



## 40 CFR 63 Subpart N- Chromium Electroplating and Anodizing Processes: Revised NESHAP Emission Limits, Testing, Monitoring and Permitting

The Federal National Emission Standard for Hazardous Air Pollutants (NESHAP) affects all facilities that use chromium electroplating or anodizing tanks. Emissions standards vary depending on the type of electroplating, its size, and its installation date. The regulation also includes monitoring, maintenance, record keeping and reporting standards. At the time a facility becomes subject to this rule, the source must submit a one-time Subpart N Notification of Compliance Status Report described in the “Subpart N NESHAP Notification of Compliance Status Report” fact sheet.

### Emissions Control Standards

A trivalent chromium bath that incorporates a wetting agent as a bath ingredient meets the emissions control standards. All other chromium electroplating and anodizing tanks can meet the emissions control standards by using a chemical fume suppressant with wetting agent that maintains the surface tension of the bath at all times at or below 40 dynes/cm as measured by a stalagmometer or 33 dynes/cm as measured by a tensiometer. Note that perfluorooctane sulfonic acid (PFOS) based fume suppressants can no longer be used as fume suppressants. PFAS (per- and poly-fluoroalkyl substances) are currently allowed but may be phased out at some time in the future do to toxicity and persistence concerns.

For tanks that do not meet the fume suppressant/wetting agent control standard, they must meet the emissions standards shown in Table 1 below.

**Table 1- Cr NESHAP Emission Limits**

Type of Tank	Total Chromium Emissions (mg/dscm)
New Cr Tank (construction or reconstruction commenced after February 8, 2012)	0.006
Small Existing Hard Chromium Plating Tank*	0.015
Large Existing Hard Chromium Plating Tank*	0.011
Existing Decorative Chromium Plating Tank	0.007
Existing Chromium Anodizing Tank	0.007

\*Enclosed Hard Chromium can choose to comply with an alternative mass emissions standard (mg/hr) that can be calculated for a tank using equations in [40CFR63.344\(f\)\(1\)](#).

- Large, hard chromium electroplating facility means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity greater than or equal to 60 million ampere-hours per year (amp-hr/yr). Small facility is any facility smaller than this.

- Maximum cumulative potential rectifier capacity means the summation of the total installed rectifier capacity associated with the hard chromium electroplating tanks at a facility, expressed in amperes, multiplied by the maximum potential operating schedule of 8,400 hours per year and 0.7, which assumes that electrodes are energized 70 percent of the total operating time. The maximum potential operating schedule is based on operating 24 hours per day, 7 days per week, 50 weeks per year.

- Note that existing tanks are all tanks for which construction or reconstruction commenced on or before February 8, 2012.

**Initial Performance Testing** – As required by 40CFR63.344(b), facilities that do not meet the fume suppressant/wetting agent control standard, must conduct an initial performance test to demonstrate compliance with the applicable emission limits in Table 1. The initial performance test must be conducted according to requirements in 40CFR63.344. This initial performance test establishes values for air pollution control (APC) systems operating parameters such as pressure drop or foam blanket thickness. You may complete multiple tests at a range of air pollution control conditions if you wish to set a range of operating conditions for the APC system.

You must create a test plan that includes the following: a description of your process including operating parameters to be measured, a description of the sampling locations, sampling and analytical procedures, and any modifications to standard procedures as required by 40CFR63.344(c). You must notify the DEC of your intent to conduct an initial performance test at least 60 days prior to the actual testing date and submit the test plan to DEC if requested. An emissions test report must be submitted to DEC within 90 days of the completion date of the test. The report must contain the information in the test plan including any changes from the plan that occurred during testing, test results, quality assurance procedures and results, equipment monitoring values during testing, raw data and calculations.

**Notification of Compliance Status** – A one-time Notification of Compliance Status Report must be submitted to the Agency. A template is found in the “Subpart N – Cr Electroplating NESHAP Notification of Compliance Status Report” fact sheet. This information must be resubmitted any time a change to the compliance status occurs.

