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**TITLE 22. Social Security**  
**Division 4. Environmental Health**  
**Chapter 15. Domestic Water Quality and Monitoring Regulations**  
**Article 1. Definitions**  
**§64400.70. MCL.**

**§64400.70. MCL.**



• Note • History

“MCL” means maximum contaminant level.

NOTE

Authority cited: Sections 208, 4023.3 and 4028, Health and Safety Code. Reference: Sections 4010 through 4039.6, Health and Safety Code.

HISTORY

1. New section filed 9-8-94 as an emergency; operative 9-8-94 (Register 94, No. 36). A Certificate of Compliance must be transmitted to OAL by 1-6-95 or emergency language will be repealed by operation of law on the following day.
2. New section refiled 1-3-95 as an emergency; operative 1-3-95 (Register 95, No. 1). A Certificate of Compliance must be transmitted to OAL by 5-3-95 or emergency language will be repealed by operation of law on the following day.
3. New section refiled 4-26-95 as an emergency; operative 4-26-95 (Register 95, No. 17). A Certificate of Compliance must be transmitted to OAL by 8-24-95 or emergency language will be repealed by operation of law on the following day.
4. Certificate of Compliance as to 4-26-95 order transmitted to OAL 5-5-95 and filed 6-19-95 (Register 95, No. 25).

**§64400.80. Nontransient-noncommunity Water System.**



• Note • History

“Nontransient-noncommunity water system” means a public water system that is not a community water system and that regularly serves at least the same 25 persons over 6 months per year.

NOTE

Authority cited: Sections 208, 4023.3 and 4028, Health and Safety Code. Reference: Sections 4010 through 4039.6, Health and Safety Code.

HISTORY

1. New section filed 9-8-94 as an emergency; operative 9-8-94 (Register 94, No. 36). A Certificate of Compliance must be transmitted to OAL by 1-6-95 or emergency language will be repealed by operation of law on the following day.
2. New section refiled 1-3-95 as an emergency; operative 1-3-95 (Register 95, No. 1). A Certificate of Compliance must be transmitted to OAL by 5-3-95 or emergency language will be repealed by operation of law on the following day.
3. New section refiled 4-26-95 as an emergency; operative 4-26-95 (Register 95, No. 17). A Certificate of Compliance must be transmitted to OAL by 8-24-95 or emergency language will be repealed by operation of law on the following day.
4. Certificate of Compliance as to 4-26-95 order transmitted to OAL 5-5-95 and filed 6-19-95 (Register 95, No. 25).

**§64401. Repeat Compliance Period.**



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**TITLE 22. Social Security**  
**Division 4. Environmental Health**  
**Chapter 15. Domestic Water Quality and Monitoring Regulations**  
**Article 4. Primary Standards--Inorganic Chemicals**  
**§64431. Maximum Contaminant Levels--Inorganic Chemicals.**

 • [Note](#) • [History](#)

(a) The primary MCLs for the drinking water chemicals shown in Table 64431-A shall not be exceeded in the water supplied to the public.

Table 64431-A  
 Maximum Contaminant Levels  
 Inorganic Chemicals

Chemical	Maximum Contaminant Level, mg/L
Aluminum	1.
Antimony	0.006
Arsenic	0.05
Asbestos	7 MFL*
Barium	1.
Beryllium	0.004
Cadmium	0.005
Chromium	0.05
Cyanide	0.15
Fluoride	2.0
Mercury	0.002
Nickel	0.1
Nitrate (as NO <sub>3</sub> )	45.
Nitrate+Nitrite (sum as nitrogen)	10.
Nitrite (as nitrogen)	1.
Selenium	0.05
Thallium	0.002

\* MFL=million fibers per liter; MCL for fibers exceeding 10 um in length.

#### NOTE

Authority cited: Sections 100275, 116350, 116365 and 116375, Health and Safety Code. Reference: Sections 116365 and 116470, Health and Safety Code.

#### HISTORY

1. Amendment of article heading, repealer of section and renumbering and amendment of former section 64435 to [section 64431](#) filed 9-8-94 as an emergency; operative 9-8-94 (Register 94, No. 36). A Certificate of Compliance must be transmitted to OAL by 1-6-95 or emergency language will be repealed by operation of law on the following day. For

prior history, see Register 88, No. 51.

