

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
AIR QUALITY DIVISION**

January 17, 2020

**PERMIT TO INSTALL**  
584-91F

**ISSUED TO**  
Electro Chemical Finishing Company

**LOCATED AT**  
2610 Remico Street, S. W.  
Wyoming, Michigan

**IN THE COUNTY OF**  
Kent

**STATE REGISTRATION NUMBER**  
N2787

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>October 15, 2019</b>	
DATE PERMIT TO INSTALL APPROVED: <b>January 17, 2020</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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### COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig

### POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H <sub>2</sub> S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO <sub>x</sub>	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO <sub>2</sub>	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

**EMISSION UNIT SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
EUATRICHROME1	One trivalent decorative chrome electroplating tank	2013	FGALINE
EUATRICHROME2	One trivalent decorative chrome electroplating tank	2013	FGALINE
EUATRICHROME3	One trivalent decorative chrome electroplating tank	2013 / 01-17-2020	
EUBLINE	Electroless nickel preplating line containing two chromic acid etch tanks that use a fume suppressant and a composite mesh pad scrubber system that is shared with the chrome plating tank in EUCLINE for control. Additionally, the neutralizer tank, pre-dip tank, activator tank, electroless nickel tank and two rinse tanks (Tanks B-19 and B-20) in EUBLINE are vented to a single packed bed fume scrubber system for control. EUBLINE also utilizes a cleaner tank, etch reclaim tank and 10 rinse tanks that are vented to the in-plant environment.	1992	
EUCLINE	Decorative chrome electroplating line containing one decorative chrome plating tank that uses a fume suppressant and a composite mesh pad scrubber system that is shared with EUBLINE for control. Additionally, the acid copper strike tank, bright acid copper tank and nickel activator tank in EUCLINE are vented to a single packed bed fume scrubber system for control. EUCLINE also utilizes two copper immersion tanks, a copper activator tank, semi-bright nickel tank, bright nickel tank, microporous nickel tank, a chrome reclaim tank and 13 rinse tanks that are vented to the in-plant environment.	1992	
EUSLDGDRYER	Electric sludge dryer	2003	

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

<b>EUATRICHROME3 EMISSION UNIT CONDITIONS</b>
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**DESCRIPTION**

One trivalent decorative chrome electroplating tank

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

Fume suppressant and a composite mesh pad (CMP) scrubber system

**I. EMISSION LIMIT(S)**

NA

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. Within 30 calendar days of commencing use of the trivalent chromium solution in EUATRICHROME3, the permittee shall submit to the AQD District Supervisor, an updated approvable operation and maintenance plan. The plan shall contain all information required by 40 CFR 63.342(f)(3)(i), which includes the following: **(R 336.1910)**
  - a) Operation and maintenance criteria for EUATRICHROME3, add-on control device(s), and for the process and control device(s) monitoring equipment as well as a standardized checklist to document the operation and maintenance of the equipment.
  - b) The work practice standards for the add-on control device(s) and monitoring equipment.
  - c) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.
  - d) A systematic procedure for identifying process equipment, add-on control device(s) and monitoring equipment malfunctions and for implementing corrective actions to address such malfunctions.
2. The permittee shall incorporate a wetting agent, as defined in 40 CFR 63.341, as a bath ingredient in EUATRICHROME3. **(R 336.1910, 40 CFR Part 63 Subparts A & N)**
3. If the permittee does not incorporate the wetting agent, as defined in 40 CFR 63.341, as a bath ingredient in EUATRICHROME3, then the permittee shall not operate EUATRICHROME3 unless the chemical fume suppressant containing a wetting agent is applied in quantities and at a frequency to ensure the surface tension of EUATRICHROME3 does not exceed, at any time during operation, 40 dynes/cm (2.8x10<sup>-3</sup> pound-force per foot) as measured by a stalagmometer or does not exceed 33 dynes/cm (2.3x10<sup>-3</sup> pound-force per foot) as measured by a tensiometer. **(R 336.1910, 40 CFR 63.342(d)(3))**
4. The permittee shall use fresh water for any make-up water for the CMP scrubber system. **(R 336.1910)**

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate EUATRICHROME3 unless the CMP scrubber system is installed, maintained, and operated in a satisfactory manner. **(R 336.1910)**

