



40 CFR 63 Subpart N

Chromium Electroplating & Anodizing Processes: NESHAP Operation & Maintenance Practices

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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 federal operation and maintenance practices that chromium electroplating and anodizing operations must comply with.** State and local regulatory agencies may have additional requirements. If you require additional technical information, the Small Business Environmental Assistance Program (SBEAP) provides free and confidential assistance and can be contacted at the toll-free number listed below.

Operation & Maintenance Practices

The NESHAP requires chromium operations to follow specific operation and maintenance standards. This requirement ensures that the control equipment your facility uses to comply with the regulation is properly maintained. Poor maintenance may result in system degradation over time, and eventually lead to an increase in emissions. In most cases, the operation and maintenance standards must be performed quarterly. The requirements vary, depending on what type of control technique you are using. *If you operate a decorative chromium electroplating tank using a trivalent chromium bath and you can document on-going purchases and use of bath chemicals containing a wetting agent, you do not have to comply with any operation and maintenance standards.*

The table on the following page summarizes these operation and maintenance practices for both the control equipment and the monitoring equipment.

Operation & Maintenance Plan

In addition to operation and maintenance standards, you must also develop an operation and maintenance (O&M) plan for your facility. (Decorative chromium electroplating operations using trivalent chromium baths are not required to develop an O&M plan.) Each facility's O&M plan must include housekeeping procedures, which are described in detail in our *Housekeeping Practices* fact sheet. You must keep this plan on-site and make it available during an inspection. *Your facility's O&M plan must include the following:*

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| <ul style="list-style-type: none"> ✓ Descriptions of your control device and monitoring equipment ✓ A checklist to document the operation and maintenance of the equipment ✓ Procedures for identifying malfunctions and implementing corrections | <ul style="list-style-type: none"> ✓ Procedures to follow to prevent equipment or process malfunctions due to poor maintenance ✓ A list of the work practice standards from the table on the back that apply to your facility |
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The SBEAP can provide you with sample checklists to use as part of your O&M planning regimen.

Summary of Operation & Maintenance Practices for Control Techniques under the NESHAP

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-blade 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 bed ^{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 manufacturers 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 (device that is used to measure the surface tension)	<i>Follow manufacturer's recommendations</i>	<i>Per manufacturer</i>

^aIf more than 50% of the scrubber water is drained (e.g. for maintenance purposes) makeup water may be added to the scrubber basin.

^bFor horizontal-flow scrubbers, top is defined as the section of the unit directly above the packing media such that the makeup water would flow perpendicular to the air flow through the packing. For vertical-flow units, the top is defined as the area downstream of the packing material such that the makeup water would flow countercurrent to the air flow through the unit

^cWork practice standards for the control device installed upstream of the fiber-bed mist eliminator to prevent plugging *do not apply*, provided the work practice standards for the fiber-bed unit are followed

Helping New York's Small Businesses understand and comply with environmental regulations.

Small Business Environmental Assistance Program

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