2. Amendment of article heading, repealer of section and renumbering and amendment of former section 64435 to section 64431 refiled 1-3-95 as an emergency; operative 1-3-95 (Register 95, No. 1). A Certificate of Compliance must be transmitted to OAL by 5-3-95 or emergency language will be repealed by operation of law on the following day.
3. Amendment of article heading, repealer of section, and renumbering and amendment of former section 64435 to section 64431 refiled 4-26-95 as an emergency; operative 4-26-95 (Register 95, No. 17). A Certificate of Compliance must be transmitted to OAL by 8-24-95 or emergency language will be repealed by operation of law on the following day.
4. Certificate of Compliance as to 4-26-95 order transmitted to OAL 5-5-95 and filed 6-19-95 (Register 95, No. 25).
5. Amendment of subsection (a) and table 64431-A, repealer of table 64431-B and subsection (b) and amendment of Note filed 3-23-98; operative 4-22-98 (Register 98, No. 13).
6. Amendment of Table 64431-A and amendment of Note filed 5-13-2003; operative 6-12-2003 (Register 2003, No. 20).

**§64432. Monitoring and Compliance--Inorganic Chemicals.**

**§** • Note • History

(a) All public water systems shall monitor to determine compliance with the nitrate and nitrite MCLs in Table 64431-A, pursuant to subsections 64432(c) through (e) of this section and Section 64432.1. All community and nontransient-noncommunity water systems shall also monitor to determine compliance with the MCLs in Table 64431-A, pursuant to subsections 64432(b) through (f) of this section, and Section 64432.2. Monitoring shall be conducted in the year designated by the Department of each compliance period beginning with the compliance period starting January 1, 1993.

(b) The frequency of monitoring conducted to determine compliance with the MCLs for the inorganic chemicals listed in Table 64431-A, except for asbestos and nitrate/nitrite, shall be as follows:

(1) Each compliance period, all community and nontransient-noncommunity systems using groundwater shall monitor once during the year designated by the Department. The Department will designate the year based on historical monitoring frequency and laboratory capacity. All community and nontransient-noncommunity systems using approved surface water shall monitor annually. All systems monitoring at distribution entry points which have combined surface and groundwater sources shall monitor annually.

(2) Quarterly samples shall be collected and analyzed for any chemical if analyses of such samples indicate a continuous or persistent trend toward higher levels of that chemical, based on an evaluation of previous data.

(c) For the purposes of Sections 64432, 64432.1 and 64432.2, detection shall be defined by the detection limits for purposes of reporting (DLRs) in Table 64432-A.

Table 64432-A  
 Detection Limits for Purposes  
 of Reporting (DLRs) for  
 Regulated Inorganic Chemicals

<i>Chemical</i>	<i>Detection Limit for Purposes of Reporting (DLR) (mg/L)</i>
Aluminum	0.05
Antimony	0.006
Arsenic	0.002
Asbestos	0.2
	MFL>10um*
Barium	0.1
Beryllium	0.001

Cadmium	0.001
Chromium	0.01
Cyanide	0.1
Fluoride	0.1
Mercury	0.001
Nickel	0.01
Nitrate (as NO <sub>3</sub> )	2.
Nitrite (as nitrogen)	0.4
Selenium	0.005
Thallium	0.001

\* MFL=million fibers per liter; DLR for fibers exceeding 10 um in length.

(d) Samples shall be collected from each water source or a supplier may collect a minimum of one sample at every entry point to the distribution system which is representative of each source after treatment. The system shall collect each sample at the same sampling site, unless a change is approved by the Department.

(e) A water system may request approval from the Department to composite samples from up to five sampling sites, provided that the number of sites to be composited is less than the ratio of the MCL to the DLR. Approval will be based on a review of three years of historical data, well construction and aquifer information for groundwater, and intake location, similarity of sources, and watershed characteristics for surface water. Compositing shall be done in the laboratory.

(1) Systems serving more than 3,300 persons shall composite only from sampling sites within a single system. Systems serving 3,300 persons or less may composite among different systems up to the 5-sample limit.