**Monitoring** – Monitoring and recording operating parameters during normal tank operation is required by 40CFR63.343(c) to show the operating conditions are equivalent to the conditions during the compliance test. Table 2 – Cr NESHAP Ongoing Monitoring Requirements lists the requirements for different control devices and the provision for alternative monitoring approaches. Decorative chromium electroplating operations using trivalent chromium baths are not required to conduct ongoing compliance monitoring.

**Table 2 – Cr NESHAP Ongoing Monitoring Requirements**

<b>Control Technique</b>	<b>Monitored Parameter<sup>a</sup></b>	<b>Frequency</b>	<b>Allowable Deviation from acceptable value<sup>a</sup> (or range if multiple conditions were tested) during performance test</b>
Composite Mesh-Pad System	Pressure drop across system	Once each day or continuous	±2 inches of water column
Packed-Bed Scrubber	Velocity pressure at the system inlet	Once each day or continuous	±10 percent from the velocity pressure value
	Pressure drop across system	Once each day or continuous	±1 inch of water column
Combined Composite Mesh-Pad System/Packed-Bed Scrubber	Pressure drop across the mesh-pad system	Once each day or continuous	±2 inches of water column
Fiber-Bed Mist Eliminator	Pressure drop across the control device upstream of the fiber-bed that prevents plugging	Once each day or continuous	±1 inch of water column
	Pressure drop across the fiber-bed mist eliminator	Once each day or continuous	±1 inch of water column
Wetting Agent-Type or Combination Wetting Agent-Type/Foam Blanket Fume Suppressant	Surface tension of the bath	Every 4 hours or continuous	Must be ≤ to the value established during the performance test or the 40 dynes/cm (stalagometer) or 33 dynes/cm (tensiometer) standard
Foam Blanket-Type Fume Suppressant	Thickness of the foam blanket	Once every hour or continuous	Must be ≥ to one inch or the value established during the performance test
Fume Suppressant/Add-On Control Device	Requirements for all control methods used to establish compliance must be met.		
Alternative Monitoring Approaches	Requests for alternative monitoring approaches can be submitted per 40CFR63.343(c)(8) and used if approved by the Agency.		
Other Control Techniques	Submit monitoring plan as required by 40CFR63.343(d)		

(a) Acceptable values for these monitored parameters are established during initial performance testing.

**Permitting** – Sources that are subject to this chromium electroplating rule must obtain a NYS Air Registration, State Facility Permit, or Title V Permit. Most electroplaters are small business that only require an Air Registration. If the actual emissions of a single Hazardous Air pollutant is 5 tons per year or greater or the emissions of all HAPs is 12.5 tons per year or greater a state or Title V permit is required.

New sources and reconstructed sources (sources that spend 50% of the capital cost of an equivalent new chromium tank system) must notify the agency before initiating construction/reconstruction, supplying the information required by 40CFR63.345 in the notification.

**Small Business Environmental Assistance Program**  
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**Operation & Maintenance** – The NESHAP requires chromium operations (except decorative chromium electroplating tank using a trivalent chromium bath) to follow specific operation and maintenance practices including housekeeping practices for certain types of monitoring and control equipment. These requirements are detailed in a separate fact sheet, “40 CFR 63 Subpart N- Chromium Electroplating and Anodizing Processes: NESHAP Operation and Maintenance and Housekeeping Practices.”

**Annual Reports** – In addition to reports and notifications discussed previously in this fact sheet, sources must complete a compliance status report annually and keep the report on site. Major sources that have a Title V permit have more extensive reporting requirements. The information required for this annual compliance report is contained in the “Cr subpart N NESHAP Ongoing Reporting Requirements” fact sheet.

**Recordkeeping** – The record keeping requirements are contained in the “Cr subpart N NESHAP Ongoing Recordkeeping Requirements” fact sheet.

**Contact the SBEAP for free, confidential technical assistance.**

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