John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

11/5/2013

Certified Mail

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

Mrs. JULIE LOWRY
Electrolizing Corporation of Ohio
5340 Avion Park Drive
Highland Heights, OH 44143-1917

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1318183358
Permit Number: P0114931
Permit Type: Initial Installation
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

How to give us feedback on your permitting experience

Please complete a survey at 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 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)664-2297or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

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
Electrolizing Corporation of Ohio

Facility ID:	1318183358
Permit Number:	P0114931
Permit Type:	Initial Installation
Issued:	11/5/2013
Effective:	11/5/2013
Expiration:	8/25/2019

Division of Air Pollution Control
Permit-to-Install and Operate
for
Electrolizing Corporation of Ohio

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Authorization

Facility ID:	1318183358
Application Number(s):	A0047947
Permit Number:	P0114931
Permit Description:	Initial PTIO for hard chrome plating lines (P006-P009) using hexavalent chrome. Emissions are controlled with composite mesh-pad system. The plating lines are considered as "existing" emissions units as defined in 40 CFR Part 63 Subpart N. These plating lines were installed in September of 1997.
Permit Type:	Initial Installation
Permit Fee:	$1,600.00
Issue Date:	11/5/2013
Effective Date:	11/5/2013
Expiration Date:	8/25/2019

Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Electrolizing Corporation of Ohio
1325 EAST 152ND ST.
East Cleveland, OH 44112-2014

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

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0114931
Permit Description: Initial PTIO for hard chrome plating lines (P006-P009) using hexavalent chrome. Emissions are controlled with composite mesh-pad system. The plating lines are considered as "existing" emissions units as defined in 40 CFR Part 63 Subpart N. These plating lines were installed in September of 1997.

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

Emissions Unit ID:	**P006**
Company Equipment ID:	Hard Chrome Platine Line #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P007**
Company Equipment ID:	Hard Chrome Plating Line #2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P008**
Company Equipment ID:	Hard Chrome Plating Line #3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P009**
Company Equipment ID:	Hard Chrome Plating Line #4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

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 beingpermanently shut down without first applying for and obtaining a permit pursuantto 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.

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) B.2.

2. The following emissions units contained in this permit 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: P006, P007, P008 and P009. 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://ecfr.gpoaccess.gov or by contacting the Cleveland Division of Air Quality (CDAQ).

   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.

C. Emissions Unit Terms and Conditions

1. P006, Hard Chrome Platine Line #1

Operations, Property and/or Equipment Description:

Hard Chrome Platine Line #1. Emissions are controlled by compostitemeshpadsyststem #1. 10,500 amperes.

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)	Chromium emissions shall not exceed 0.0032 ton/yr. Visible particulate emissions from the stacks serving this emissions unit shall not exceed 5% opacity as a six-minute average. The requirements of this rule include compliance with the requirements of 40 CFR Part 63, Subpart N.
b.	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	The particulate emission limit specified by this rule is less stringent than the emission limit established by 40 CFR Part 63, Subpart N.
d.	40 CFR Part 63, Subpart N [In accordance with 40 CFR 63.340 this emission unit is an existing hard chrome electroplating tank subject to the emissions limitations/control measures specified in this section.]	Chromium emissions shall not exceed 0.011 mg/dscm (4.8 x 10^{-6} gr/dscf). See Section B.2. See b)(2)a., c)(2), d)(1), e)(3), and f)(2) below.
e.	40 CFR 63.1-16	Appendix B 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 63.1-16 apply.

(2) Additional Terms and Conditions

a. After 9/21/15 perfluorooctane sulfonic acid (PFOD)-based fume suppressants (containing 1% or greater PFOS by weight) shall not be used in open surface, hard chromium electroplating tanks.

c) Operational Restrictions

(1) In accordance with 40 CFR Part 63.343(c)(1)(ii), the composite meshpad system shall be operated with pressure drops within +/- 2 inches of water column of the pressure drop values established during the most recent stack test that demonstrated compliance.

(2) The permittee shall comply with the applicable operational restrictions and requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.342(b)	Applicability of emissions limitations.
63.342(c)	Total chromium concentration in exhaust gas stream limit.
63.342(f)	Operation and maintenance practices and plan requirements, including requirements identified in Table 1 of §63.342.
63.342(g)	Chromic acid baths shall not be reduced from hexavalent to trivalent.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.343(a)	Compliance dates.
63.343(b)	Methods to demonstrate initial compliance.
63.343(c)	Monitoring and recording pressure drop to demonstrate continuous compliance.
63.346(a)	Fulfill all record keeping requirements identified in Subpart N including the applicable portions of Subpart A.
63.346(b)	Maintain required records.
63.346(c)	Shall maintain records for a period of 5 years in accordance with §63.10(b)(1).
Table 1 to §63.342	Summary of operation and maintenance practices.

