

# REGULATION 7 ODOROUS SUBSTANCES

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## REGULATION 7 ODOROUS SUBSTANCES

### 7-100 GENERAL

**7-101 Description:** This Regulation places general limitations on odorous substances and specific emission limitations on certain odorous compounds. A person must meet all limitations of this Regulation, but meeting such limitations shall not exempt such person from any other requirements of the District, state or federal law. See also Rule 1, Sulfur Dioxide and Rule 2, Hydrogen Sulfide, of Regulation 9, Inorganic Gaseous Pollutants.

**7-102 Citizen Complaints:** The limitations of this Regulation shall not be applicable until the APCO receives odor complaints from ten or more complainants within a 90-day period, alleging that a person has caused odors perceived at or beyond the property line of such person and deemed to be objectionable by the complainants in the normal course of their work, travel or residence. When the limits of this regulation become effective as a result of citizen complaints described above, the limits shall remain effective until such time as no citizen complaints have been received by the APCO for 1 year. The limits of this Regulation shall become applicable again when the APCO receives odor complaints from five or more complainants within a 90-day period. (Amended May 21, 1980)

**7-110 Exemptions:** The following buildings, materials and operations are exempted from this regulation:

- 110.1 Single family dwellings.
- 110.2 Restaurants and other establishments for the purpose of preparing food for human consumption employing less than 5 persons.
- 110.3 Materials odorized for safety purposes.
- 110.4 Materials possessing strong odors for reasons of public health and welfare, and where no suitable substitute is available and where best modern practices are employed.
- 110.5 Agricultural operations as described in the California Health and Safety Code, Section 41705.

### 7-200 DEFINITIONS

**7-201 Odor Free Air:** Air which as been passed through a drying agent followed by two successive beds of activated carbon.

**7-202 Kraft Pulp Mill:** Any combination of industrial operations which converts wood to pulp, and which uses in the pulping process an alkaline sulfide cooking liquor containing sodium hydroxide and sodium sulfide.

**TABLE I  
DILUTION RATES**

Elevation of Emission Point above Grade in Meters (Feet)	Dilution Rate (Volumes of odor-free air per volume of source sample)
Less than 9 (30)	1,000
9 to 18 (30 to 60)	3,000
18 to 30 (60 to 100)	9,000
30 to 55 (100 to 180)	30,000
greater than 55 (180)	50,000

**7-300 STANDARDS**

- 7-301 General Limit on Odorous Substances:** A person shall not discharge any odorous substance which remains odorous after dilution with odor-free air as specified in Table I. Samples shall be collected and analyzed as prescribed in Section 7-400.
- 7-302 Limit on Odorous Substances at or Beyond Property Line:** A person shall not discharge any odorous substance which causes the ambient air at or beyond the property line of such person to be odorous and to remain odorous after dilution with four parts of odor-free air.
- 7-303 Limit on Odorous Compounds:** A person shall not discharge concentrations of odorous compounds in excess of those specified in Table II, except that this Section shall not apply to kraft mills.

**TABLE II  
MAXIMUM ALLOWABLE EMISSION CONCENTRATIONS IN PPM**

Compound or Family of Compounds	Type A Emission Point	Type B Emission Point
Dimethylsulfide (CH <sub>3</sub> ) <sub>2</sub> S	0.1	0.05
Ammonia NH <sub>3</sub>	5000	2500
Mercaptans calculated as Methylmercaptan CH <sub>3</sub> SH	0.2	0.1
Phenolic compounds calculated as phenol C <sub>6</sub> H <sub>5</sub> OH	5.0	2.5
Trimethylamine (CH <sub>3</sub> ) <sub>3</sub> N	0.02	0.02

**7-400 ADMINISTRATIVE REQUIREMENTS**

- 7-401 Collection of Samples:** Samples shall be taken and transported in a manner which minimizes alteration of the samples either by contamination or loss of odorous material.
- 7-402 Analysis of Samples:** All samples shall be evaluated as soon after collection as possible in accordance with the procedures set forth in Sections 7-403, 7-404 and 7-405.
- 7-403 Evaluation Apparatus:** The evaluation apparatus consists of a dynamic olfactometer (variable dilution device) which accepts a field sample, dilutes it with odor-free air and conducts it to an inhalation mask at a flow rate of approximately 14 liters/minute (0.5 cfm).
- 7-404 Evaluation Procedure:** Three subjects, selected by the APCO, are seated out-of-sight of the evaluation apparatus and fitted with the inhalation mask. The subjects shall be selected in accordance with procedures approved by the APCO and which are designed to eliminate prospective subjects who have olfactory sensitivity deemed by the APCO to be unduly sensitive or insensitive at the time of the test. A signal lamp and a signal switch are in front of each subject. The subjects are given 20 presentations, each of 5 seconds duration and 10 seconds apart, for appraisal. Half the presentations (10) are diluted field sample, and half (10) consists only of odor-free air. The presentations of sample and odor-free air are given in random order. At the time each presentation is made, each subject's response is solicited by lighting the subject's signal lamp. If the subject can detect any odor, he responds by pressing his signal switch. The operator records each subject's affirmative or negative response. If the presentation of a sample elicits an affirmative response in less than 5 seconds, odor-free air is substituted for the remainder of the 5 second presentation period. During the 10 second relaxation period between presentations, odor-free air is supplied to the mask.
- 7-405 Evaluation Analysis:** For the purpose of this Regulation, a diluted sample shall be deemed odorous if during evaluation as prescribed in Section 7-404 at least two of the subjects gave negative responses to at least 8 of the 10 odor-free or "blank"

presentations and affirmative responses to at least 8 of the 10 sample presentations. Samples deemed to be odorous in accordance with the evaluation analysis described in this Section shall be deemed to be a violation of the limits established in Sections 7-301 and 7-302.

**7-600      MANUAL OF PROCEDURES**

**7-601      Collection of Samples:** Samples of odorous compounds specified in Section 7-303, Table II, shall be collected as prescribed in the Manual of Procedures, Volume IV, ST-1, ST-8, ST-11, ST-16, ST-22. (Amended March 17, 1982)

**7-602      Sampling Equipment and Techniques for Collection:** Sampling equipment and techniques for collection purposes in Section 7-401 are prescribed in the Manual of Procedures, Volume IV. (Amended March 17, 1982)