## **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

## **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall perform inspections of the composite mesh pad (CMP) system as follows: **(R 336.1910)**
  - a) Determine pressure drop across the CMP system on a daily basis. If the pressure drop across the control varies by more than  $\pm 2$  inch of water gauge, from the pressure drop as specified by the manufacturer or as determined during compliance testing, the permittee shall document the variation, and review the operation and maintenance procedures. The permittee shall document any corrective action.
  - b) Visually inspect the CMP system, on a quarterly basis, to ensure there is proper drainage, no chromic acid build up on the pads, and no evidence of chemical attack on the structural integrity of the control device.
  - c) Visually inspect the back portion of the mesh pad closest to the fan, on a quarterly basis, to ensure there is no breakthrough of chromic acid mist.
  - d) Visually inspect ductwork from tanks to the CMP system, on a quarterly basis, to ensure there are no leaks.
  - e) Perform wash-down of composite mesh pads in accordance with manufacturer's recommendations.
2. The permittee shall monitor emissions and operating and maintenance information in accordance with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and N. The permittee shall keep records of all source emissions and operating and maintenance information on file and make them available to the Department upon request. **(40 CFR Part 63 Subparts A & N)**
3. If the permittee operates EUATRICHROME3 and measures surface tension as allowed in SC III.3, records shall be kept of the surface tension of EUATRICHROME3, the amount of chemical fume suppressant added to EUATRICHROME3, and the date and time of each addition. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR Part 63 Subparts A & N)**

## **VII. REPORTING**

1. Permittee shall submit the following notifications to the Department in accordance with 40 CFR Part 63.347: **(40 CFR Part 63 Subparts A & N)**
  - a) A notification of the date when construction was commenced, submitted no later than 30 calendar days after such date.
  - b) A notification of the actual date of startup of the source, submitted within 30 calendar days after such date.
2. The permittee shall retain the Ongoing Compliance Status Report on site in accordance with 40 CFR Part 63.347. **(R 336.1941, 40 CFR Part 63 Subpart N)**
3. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencing use of the trivalent chromium solution in EUATRICHROME3. **(R 336.1201(7)(a))**

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVALINE <sup>1</sup>	41	45.5	R 336.1225

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**EUBLINE  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Electroless nickel preplating line containing two chromic acid etch tanks that use a fume suppressant and a composite mesh pad scrubber system that is shared with the chrome plating tank in EUCLINE for control. Additionally, the neutralizer tank, pre-dip tank, activator tank, electroless nickel tank and two rinse tanks (Tanks B-19 and B-20) in EUBLINE are vented to a single packed bed fume scrubber system for control. EUBLINE also utilizes a cleaner tank, etch reclaim tank and 10 rinse tanks that are vented to the in-plant environment.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

Chromic acid etch tanks use a fume suppressant and are vented to a composite mesh pad scrubber system. The neutralizer tank, pre-dip tank, activator tank, electroless nickel tank and two rinse tanks (Tanks B-19 and B-20) are vented to a single packed bed fume scrubber system.

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Hexavalent chromium	0.00014 lb/hr	Test Protocol*	EUBLINE – two chromic acid etch tanks/composite mesh pad scrubber system stack	GC13	R 336.1224, R 336.1225
2. Hexavalent chromium	0.6 lb/year	12-month rolling time period as determined at the end of each calendar month	EUBLINE	SC VI.1, SC VI.2, SC VI.3	R 336.1224, R 336.1225

\* Test protocol shall specify averaging time

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate EUBLINE more than 4,000 hours per year, based upon a 12-month rolling time period as determined at the end of each calendar month. Operational hours for EUBLINE shall be defined as any time parts are present in the chromic acid etch tanks. **(R 336.1224, R 336.1225, R 336.1910)**
2. The permittee shall not operate EUBLINE unless the chemical fume suppressant is applied in quantities and at a frequency to ensure the surface tension of each individual chromic acid etch bath does not exceed 60 dynes/cm ( $4.1 \times 10^{-3}$  lb<sub>f</sub>/ft) at any time during operation. **(R 336.1224, R 336.1225, R 336.1910)**
3. Within 30 calendar days of commencement of installation, the permittee shall submit to the AQD District Supervisor, an approvable operation and maintenance plan for the packed bed fume scrubber system and composite mesh pad scrubber system for EUBLINE. The plan shall include the following: **(R 336.1224, R 336.1225, R 336.1910, R 336.1911)**
  - a) Operation and maintenance criteria for EUBLINE, add-on control device(s), and for the process and control device(s) monitoring equipment as well as a standardized checklist to document the operation and maintenance of the equipment.