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 identify in the annual permit evaluation report the following information concerning the operations of the composite mesh-pad system during the 12-month reporting period for this/these emissions unit(s):

a. each period of time (start time and date, and end time and date) when the pressure drop was outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the composite mesh-pad system;

c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;

d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the pressure drop into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and

e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.347(a)	Fulfill all reporting requirements identified in Subpart N and the applicable portions of Subpart A.
63.347(b)	Reporting requirements applicability.
63.347(c)	Initial notifications.
63.347(d)	Notification of performance test.
63.347(e)	Notification of compliance status.
63.347(f)	Reports of performance test results.
63.347(h)	Ongoing compliance status reports for area sources in accordance with §63.347(g)(3).

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. <u>Emission Limitation:</u>
Chromium emissions shall not exceed 0.0032 ton per year

<u>Applicable Compliance Method:</u>
Compliance with the above emission limitation shall be determined for each emissions unit by the following equation (based on AP-42, 5th Edition, Vol 1, Chapter 12.20, Electroplating):

Ea = (Ef) x (Rc)x(1 lb/7000 grains)x (100dscf/A-hr)x(Hr)x(1 ton/ 2000 lbs)

Ea = (gr/dscf) x (10,500 A) x (1 lb/7000 grains)x (100dscf/A-hr)x (8760 hrs/yr)x(1 ton/ 2000 lbs)

Where:

Ea = actual annual chromium emissions (ton per year)

Ef = emission factor for hard chromium electroplating line with composite mesh-pad mist eliminator (4.8×10^{-6}gr/dscf)

Rc = rectifier capacity in amps (10,500 A)

Hr = operating hours per year (8760 hrs/yr)

b. Emission Limitation:
0.011 mg/dscm (4.8×10^{-6} gr/dscf)

Applicable Compliance Method:
Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations" shall be used to determine the chromium concentration from the electroplating or anodizing tank.

Emissions test conducted on 9/26/1997 demonstrated compliance with this emissions limitation.

c. Emission Limitation:
Visible particulate emissions from any stack shall not exceed 5 percent opacity as a six-minute average.

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) The permittee shall comply with the applicable testing methods under 40 CFR, Part 63 Subpart N, including the following sections:

63.344(a)	Performance test requirements.
63.344(c)	Test methods in accordance with §63.343(c)(1).
63.344(d)	Site specific operating parameter values.
63.344(e)	Emission limitation for multiple sources sharing pollution control device.

g) Miscellaneous Requirements

(1) Emissions unit P006 was installed 9/1/1997.

2. P007, Hard Chrome Plating Line #2

Operations, Property and/or Equipment Description:

Hard Chrome Plating Line #2. Emissions are controlled by compostitemeshpadsyststem #1. 7,000 amperes.

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)	Chromium emissions shall not exceed 0.0021 ton/yr. Visible particulate emissions from the stacks serving this emissions unit shall not exceed 5% opacity as a six-minute average. The requirements of this rule include compliance with the requirements of 40 CFR Part 63, Subpart N.
b.	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	The particulate emission limit specified by this rule is less stringent than the emission limit established by 40 CFR Part 63, Subpart N.
d.	40 CFR Part 63, Subpart N [In accordance with 40 CFR 63.340 this emission unit is an existing hard chrome electroplating tank subject to the emissions limitations/control measures specified in this section.]	Chromium emissions shall not exceed 0.011 mg/dscm (4.8 x 10^{-6} gr/dscf). See Section B.2. See b)(2)a., c)(2), d)(1), e)(3), and f)(2) below.
e.	40 CFR 63.1-16	Appendix B 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 63.1-16 apply.

(2) Additional Terms and Conditions

a. After 9/21/15 perfluorooctane sulfonic acid (PFOD)-based fume suppressants (containing 1% or greater PFOS by weight) shall not be used in open surface, hard chromium electroplating tanks.

c) Operational Restrictions

(1) In accordance with 40 CFR Part 63.343(c)(1)(ii), the composite meshpad system shall be operated with pressure drops within +/- 2 inches of water column of the pressure drop values established during the most recent stack test that demonstrated compliance.

