



40 CFR 63 Subpart N- Chromium Electroplating and Anodizing Processes: NESHAP Operation and Maintenance and Housekeeping Practices

The Federal National Emission Standard for Hazardous Air Pollutants (NESHAP) affects all facilities that use chromium electroplating or anodizing tanks, regardless of size. What your facility must do to comply with the NESHAP depends on the size of your operation and what type of process you use (hard, decorative, or anodizing), and what control technique you use. This fact sheet provides a general overview of the operation and maintenance (O&M) and housekeeping practices for chromium electroplating and anodizing operations required by 40CFR63.342(f).

You must follow the O&M plan at all times.

Operation and Maintenance (O&M) Plan

Except for decorative chromium electroplating operations using trivalent chromium baths, which are not required to develop an O&M plan, all other chromium electroplating and anodizing tanks must have an O&M plan. Your facility's O&M plan must include the following:

- Descriptions of you control device and monitoring equipment
- A checklist to document the operation and maintenance of the equipment
- Procedures for identifying malfunctions and implementing corrections. (Note that if these procedures are not followed during a malfunction, you must contact the Agency by phone within 2 working days, and follow up by letter within 7 working days recording the actions taken and how they differ from the O&M plan)
- Procedures to follow to prevent equipment or process malfunctions due to poor maintenance
- A list of the work practice standards from the Table 1 O&M Practices that apply to your facility.
- Housekeeping Practices, which are described in detail in Table 2 - Housekeeping Practices. You must keep this plan on-site and make it available during an inspection.

Table 1 – Chromium NESHAP Operation and Maintenance Practices

Control Technique	O&M Standards	Frequency
Packed-Bed Scrubber (PBS)	Visually inspect the device to ensure there is proper drainage, no chromic acid buildup on the packed beds, and no evidence of chemical attack on the structural integrity of the device.	Quarterly
	Visually inspect back portion of the chevron-blasé mist eliminator to ensure that it is dry and there is no breakthrough of chromic acid mist.	Quarterly
	Visually inspect ductwork from the tank to the control device to ensure there are no leaks.	Quarterly
	Add fresh makeup water to the top of the packed be ^{a,b}	Whenever scrubber water is drained
Composite Mesh-Pad (CMP) System	Visually inspect the device to ensure there is proper drainage, no chromic acid buildup on the pads, and no evidence of chemical attack on the structural integrity of the device.	Quarterly
	Visually inspect the back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.	Quarterly
	Visually inspect ductwork from tank to the control device to ensure there are no leaks.	Quarterly
	Perform wash-down of the composite mesh-pads in accordance with the manufacturer's recommendations.	Per manufacturer
Combined Packed-Bed Scrubber/Composite Mesh-Pad System	<i>Same as for Composite Mesh-Pad Systems</i>	<i>Same as for Composite Mesh-Pad Systems</i>
Fiber-Bed Mist Eliminator ^c	Visually inspect fiber-bed unit and prefiltering device to ensure there is proper drainage, no chromic acid buildup in the units, and no evidence of chemical attack on the structural integrity of the devices.	Quarterly
	Visually inspect ductwork from tank (or tanks) to the control device to ensure there are no leaks.	Quarterly
	Perform wash-down of fiber elements in accordance with manufacturers recommendations.	Per manufacturer
Other Air Pollution Control Device (APCD)	<i>To be proposed by the source for approval by the Administrator</i>	<i>To be proposed by the source for approval by the Administrator</i>
Monitoring Equipment	O&M Standards	Frequency
Pitot Tube	Backflush with water or remove from the duct and rinse with fresh water. Replace in the duct and rotate 180° to ensure that the same zero reading is obtained. Check pitot tube ends for damage. Replace pitot tube if it is cracked or shows other signs of fatigue.	Quarterly
Stalagmometer	<i>Follow manufacturer's recommendations</i>	<i>Per manufacturer</i>

Table 2 – Chromium Housekeeping Practices

For:	You Must:	At This Minimum Frequency:
(1) Any substance used in an affected chromium electroplating or chromium anodizing tank that contains hexavalent chromium.	<p>a). Store the substance in a closed container, in an enclosed storage area/building; AND</p> <p>b). Use a closed container when transporting the substance from the enclosed storage area.</p>	<p>- At all times, except when transferring the substance to and from the container.</p> <p>- Whenever transporting substance, except when transferring the substance to and from the container.</p>
<p>(2) Each affected tank, to minimize spills of bath solution that result from dragout.</p> <p>Note: this measure does not require the return of contaminated bath solution to the tank. This requirement applies only as the parts are removed from the tank. Once away for the tank area, any spilled solution must be handled in accordance with item 4 of the housekeeping measures.</p>	<p>a). Install dip trays that collect and return to the tank any bath solution that drips or drains from parts as the parts are removed from the tank; OR</p> <p>b). Contain and return to the tank any bath solution that drains or drips from parts as the parts are removed from the tank; OR</p> <p>c). Collect and treat in an onsite wastewater treatment plant any bath solution that drains or drips from parts as the parts are removed from the tank.</p>	<p>- Prior to operating the tank.</p> <p>- Whenever removing parts from an affected tank.</p> <p>- Whenever removing parts from an affected tank.</p>
(3) Each spraying operation for removing excess chromic acid from parts removed from, and occurring over, an affected tank.	Install a splash guard to minimize overspray during spraying operations and to ensure that any hexavalent chromium laden liquid captured by the splash guard is returned to the affected chromium electroplating or anodizing tank.	Prior to any such spraying operation.
(4) Each operation that involves the handling or use of any substance used in an affected chromium electroplating or anodizing tank that contains hexavalent chromium.	<p>Begin clean up, or otherwise contain, all spills of the substance.</p> <p>Note: substances that fall or flow into drip trays, pans, sumps, or other containment areas are not considered spills.</p>	Within 1 hour of the spill.
(5) Surfaces within the enclosed storage area, open floor area, walkways around affected tanks contaminated with hexavalent chromium from an affected chromium electroplating or anodizing tank.	<p>a). Clean the surfaces using one or more of the following methods: HEPA vacuuming; hand-wiping with a damp cloth; wet mopping; hose down or rinse with potable water that is collected in a wastewater collection system; other cleaning method approved by the permitting authority; OR</p> <p>b). Apply a non-toxic chemical dust suppressant to the surfaces.</p>	<p>- At least once every 7 days if one or more chromium electroplating or anodizing tanks were used, or at least after every 40 hours of operating time of one or more affected chromium electroplating or anodizing tank, whichever is later.</p> <p>- According to manufacturer's recommendations.</p>
(6) All buffing, grinding, or polishing operations that are located in the same room as chromium electroplating or anodizing operations.	Separate the operation from any affected electroplating or anodizing operation by installing a physical barrier; the barrier may take the form of plastic strip curtains.	Prior to beginning the buffing, grinding, or polishing operation.
(7) All chromium or chromium-containing wastes generated from housekeeping activities.	a). Store, dispose, recover, or recycle the wastes using practices that do not lead to fugitive dust and in accordance with hazardous waste requirements.	At all times

Contact the SBEAP for free, confidential technical assistance.

Small Business Environmental Assistance Program
 Administered by the NYS Pollution Prevention Institute
Phone: 585-475-7869 | **Email:** sbeap@rit.edu