- b) The work practice standards for the composite mesh pad scrubber system, packed bed fume scrubber system and surface tension monitoring equipment.
- c) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.
- d) A systematic procedure for identifying process equipment, add-on control device(s), and monitoring equipment malfunctions and for implementing corrective actions to address such malfunctions.

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall monitor the surface tension of each of the two chromic acid baths in EUBLINE at least once a week. **(R 336.1224, R 336.1225, R 336.1910)**
2. The permittee shall not operate any tanks in EUBLINE unless the packed bed fume scrubber system is installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1910)**
3. The permittee shall equip and maintain the packed bed fume scrubber system with a differential pressure monitoring device. **(R 336.1225, R 336.1910)**
4. The permittee shall not operate the decorative chrome plating tank in EUBLINE unless the composite mesh pad scrubber system is installed, maintained, and operated in a satisfactory manner. **(R 336.1225, R 336.1910)**
5. The permittee shall equip and maintain the composite mesh pad scrubber system with a differential pressure monitoring device. **(R 336.1225, R 336.1910)**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep records of the surface tension of each of the chromic acid etch baths in EUBLINE, the amount of chemical fume suppressant added to each of the etch baths, and the date and time of each addition. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**
2. The permittee shall maintain records of any inspections of the chromic acid electroless etch baths in EUBLINE and any associated equipment including control equipment. Each inspection record shall identify the device inspected, the date, approximate time of inspection, and a brief description of the working condition of the device during the inspection. The permittee shall also record any actions taken to correct the deficiencies found during the inspection. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**
3. The permittee shall keep records of the hours of operation for EUBLINE on a weekly basis. These records shall be kept on file at the facility for a period of at least five years and made available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**
4. The permittee shall perform inspections of the packed bed fume scrubber system as follows: **(R 336.1225, R 336.1910)**
  - a) Determine pressure drop across the packed bed fume scrubber system on a daily basis. If the pressure drop across the control varies by more than  $\pm 1$  inch of water gauge, from the pressure drop as specified by the manufacturer or as determined during compliance testing, the permittee shall document the variation, and review the operation and maintenance procedures. The permittee shall document any corrective action.

- b) Visually inspect the packed bed fume scrubber system, on a quarterly basis, to ensure there is proper drainage, no chromic acid build up on packed beds, and no evidence of chemical attack on the structural integrity of the control device.
  - c) Visually inspect the back portion of the chevron-blade mist eliminator, if one is present, on a quarterly basis, to ensure that it is dry and there is no breakthrough.
  - d) Visually inspect ductwork from tanks to the packed bed scrubber, on a quarterly basis, to ensure there are no leaks.
5. The permittee shall perform inspections of the composite mesh pad (CMP) system as follows: **(R 336.1910)**
- a) Determine pressure drop across the CMP system on a daily basis. If the pressure drop across the control varies by more than  $\pm 2$  inch of water gauge, from the pressure drop determined during compliance testing, the permittee shall document the variation, and review the operation and maintenance procedures. The permittee shall document any corrective action.
  - b) Visually inspect the CMP system, on a quarterly basis, to ensure there is proper drainage, no chromic acid build up on the pads, and no evidence of chemical attack on the structural integrity of the control device.
  - c) Visually inspect the back portion of the mesh pad closest to the fan, on a quarterly basis, to ensure there is no breakthrough of chromic acid mist.
  - d) Visually inspect ductwork from tanks to the CMP system, on a quarterly basis, to ensure there are no leaks.
  - e) Perform wash-down of composite mesh pads in accordance with manufacturer's recommendations.