(2) The permittee shall comply with the applicable operational restrictions and requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.342(b)	Applicability of emissions limitations.
63.342(c)	Total chromium concentration in exhaust gas stream limit.
63.342(f)	Operation and maintenance practices and plan requirements, including requirements identified in Table 1 of §63.342.
63.342(g)	Chromic acid baths shall not be reduced from hexavalent to trivalent.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.343(a)	Compliance dates.
63.343(b)	Methods to demonstrate initial compliance.
63.343(c)	Monitoring and recording pressure drop to demonstrate continuous compliance.
63.346(a)	Fulfill all record keeping requirements identified in Subpart N including the applicable portions of Subpart A.
63.346(b)	Maintain required records.
63.346(c)	Shall maintain records for a period of 5 years in accordance with §63.10(b)(1).
Table 1 to §63.342	Summary of operation and maintenance practices.

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 identify in the annual permit evaluation report the following information concerning the operations of the composite mesh-pad system during the 12-month reporting period for this/these emissions unit(s):

a. each period of time (start time and date, and end time and date) when the pressure drop was outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the composite mesh-pad system;

c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;

d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the pressure drop into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and

e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.347(a)	Fulfill all reporting requirements identified in Subpart N and the applicable portions of Subpart A.
63.347(b)	Reporting requirements applicability.
63.347(c)	Initial notifications.
63.347(d)	Notification of performance test.
63.347(e)	Notification of compliance status.
63.347(f)	Reports of performance test results.
63.347(h)	Ongoing compliance status reports for area sources in accordance with §63.347(g)(3).

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. <u>Emission Limitation:</u>
Chromium emissions shall not exceed 0.0021 ton per year

<u>Applicable Compliance Method:</u>
Compliance with the above emission limitation shall be determined for each emissions unit by the following equation (based on AP-42, 5th Edition, Vol 1, Chapter 12.20, Electroplating):

Ea = (Ef) x (Rc)x(1 lb/7000 grains)x (100dscf/A-hr)x(Hr)x(1 ton/ 2000 lbs)

Ea = (gr/dscf) x (7,000 A) x (1 lb/7000 grains)x (100dscf/A-hr)x (8760 hrs/yr)x(1 ton/ 2000 lbs)

Where:

Ea = actual annual chromium emissions (ton per year)

Ef = emission factor for hard chromium electroplating line with composite mesh-pad mist eliminator (4.8×10^{-6}gr/dscf)

Rc = rectifier capacity in amps (7,000 A)

Hr = operating hours per year (8760 hrs/yr)

b. Emission Limitation:
0.011 mg/dscm (4.8×10^{-6} gr/dscf)

Applicable Compliance Method:
Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations" shall be used to determine the chromium concentration from the electroplating or anodizing tank.

Emissions test conducted on 9/26/1997 demonstrated compliance with this emissions limitation.

c. Emission Limitation:
Visible particulate emissions from any stack shall not exceed 5 percent opacity as a six-minute average.

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) The permittee shall comply with the applicable testing methods under 40 CFR, Part 63 Subpart N, including the following sections:

63.344(a)	Performance test requirements.
63.344(c)	Test methods in accordance with §63.343(c)(1).
63.344(d)	Site specific operating parameter values.
63.344(e)	Emission limitation for multiple sources sharing pollution control device.

g) Miscellaneous Requirements

(1) Emissions unit P007 was installed 9/1/1997.

3. P008, Hard Chrome Plating Line #3

Operations, Property and/or Equipment Description:

Hard Chrome Plating Line #3. Emissions are controlled by compostitemeshpadsyststem #1. 20,000 amperes.

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)	Chromium emissions shall not exceed 0.006 ton/yr. Visible particulate emissions from the stacks serving this emissions unit shall not exceed 5% opacity as a six-minute average. The requirements of this rule include compliance with the requirements of 40 CFR Part 63, Subpart N.
b.	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	The particulate emission limit specified by this rule is less stringent than the emission limit established by 40 CFR Part 63, Subpart N.
d.	40 CFR Part 63, Subpart N [In accordance with 40 CFR 63.340 this emission unit is an existing hard chrome electroplating tank subject to the emissions limitations/control measures specified in this section.]	Chromium emissions shall not exceed 0.011 mg/dscm (4.8 x 10^{-6} gr/dscf). See Section B.2. See b)(2)a., c)(2), d)(1), e)(3), and f)(2) below.
e.	40 CFR 63.1-16	Appendix B 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 63.1-16 apply.

