description of sampling and analytical procedures and any modifications to standard procedures;
  - d. test results;
  - e. quality assurance procedures and results;
  - f. records of operating conditions during testing, preparation of standards, and calibration procedures;



- g. raw data sheets for field sampling and field and laboratory analyses;
- h. documentation of calculations; and
- i. any other information required by the test method.

The test plan shall be made available to the Cleveland DAQ prior to testing, if requested.

The results of tests conducted prior to December 1991, in which Method 306A was used to demonstrate the performance of a control technique, are not acceptable.

- (3) All monitoring equipment shall be operated such that representative measurements of emissions or process parameters from the affected emissions unit are obtained. For monitoring equipment purchased from a vendor, verification of the operational status of the monitoring equipment shall include execution of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.
- (4) The permittee shall measure the pressure drop across the add-on air pollution control device in accordance with the following guidelines:
  - a. Pressure taps shall be installed at any of the following locations:
    - i. at the inlet and outlet of the control system. The inlet tap should be installed in the ductwork just prior to the control device and the corresponding outlet pressure tap should be installed on the outlet side of the control device prior to the blower or on the downstream side of the blower;
    - ii. on each side of the packed bed within the control system or on each side of each mesh pad within the control system; and
    - iii. on the front side of the first mesh pad and back side of the last mesh pad within the control system;
  - b. Pressure taps shall be sited at locations that are:
    - i. as free from pluggage as possible and away from any flow disturbances such as cyclonic demisters; and
    - ii. situated such that no air infiltration at the measurement site will occur that could bias the measurement;
  - c. pressure taps shall be constructed of either polyethylene, polybutylene, or other nonreactive materials;
  - d. nonreactive plastic tubing shall be used to connect the pressure taps to the device used to measure pressure drop;
  - e. any of the following pressure gauges can be used to monitor pressure drop: a magnehelic gauge, an included manometer, or a "U" tube manometer; and



f. prior to connecting any pressure lines to the pressure gauge(s), each gauge shall be zeroed. No calibration of the pressure gauges is required.

(5) When multiple affected emissions units performing the same type of operation (e.g., all are performing hard chromium electroplating), and subject to the same emission limitations, are controlled with an add-on air pollution control device that is not controlling emissions from any other type of affected operation or from any nonaffected emissions unit, the emission limitation of 0.015 mg/dscm ( $6.6 \times 10^{-6}$  gr/dscf) must be met at the outlet of the add-on air pollution control device .

g) Miscellaneous Requirements

(1) Stack test was performed on:

- a. June 13, 1997 Bay #2 (tanks 10, 11 & 12) stack and the emission rate was determined to be 0.0001367 lbs/hr and 0.0027531 mg/dscm(0.000001167 gr/dscfm).
- b. June 20-22, 2000, [Bay 1, Bay 2 and By 3, on stacks designated as A and B for each Bay - P008-P022 & P025-P027(the then P003)] and the emission rate was determined to be as follows:

Bay	Stack	Average Chromium concentration (mg/dscm)	Average Chromium Emission Rate (lbs/hr)
<b>#1</b> P008-P013 (tanks 4-9)	A	0.00086	0.000042
	B	0.00127	0.000048
<b>#2</b> P003, P014-P016 (tanks 10-15)	A	0.00125	0.000049
	B	0.00099	0.000043
<b>#3</b> P017-P022 (tanks 16-21)	A	0.00086	0.000031
	B	0.00079	0.000028

(2) Emissions units P025, P026, and P027 were previously identified as P003 and were installed in 1956.