## VII. REPORTING

NA

## VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVPBSSTCK	42	45	R 336.1225
2. SVCMPSTCK	32	35	R 336.1225, 40 CFR 52.21 (c) & (d)

## IX. OTHER REQUIREMENT(S)

- 1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63, Subpart WWWWWW, as applicable to EUBLINE. **(40 CFR Part 63, Subpart A & WWWWWW)**

### Footnotes:

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**EUCLINE  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Decorative chrome electroplating line containing one decorative chrome plating tank that uses a fume suppressant and a composite mesh pad scrubber system that is shared with EUBLINE for control. Additionally, the acid copper strike tank, bright acid copper tank and nickel activator tank in EUCLINE are vented to a single packed bed fume scrubber system for control. EUCLINE also utilizes two copper immersion tanks, a copper activator tank, semi-bright nickel tank, bright nickel tank, microporous nickel tank, a chrome reclaim tank and 13 rinse tanks that are vented to the in-plant environment.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

Decorative chrome plating tank uses a fume suppressant and is vented to a composite mesh pad scrubber system. The acid copper strike tank, bright acid copper tank and nickel activator tank in EUCLINE are vented to a single packed bed fume scrubber system.

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Hexavalent chromium	0.006 mg/dscm <sup>a</sup>	Test Protocol*	EUCLINE – decorative chrome plating tank/ composite mesh pad scrubber system stack	GC13	40 CFR 63.342(d)(2)
<sup>a</sup> corrected to 70°F and 29.92 inches Hg * Test protocol shall specify averaging time					

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate the decorative chrome plating tank in EUCLINE unless the chemical fume suppressant is applied in quantities and at a frequency to ensure the surface tension of the decorative chromic acid electroplating bath in EUCLINE does not exceed 40 dynes/cm ( $3.1 \times 10^{-3}$  lb<sub>f</sub>/ft), when measured using a stalagmometer, or 33 dynes/cm ( $2.4 \times 10^{-3}$  lb<sub>f</sub>/ft), when measured using a tensiometer, at any time during operation. **(R 336.1225, R 336.1910, R 336.1941, 40 CFR Part 63 Subpart N)**
2. Within 30 calendar days of commencement of installation, the permittee shall submit to the AQD District Supervisor, an approvable operation and maintenance plan for the composite mesh pad scrubber system for EUCLINE. The plan shall contain all information required by 40 CFR 63.342(f)(3)(i), which includes the following: **(R 336.1225, 40 CFR Part 63 Subparts A & N)**
  - a) Operation and maintenance criteria for the decorative chrome plating tank in EUCLINE, add-on control device(s), and for the process and control device(s) monitoring equipment as well as a standardized checklist to document the operation and maintenance of the equipment.
  - b) The work practice standards for the add-on control device(s) and monitoring equipment.
  - c) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.

- d) A systematic procedure for identifying process equipment, add-on control device(s) and monitoring equipment malfunctions and for implementing corrective actions to address such malfunctions.
3. Within 30 calendar days of the date of permit approval, the permittee shall submit to the AQD District Supervisor, an approvable operation and maintenance plan for the packed bed fume scrubber system for EUCLINE. The plan shall include the following: **(R 336.1224, R 336.1225, R 336.1910, R 336.1911)**
    - a) Operation and maintenance criteria for each packed bed fume scrubber as well as a standardized checklist to document the operation and maintenance of the equipment.
    - b) The work practice standards for the packed bed fume scrubber system.
    - c) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.
    - d) A systematic procedure for identifying process equipment, add-on control device(s), and monitoring equipment malfunctions and for implementing corrective actions to address such malfunctions.