(2) Additional Terms and Conditions

a. After 9/21/15 perfluorooctane sulfonic acid (PFOD)-based fume suppressants (containing 1% or greater PFOS by weight) shall not be used in open surface, hard chromium electroplating tanks.

c) Operational Restrictions

(1) In accordance with 40 CFR Part 63.343(c)(1)(ii), the composite meshpad system shall be operated with pressure drops within +/- 2 inches of water column of the pressure drop values established during the most recent stack test that demonstrated compliance.

(2) The permittee shall comply with the applicable operational restrictions and requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.342(b)	Applicability of emissions limitations.
63.342(c)	Total chromium concentration in exhaust gas stream limit.
63.342(f)	Operation and maintenance practices and plan requirements, including requirements identified in Table 1 of §63.342.
63.342(g)	Chromic acid baths shall not be reduced from hexavalent to trivalent.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.343(a)	Compliance dates.
63.343(b)	Methods to demonstrate initial compliance.
63.343(c)	Monitoring and recording pressure drop to demonstrate continuous compliance.
63.346(a)	Fulfill all record keeping requirements identified in Subpart N including the applicable portions of Subpart A.
63.346(b)	Maintain required records.
63.346(c)	Shall maintain records for a period of 5 years in accordance with §63.10(b)(1).
Table 1 to §63.342	Summary of operation and maintenance practices.

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 identify in the annual permit evaluation report the following information concerning the operations of the composite mesh-pad system during the 12-month reporting period for this/these emissions unit(s):

a. each period of time (start time and date, and end time and date) when the pressure drop was outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the composite mesh-pad system;

c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;

d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the pressure drop into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and

e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.347(a)	Fulfill all reporting requirements identified in Subpart N and the applicable portions of Subpart A.
63.347(b)	Reporting requirements applicability.
63.347(c)	Initial notifications.
63.347(d)	Notification of performance test.
63.347(e)	Notification of compliance status.
63.347(f)	Reports of performance test results.
63.347(h)	Ongoing compliance status reports for area sources in accordance with §63.347(g)(3).

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. <u>Emission Limitation:</u>
Chromium emissions shall not exceed 0.006 ton per year

<u>Applicable Compliance Method:</u>
Compliance with the above emission limitation shall be determined for each emissions unit by the following equation (based on AP-42, 5th Edition, Vol 1, Chapter 12.20, Electroplating):

Ea = (Ef) x (Rc)x(1 lb/7000 grains)x (100dscf/A-hr)x(Hr)x(1 ton/ 2000 lbs)

Ea = (gr/dscf) x (20,000 A) x (1 lb/7000 grains)x (100dscf/A-hr)x (8760 hrs/yr)x(1 ton/ 2000 lbs)

Where:

Ea = actual annual chromium emissions (ton per year)

Ef = emission factor for hard chromium electroplating line with composite mesh-pad mist eliminator (4.8×10^{-6}gr/dscf)

Rc = rectifier capacity in amps (20,000 A)

Hr = operating hours per year (8760 hrs/yr)

b. Emission Limitation:
0.011 mg/dscm (4.8×10^{-6} gr/dscf)

Applicable Compliance Method:
Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations" shall be used to determine the chromium concentration from the electroplating or anodizing tank.

Emissions test conducted on 9/26/1997 demonstrated compliance with this emissions limitation.

c. Emission Limitation:
Visible particulate emissions from any stack shall not exceed 5 percent opacity as a six-minute average.

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) The permittee shall comply with the applicable testing methods under 40 CFR, Part 63 Subpart N, including the following sections:

63.344(a)	Performance test requirements.
63.344(c)	Test methods in accordance with §63.343(c)(1).
63.344(d)	Site specific operating parameter values.
63.344(e)	Emission limitation for multiple sources sharing pollution control device.

g) Miscellaneous Requirements

(1) Emissions unit P008 was installed 9/1/1997.

4. P009, Hard Chrome Plating Line #4

Operations, Property and/or Equipment Description:

Hard Chrome Plating Line #4. Emissions are controlled by compostitemeshpadsyststem #2. 15,000 amperes.

