

RULE 7012 HEXAVALENT CHROMIUM - COOLING TOWERS (Adopted May 16, 1991, Amended December 17, 1992)

1.0 Purpose

The purpose of this rule is to limit emissions of hexavalent chromium from circulating water in cooling towers and to prohibit the use or sale of products containing these compounds for treating cooling tower water. Recordkeeping and monitoring requirements and test methods for determining emission concentration limits are specified. An implementation schedule is also included.

2.0 Applicability

The requirements of this rule shall apply to any person who owns or operates or who plans to build, own, or operate a cooling tower in which the circulating water is exposed to the atmosphere.

3.0 Definitions

3.1 Hexavalent Chromium/Chromate: a cancer-causing (toxic) substance existing as part of various inorganic chromate compounds, for example sodium dichromate or lead chromate.

3.2 Cooling Tower: a device which evaporates circulating water to remove heat from a process, a building, or a refrigerator and transfers the heat to the atmosphere.

3.3 Water Treatment Chemicals: any combination of chemicals which are added to cooling tower water including, but not limited to, corrosion inhibitors, antiscalants, tracers, dispersants, and biocides.

3.4 Wooden Cooling Tower: a cooling tower containing wood components which are exposed to the circulating water.

4.0 Exemptions

4.1 If cooling tower circulating water has:

4.1.1 hexavalent chromium concentration levels less than 0.15 mg/l as determined by Section 6.3.1; or

4.1.2 never had hexavalent chromium containing compounds added.

The cooling tower shall be exempt from the provisions of this rule except for Sections 5.2.1, 6.1, and 7.1. The owner/operator of a cooling tower seeking an exemption pursuant to this section shall submit to the APCO a compliance plan, as

outlined in Section 6.1, which demonstrates compliance with the requirements of this section.

- 4.2 Cooling device commonly known as evaporative coolers or swamp coolers, whose operating principle is based on cooling air which subsequently is used to cool a building, residence, or other occupied area are exempt from the provisions of this rule except for Section 5.2.1.
- 4.3 Any cooling tower in which the circulating water is completely contained and is not exposed to the atmosphere is exempt from the provisions of this rule.

## 5.0 Requirements

- 5.1 No person shall sell any product containing chromate for the purpose of adding it to the water in a cooling tower.
- 5.2 A person shall not operate any cooling tower unless the following requirements are met:

- 5.2.1 No hexavalent chromium containing compounds shall be added to cooling tower circulating water, effective September 16, 1991; and

- 5.2.2 Wooden Cooling Towers:

A person shall not operate a wooden cooling tower in the District unless the following requirements are met:

- 5.2.2.1 by November 16, 1991, hexavalent chromium concentration levels in the circulating water do not exceed 8.0 milligrams per liter (mg/l); and

- 5.2.2.2 by May 16, 1992, hexavalent chromium concentration levels in the circulating water do not exceed 0.15 mg/l; or

- 5.2.3 Non-Wooden Cooling Towers:

By November 16, 1991, a person shall not operate a non-wooden cooling tower unless the hexavalent chromium concentration levels in the circulating water do not exceed 0.15 mg/l.

## 6.0 Administrative Requirements

### 6.1 Reporting

6.1.1 By August 16, 1991, any owner/operator of a cooling tower shall submit to the APCO a compliance plan which includes the following information about the cooling tower.

After August 16, 1991, any operator/owner of any newly constructed cooling tower shall submit a compliance plan to the APCO with the following information at least 90 days before the tower is operated.

- 6.1.1.1 the name, address, and phone number of the owner/operator,
- 6.1.1.2 location of the cooling tower,
- 6.1.1.3 cooling tower type and materials of construction,
- 6.1.1.4 a statement regarding use or non-use of chromate in the cooling tower,
- 6.1.1.5 a statement when chromate will be discontinued if currently utilized, and
- 6.1.1.6 current hexavalent chromium concentration level in the circulating water.

### 6.2 Recordkeeping

Any person subject to Sections 5.2.2 and 5.2.3 shall:

6.2.1 Maintain records of all circulating water tests performed pursuant to Section 6.3 and 6.4. The records shall be retained for at least two (2) years and shall be made available to the APCO upon request.

6.2.2 By June 16, 1992 and annually thereafter, submit to the APCO the following:

- 6.2.2.1 results of all circulating water tests performed pursuant to Sections 6.3 and 6.4,
- 6.2.2.2 the name and address of the laboratory performing the test, and

6.2.2.3 the dates the samples were collected and analysis was performed.

### 6.3 Test Methods

6.3.1 Compliance with the hexavalent chromium concentration limits shall be determined by American Public Health Association Method 312B.

6.3.2 The owner/operator shall notify the APCO 48 hours in advance of any sampling of cooling water for testing and allow the APCO to take a simultaneous sample if requested.

### 6.4 Monitoring

#### 6.4.1 Wooden Cooling Towers:

6.4.1.1 From November 16, 1991 to May 16, 1992, any person subject to Section 5.2.2 shall test the circulating water at least once every month to determine the concentration of hexavalent chromium.

6.4.1.2 After May 16, 1992, any person subject to Section 5.2.2.2 shall test the circulating water at least once every six (6) months to determine the concentration of hexavalent chromium.

#### 6.4.2 Non-Wooden Cooling Towers:

After November 16, 1992, any person subject to Section 5.2.3 shall test the circulating water at least once every six (6) months to determine the concentration of hexavalent chromium.

6.4.3 Testing may be discontinued, and an exemption sought pursuant to Section 4.1, when two consecutive required tests show hexavalent chromium concentrations less than 0.15 mg/l.

6.4.4 The APCO reserves the right to require testing of the circulating water at any time, to confirm that the water does not contain hexavalent chromium in excess of 0.15 mg/l.

### 7.0 Fees

7.1 A compliance plan shall be accompanied by the fee specified in Rule 3010 (Permit Fee).

7.2 The owner/operator of a nonexempt cooling tower shall pay an annual fee as specified in Rule 3020 (Permit Fee Schedules).

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