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate any tanks in EUCLINE unless the packed bed fume scrubber system is installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1910)**
2. The permittee shall equip and maintain the packed bed fume scrubber system with a differential pressure monitoring device. **(R 336.1225, R 336.1910)**
3. The permittee shall not operate the decorative chrome plating tank in EUCLINE unless the composite mesh pad scrubber system is installed, maintained, and operated in a satisfactory manner. **(R 336.1225, R 336.1910, 40 CFR Part 63 Subparts A & N)**
4. The permittee shall equip and maintain the composite mesh pad scrubber system with a differential pressure monitoring device. **(R 336.1225, R 336.1910, 40 CFR 63.343(c))**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor the surface tension of the decorative chrome plating tank in EUCLINE once every four (4) hours of tank operation for the first 40 hours of tank operation. If there are no exceedances during the first 40 hours of tank operation, then surface tension measurements may be conducted once every eight (8) hours of tank operation for the next 40 hours of tank operation. If there are no exceedances during the 40 hours of tank operation when surface tension measurements are being conducted every eight (8) hours, then surface tension measurements may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every four hours must be resumed and the subsequent decrease in frequency shall follow the schedule as laid out above. The minimum frequency of monitoring allowed is once every 40 hours of tank operation. An example of monitoring frequency is available at 40 CFR 63.343(c)(5)(ii)(C). The surface tension shall be monitored with a stalagmometer or tensiometer as specified in Method 306B of 40 CFR Subpart N. **(R 336.1910, 40 CFR Part 63.343(c)(5))**
2. The permittee shall keep records of the surface tension of the decorative chromic acid bath in EUCLINE, the amount of chemical fume suppressant added to the chromic acid bath, and the date and time of each addition. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1225, R 336.1910, R 336.1941, 40 CFR Part 63 Subpart N)**

3. Monitoring and recording of emissions, operating and maintenance information is required to comply with the National Emission Standards for Hazardous Air Pollutants (NESHAPs) as specified in 40 CFR, Part 63, Subparts A and N. 40 CFR, Part 63, Subparts A and N are adopted by reference in R336.1941 and therefore also referenced for the packed bed fume scrubbers. All source emissions data, operating data and maintenance data shall be kept on file at the facility for a period of at least five years and made available to the Department upon request. **(R 336.1225, R 336.1941, 40 CFR Part 63, Subparts A and N)**
4. The permittee shall maintain records of inspection required to comply with applicable work practice standards of 40 CFR 63.342(f). Each inspection record shall identify the device inspected, the date, approximate time of inspection, and a brief description of the working condition of the device during the inspection. The permittee shall also record any actions taken to correct the deficiencies found during the inspection. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1225, R 336.1941, 40 CFR Part 63 Subpart N)**
5. The permittee shall perform inspections of the packed bed fume scrubber system as follows: **(R 336.1225, R 336.1910)**
  - a) Determine pressure drop across the packed bed fume scrubber system on a daily basis. If the pressure drop across the control varies by more than  $\pm 1$  inch of water gauge, from the pressure drop as specified by the manufacturer or as determined during compliance testing, the permittee shall document the variation, and review the operation and maintenance procedures. The permittee shall document any corrective action.
  - b) Visually inspect the packed bed fume scrubber system, on a quarterly basis, to ensure there is proper drainage, no chromic acid build up on packed beds, and no evidence of chemical attack on the structural integrity of the control device.
  - c) Visually inspect the back portion of the chevron-blade mist eliminator, if one is present, on a quarterly basis, to ensure that it is dry and there is no breakthrough.
  - d) Visually inspect ductwork from tanks to the packed bed scrubber, on a quarterly basis, to ensure there are no leaks.
6. The permittee shall perform inspections of the composite mesh pad (CMP) system as follows: **(R 336.1910)**
  - a) Determine pressure drop across the CMP system on a daily basis. If the pressure drop across the control varies by more than  $\pm 2$  inch of water gauge, from the pressure drop determined during compliance testing, the permittee shall document the variation, and review the operation and maintenance procedures. The permittee shall document any corrective action.
  - b) Visually inspect the CMP system, on a quarterly basis, to ensure there is proper drainage, no chromic acid build up on the pads, and no evidence of chemical attack on the structural integrity of the control device.
  - c) Visually inspect the back portion of the mesh pad closest to the fan, on a quarterly basis, to ensure there is no breakthrough of chromic acid mist.
  - d) Visually inspect ductwork from tanks to the CMP system, on a quarterly basis, to ensure there are no leaks.
  - e) Perform wash-down of composite mesh pads in accordance with manufacturer's recommendations.

