

**REGULATION IX
TOXIC AIR CONTAMINANTS**

RULE 902

**AIRBORNE TOXIC CONTROL MEASURE
HEXAVALENT CHROMIUM EMISSIONS FROM COOLING TOWERS**

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RULE 902 HEXAVALENT CHROMIUM EMISSIONS FROM COOLING TOWERS

PART 1 GENERAL

1.1 **Purpose**

The purpose of this rule is to reduce emissions of hexavalent chromium from cooling towers by eliminating chromium based circulating water treatment processes, pursuant to Title 17, California Code of Regulations, Section 93103. Hexavalent chromium containing compounds may be ingredients of cooling tower circulating water treatment chemicals.

1.2 **Applicability**

This rule shall apply to any person who owns or operates, or who plans to build, own, or operate, a cooling tower located in the Northern Sierra Air Quality Management District.

1.3 **Exemption, Discontinued Chromate Treatment**

Section 5.2 does not apply to cooling tower operators who have not used hexavalent chromium for water treatment since September 23, 1990 or cooling tower circulating water was never treated with hexavalent chromium containing compounds, and who have met all petition for exemption requirements of Section 4.4.

1.4 **Exemption, Wooden Cooling Towers**

Operators of cooling towers having wooden components exposed to circulating water may petition for a temporary exemption from the Section 3.2 hexavalent chromium concentration limitation for the period from the compliance date, September 23, 1991, up to March 23, 1992, providing that the petition for exemption requirements of Section 4.3 are met.

PART 2 DEFINITIONS

A. **Cooling Tower**

Any device which evaporates circulating water to remove heat from a process, a building, or a refrigerator, and puts the heat into the ambient air.

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B. Hexavalent Chromium/Chromate

Hexavalent chromium and chromate are identified toxic air contaminants and are a cancer-causing (toxic) substance existing as part of various inorganic chromate compounds, for example, sodium dichromate or lead chromate.

C. Water Treatment Chemicals

Any combination of chemicals added to cooling tower water including tracers, corrosion inhibitors, antiscalants, dispersants, biocides.

PART 3 STANDARDS

3.1 Prohibition On Hexavalent Chromium/Chromate Use

Effective September 23, 1991, hexavalent chromium containing compounds shall not be added to cooling tower circulating water, and

3.2 Limitation On Circulating Water Hexavalent Chromium Concentrations

Effective September 23, 1991, a cooling tower shall not be operated with a circulating water hexavalent chromium concentration greater than or equal to **0.15 milligrams per liter**.

PART 4 ADMINISTRATIVE REQUIREMENTS

4.1 Existing Cooling Towers, General Requirements

For cooling towers existing on March 27, 1991, the owner or operator shall notify the District in accordance with Section 4.2, and no later than September 23, 1991, each cooling tower shall comply with Section 3.1 and Section 3.2 requirements. Owners or operators of cooling towers with wooden components exposed to circulating water shall comply with the limitation of Section 3.2, unless a temporary exemption has been granted in accordance with Section 4.3.

4.2 Existing Cooling Towers, Notification

No later than June 25, 1991, each person who owns or operates a cooling tower shall submit the following information, in writing, to the District for each cooling tower:

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- A. A declaration that a cooling tower is owned or operated; and
- B. The location of the cooling tower; and
- C. A statement as to whether or not hexavalent chromium or hexavalent chromium containing compounds is used or was used in the cooling tower; and
- D. If hexavalent chromium or hexavalent chromium containing compounds are used, the date by which such use will cease.

4.3 **Petition for Exemption, Wooden Cooling Towers**

Owners or operators of cooling towers existing on March 27, 1991, with wooden components that are exposed to circulating water may petition the APCO for exemption from the Section 3.2 hexavalent chromium concentration limit of 0.15 milligrams per liter of circulating water for a period of up to six months from the compliance date of September 23, 1991. The following requirements must be met for the temporary exemption to be granted:

- A. The District must be notified in writing that the cooling tower has wooden components exposed to circulating water; and
- B. The owner or operator complies with all other requirements of this rule; and
- C. The circulating water of the cooling tower is tested in accordance with Section 5.2 monthly and results are reported to the District; and
- D. Testing shows a decrease in the hexavalent chromium concentrations in circulating water each month; and
- E. Hexavalent chromium concentrations in circulating water shall not exceed 8 milligrams hexavalent chromium per liter of circulating water.

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4.4 **Petition for Exemption From Test Requirements, Discontinued Chromate Treatment**

The requirements of Section 5.2 apply to any person who owns or operates a cooling tower existing on or prior to March 27, 1991, with the following exception:

- A. Hexavalent chromium has not been used in the cooling tower water treatment since September 23, 1990; or
- B. Hexavalent chromium has never been used in water treatment for the cooling tower; and
- C. Such hexavalent chromium cessation of use or non-use is demonstrated by written certification, signed by a company officer, that hexavalent chromium containing compounds have not been used in the year immediately before the compliance date.

4.5 **New Cooling Tower Construction, Notification**

No later than 90 days prior to operation of a newly constructed cooling tower, the owner or operator shall provide the following information in writing for each cooling tower:

- A. The name and address of the owner or operator of the cooling tower; and
- B. The location of the new cooling tower; and
- C. The date that operation of the cooling tower is planned to commence.

PART 5 **MONITORING AND RECORDS**

5.1 **Determination of Hexavalent Chromium In Circulating Water**

Samples of circulating water shall be analyzed for hexavalent chromium as prescribed by American Public Health Method 312B or an equivalent method, as approved by the APCO, and the results reported to the District within 30 days of the date testing is conducted.

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5.2 **Testing Requirements**

Unless a petition for exemption from testing has been made to, and granted by, the APCO in accordance with Section 4.3 prior to September 23, 1991, testing of the cooling tower circulating water shall be conducted and reported as specified in Section 5.1:

- A. **Frequency of Testing:** At least one test of cooling tower circulating water hexavalent chromium concentration shall be conducted and the results reported to the District prior to September 23, 1991:
1. Additional tests shall be conducted and the results reported every six months thereafter.
 2. If a temporary exemption from Section 3.2 limitation has been granted, then testing shall be conducted and reported monthly in accordance with Section 4.3 and Section 1.4.
- B. **Termination of Testing:** The testing requirements of this rule for a cooling tower end when two consecutive required tests have results showing concentrations of hexavalent chromium to be less than 0.15 milligrams per liter of circulating water. Testing may be required at any time by the District, if the District has information that the circulating water may contain hexavalent chromium.

5.3 **Record Keeping**

Any person subject to Sections 5.1 and 5.2 shall maintain records of the results of all required tests of circulating water for two (2) years and submit them to the District when requested.