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)	Chromium emissions shall not exceed 0.0045 ton/yr. Visible particulate emissions from the stacks serving this emissions unit shall not exceed 5% opacity as a six-minute average. The requirements of this rule include compliance with the requirements of 40 CFR Part 63, Subpart N
b.	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	The particulate emission limit specified by this rule is less stringent than the emission limit established by 40 CFR Part 63, Subpart N.
d.	40 CFR Part 63, Subpart N [In accordance with 40 CFR 63.340 this emission unit is an existing hard chrome electroplating tank subject to the emissions limitations/control measures specified in this section.]	Chromium emissions shall not exceed 0.011 mg/dscm (4.8 x 10^{-6} gr/dscf). See Section B.2. See b)(2)a., c)(2), d)(1), e)(3), and f)(2) below.
e.	40 CFR 63.1-16	Appendix B 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 63.1-16 apply.

(2) Additional Terms and Conditions

a. After 9/21/15 perfluorooctane sulfonic acid (PFOD)-based fume suppressants (containing 1% or greater PFOS by weight) shall not be used in open surface, hard chromium electroplating tanks.

c) Operational Restrictions

(1) In accordance with 40 CFR Part 63.343(c)(1)(ii), the composite meshpad system shall be operated with pressure drops within +/- 2 inches of water column of the pressure drop values established during the most recent stack test that demonstrated compliance.

(2) The permittee shall comply with the applicable operational restrictions and requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.342(b)	Applicability of emissions limitations.
63.342(c)	Total chromium concentration in exhaust gas stream limit.
63.342(f)	Operation and maintenance practices and plan requirements, including requirements identified in Table 1 of §63.342.
63.342(g)	Chromic acid baths shall not be reduced from hexavalent to trivalent.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.343(a)	Compliance dates.
63.343(b)	Methods to demonstrate initial compliance.
63.343(c)	Monitoring and recording pressure drop to demonstrate continuous compliance.
63.346(a)	Fulfill all record keeping requirements identified in Subpart N including the applicable portions of Subpart A.
63.346(b)	Maintain required records.
63.346(c)	Shall maintain records for a period of 5 years in accordance with §63.10(b)(1).
Table 1 to §63.342	Summary of operation and maintenance practices.

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 identify in the annual permit evaluation report the following information concerning the operations of the composite mesh-pad system during the 12-month reporting period for this/these emissions unit(s):

a. each period of time (start time and date, and end time and date) when the pressure drop was outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the composite mesh-pad system;

c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;

d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the pressure drop into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and

e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(3) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63 Subpart N, including the following sections:

63.347(a)	Fulfill all reporting requirements identified in Subpart N and the applicable portions of Subpart A.
63.347(b)	Reporting requirements applicability.
63.347(c)	Initial notifications.
63.347(d)	Notification of performance test.
63.347(e)	Notification of compliance status.
63.347(f)	Reports of performance test results.
63.347(h)	Ongoing compliance status reports for area sources in accordance with §63.347(g)(3).

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. <u>Emission Limitation:</u>
Chromium emissions shall not exceed 0.0045 ton per year

<u>Applicable Compliance Method:</u>
Compliance with the above emission limitation shall be determined for each emissions unit by the following equation (based on AP-42, 5th Edition, Vol 1, Chapter 12.20, Electroplating):

Ea = (Ef) x (Rc)x(1 lb/7000 grains)x (100dscf/A-hr)x(Hr)x(1 ton/ 2000 lbs)

Ea = (gr/dscf) x (15,000 A) x (1 lb/7000 grains)x (100dscf/A-hr)x (8760 hrs/yr)x(1 ton/ 2000 lbs)

Where:

Ea = actual annual chromium emissions (ton per year)

Ef = emission factor for hard chromium electroplating line with composite mesh-pad mist eliminator (4.8×10^{-6}gr/dscf)

Rc = rectifier capacity in amps (15,000 A)

Hr = operating hours per year (8760 hrs/yr)

b. Emission Limitation:
0.011 mg/dscm (4.8×10^{-6} gr/dscf)

Applicable Compliance Method:
Method 306 or Method 306A, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations" shall be used to determine the chromium concentration from the electroplating or anodizing tank.

Emissions test conducted on 12/11/1998 demonstrated compliance with this emissions limitation.

c. Emission Limitation:
Visible particulate emissions from any stack shall not exceed 5 percent opacity as a six-minute average.

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) The permittee shall comply with the applicable testing methods under 40 CFR, Part 63 Subpart N, including the following sections:

63.344(a)	Performance test requirements.
63.344(c)	Test methods in accordance with §63.343(c)(1).
63.344(d)	Site specific operating parameter values.

g) Miscellaneous Requirements

(1) Emissions unit P009 was installed 9/1/1997.