## **VII. REPORTING**

1. The permittee shall retain the Ongoing Compliance Status Report on site in accordance with 40 CFR Part 63.347. **(R 336.1225, R 336.1941, 40 CFR Part 63 Subpart N)**

## **VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVPBSSTCK	42	45	R 336.1225
2. SVCMPSTCK	32	35	R 336.1225, 40 CFR 52.21 (c) & (d)

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63, Subpart WWWW, as applicable to EUCLINE.  
**(40 CFR Part 63, Subpart A & WWWW)**

**Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**EUSLDGDRYER  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Electric sludge dryer

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

Packed bed wet scrubber system for control

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Hexavalent chromium	0.004 lb/year	12-month rolling time period as determined at the end of each calendar month	EUSLDGDRYER	SC III.1, SC VI.1	R 336.1224, R 336.1225
2. Particulate Matter	0.01 lb per 1000 lbs exhaust gases, calculated on a dry gas basis	Test Protocol*	EUSLDGDRYER	GC 13, SC I.3	R 336.1225, R 336.1331

\* Test protocol shall specify averaging time

3. Visible emissions from EUSLDGDRYER shall not exceed a six-minute average of five percent opacity. **(R 336.1301, R 336.1331, 40 CFR 52.21)**

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate EUSLDGDRYER more than 2,500 hours per year based upon a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1224, R 336.1225)**

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate EUSLDGDRYER unless the packed bed wet scrubber system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes installing and maintaining a device to monitor the liquid flow for the packed bed wet scrubber system and following the preventative maintenance plan that has been submitted to and approved by the District Supervisor, Air Quality Division. **(R 336.1224, R 336.1225, R 336.1331, R 336.1910)**

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep records of the hours of operation for EUSLDGDRYER on a daily basis, records of the hexavalent chrome concentration of the dried sludge, and records of the monthly and 12-month rolling time period calculations of the hexavalent chrome emissions from EUSLDRYER. The calculations are based on the hexavalent chrome concentration in the sludge, the PM emission rate and the hours of operation. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1331)**

**VII. REPORTING**

2. The permittee shall retain the Ongoing Compliance Status Report on site in accordance with 40 CFR Part 63.347. **(R 336.1225, R 336.1941, 40 CFR Part 63 Subpart N)**

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVDRYER	7	37.5	R 336.1225

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

### FLEXIBLE GROUP SPECIAL CONDITIONS

### FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FGALINE	Electroplating line containing two trivalent decorative chrome electroplating tanks and one flash trivalent decorative chrome electroplating tank.	EUATRICHROME1, EUATRICHROME2

**FGALINE  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Electroplating line containing two trivalent decorative chrome electroplating tanks.

**Emission Unit:** EUATRICHROME1, EUATRICHROME2

**POLLUTION CONTROL EQUIPMENT**

Fume suppressant and a composite mesh pad (CMP) scrubber system

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Total chromium	0.0008 lb/hr <sup>1</sup>	Hourly	FGALINE	SC V.1, SC VI.1, SC VI.2	R 336.1225

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. Upon request of the AQD District Supervisor, the permittee shall submit to the AQD District Supervisor, an updated approvable operation and maintenance plan. The plan shall contain all information required by 40 CFR 63.342(f)(3)(i), which includes the following: **(R 336.1225, 40 CFR Part 63 Subparts A & N)**
  - a) Operation and maintenance criteria for FGALINE, add-on control device(s), and for the process and control device(s) monitoring equipment as well as a standardized checklist to document the operation and maintenance of the equipment.
  - b) The work practice standards for the add-on control device(s) and monitoring equipment.
  - c) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.
  - d) A systematic procedure for identifying process equipment, add-on control device(s) and monitoring equipment malfunctions and for implementing corrective actions to address such malfunctions.
2. The permittee shall not operate any decorative chrome plating tank in FGALINE unless the chemical fume suppressant containing a wetting agent is applied in quantities and at a frequency to ensure the surface tension of each of the chrome plating tanks does not exceed, at any time during operation, 40 dynes/cm (3.1x10<sup>-3</sup> pound-force per foot) as measured by a stalagmometer or does not exceed 33 dynes/cm (2.4x10<sup>-3</sup> pound-force per foot) as measured by a tensiometer. **(R 336.1225, R 336.1910, 40 CFR Part 63.342(c)(1)(iii), or (c)(2)(iii) or (d)(2))**
3. The permittee shall not operate FGALINE more than 4,000 hours per year, based upon a 12-month rolling time period as determined at the end of each calendar month. Operational hours for FGALINE shall be defined as any time electrolytic plating is taking place in one or more of the chromic acid plating tanks. **(R 336.1225, R 336.1910, R 336.1941)**
4. The permittee shall incorporate a wetting agent, as defined in 40 CFR 63.341, as a bath ingredient in the trivalent chrome plating tanks in FGALINE. **(R 336.1225, R 336.1910, 40 CFR Part 63 Subparts A & N)**

5. The permittee shall use fresh water for any make-up water for the CMP scrubber system. **(R 336.1225, R 336.1910)**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate FGALINE unless the CMP scrubber system is installed, maintained, and operated in a satisfactory manner. **(R 336.1225, R 336.1910)**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Upon request from the AQD District Supervisor, the permittee may be required to verify the total chromium emissions from FGALINE by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission factors includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor the surface tension of the decorative chrome plating tanks in FGALINE once every four (4) hours of tank operation for the first 40 hours of tank operation. If there are no exceedances during the first 40 hours of tank operation, then surface tension measurements may be conducted once every eight (8) hours of tank operation for the next 40 hours of tank operation. If there are no exceedances during the 40 hours of tank operation when surface tension measurements are being conducted every eight (8) hours, then surface tension measurements may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every four hours must be resumed and the subsequent decrease in frequency shall follow the schedule as laid out above. The minimum frequency of monitoring allowed is once every 40 hours of tank operation. An example of monitoring frequency is available at 40 CFR 63.343(c)(5)(ii)(C). The surface tension shall be monitored with a stalagmometer or tensiometer as specified in Method 306B of 40 CFR Subpart N. **(R 336.1225, R 336.1910, 40 CFR Part 63.343(c)(5))**
2. The permittee shall perform inspections of the composite mesh pad (CMP) system as follows: **(R 336.1225, R 336.1910)**
  - a) Determine pressure drop across the CMP system on a daily basis. If the pressure drop across the control varies by more than  $\pm 2$  inch of water gauge, from the pressure drop as specified by the manufacturer or as determined during compliance testing, the permittee shall document the variation, and review the operation and maintenance procedures. The permittee shall document any corrective action.
  - b) Visually inspect the CMP system, on a quarterly basis, to ensure there is proper drainage, no chromic acid build up on the pads, and no evidence of chemical attack on the structural integrity of the control device.
  - c) Visually inspect the back portion of the mesh pad closest to the fan, on a quarterly basis, to ensure there is no breakthrough of chromic acid mist.
  - d) Visually inspect ductwork from tanks to the CMP system, on a quarterly basis, to ensure there are no leaks.
  - e) Perform wash-down of composite mesh pads in accordance with manufacturer's recommendations.
3. The permittee shall monitor emissions and operating and maintenance information in accordance with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and N. The permittee shall keep records of all source emissions and operating and maintenance information on file and make them available to the Department upon request. **(40 CFR Part 63 Subparts A & N)**

4. The permittee shall maintain records of inspections required to comply with applicable work practice standards of 40 CFR 63.342(f). Each inspection record shall identify the device inspected, the date, approximate time of inspection, and a brief description of the working condition of the device during the inspection. The permittee shall also record any actions taken to correct the deficiencies found during the inspection. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1910, 40 CFR Part 63 Subparts A & N)**
5. The permittee shall keep records of the surface tension of all decorative chrome electroplating tanks in FGALINE, the amount of chemical fume suppressant added to each decorative chrome electroplating tank in FGALINE and the date and time of each addition. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, 40 CFR Part 63 Subparts A & N)**

## **VII. REPORTING**

1. Permittee shall submit the following notifications to the Department in accordance with 40 CFR Part 63.347: **(40 CFR Part 63 Subparts A & N)**
  - a) A notification of the date when construction was commenced, submitted no later than 30 calendar days after such date.
  - b) A notification of the actual date of startup of the source, submitted within 30 calendar days after such date.
2. The permittee shall retain the Ongoing Compliance Status Report on site in accordance with 40 CFR Part 63.347. **(R 336.1225, R 336.1941, 40 CFR Part 63 Subpart N)**
3. The permittee shall keep records of the hours of operation for FGALINE on a daily basis. These records shall be kept on file at the facility for a period of at least five years and made available to the Department upon request. **(R 336.1225, R 336.1910, R 336.1941)**

## **VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVALINE <sup>1</sup>	41	45.5	R 336.1225

## **IX. OTHER REQUIREMENT(S)**

NA

### **Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).