(2) If any inorganic chemical is detected in the composite sample at a level equal to or greater than one fifth of the MCL, a follow-up sample shall be analyzed within 14 days from each sampling site included in the composite for the contaminants which exceeded the one-fifth-MCL level. If available, duplicates of the original sample taken from each sampling site used in the composite may be used instead of resampling; the analytical results shall be reported within 14 days. The water supplier may collect up to two additional samples each from one or more of the sources to confirm the result(s).

(3) Compliance for each site shall be determined on the basis of the individual follow-up samples, or on the average of the follow-up and confirmation sample(s) if the supplier collects confirmation sample(s) for each detection.

(f) If the level of any inorganic chemical, except for nitrate, nitrite, or nitrate plus nitrite, exceeds the MCL, the water supplier shall do one of the following:

(1) Inform the Department within 48 hours and monitor quarterly beginning in the next quarter after the violation occurred; or

(2) Inform the Department within seven days from the receipt of the analysis and collect one additional sample within 14 days to confirm the result. If the average of the two samples collected exceeds the MCL, this information shall be reported to the Department within 48 hours and the water supplier shall monitor quarterly beginning in the next quarter after the violation occurred.

(g) For systems monitoring quarterly, compliance shall be determined by a running annual average; if any one sample would cause the annual average to exceed the MCL, the system is out of compliance immediately. For systems monitoring annually or less frequently, compliance shall be determined based on the initial sample or the average of the initial and confirmation samples, if a confirmation sample is collected.

(h) If a system using groundwater has collected a minimum of two quarterly samples or a system using approved surface water has collected a minimum of four quarterly samples and the sample results have been below the MCL, the system may apply to the Department for a reduction in monitoring frequency.

(i) Water quality data collected prior to January 1, 1990, and/or data collected in a manner inconsistent with this section shall not be used in the determination of compliance with the monitoring requirements for inorganic chemicals.

(j) Water quality data collected in compliance with the monitoring requirements of this section by a wholesaler agency providing water to a public water system shall be acceptable for use by that system for compliance with the monitoring requirements of this section.

(k) A water system may apply to the Department for a waiver from the monitoring frequencies specified in paragraph (b)(1) of this section, if the system has conducted at least three rounds of monitoring (three periods for groundwater sources or three years for approved surface water sources) and all previous analytical results are less than the MCL. The water system shall specify the basis for its request. If granted a waiver, a system shall collect a minimum of one sample per source while the waiver is in effect and the term of the waiver shall not exceed one compliance cycle (i.e., nine years).

(l) A water system may be eligible for a waiver from the monitoring frequencies for cyanide specified in paragraph (b)(1) of this section without any prior monitoring if it is able to document that it is not vulnerable to cyanide contamination pursuant to the requirements in section 64445(d)(1) or (d)(2).

(m) Transient-noncommunity water systems shall monitor for inorganic chemicals as follows:

(1) All sources shall be monitored at least once for fluoride;

(2) Surface water sources for parks and other facilities with an average daily population use of more than 1000 people and/or which are determined to be subject to potential contamination based on a sanitary survey shall be monitored at the same frequency as community water systems.

NOTE

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**TITLE 22. Social Security****Division 4. Environmental Health****Chapter 15. Domestic Water Quality and Monitoring Regulations****Article 4. Primary Standards--Inorganic Chemicals****§64432. Monitoring and Compliance--Inorganic Chemicals.****NOTE**

Authority cited: Sections 100275 and 116375, Health and Safety Code. Reference: Section 116385, Health and Safety Code.

## HISTORY

1. New section filed 9-8-94 as an emergency; operative 9-8-94 (Register 94, No. 36). A Certificate of Compliance must be transmitted to OAL by 1-6-95 or emergency language will be repealed by operation of law on the following day.
2. New section refiled 1-3-95 as an emergency; operative 1-3-95 (Register 95, No. 1). A Certificate of Compliance must be transmitted to OAL by 5-3-95 or emergency language will be repealed by operation of law on the following day.
3. New section refiled 4-26-95 as an emergency; operative 4-26-95 (Register 95, No. 17). A Certificate of Compliance must be transmitted to OAL by 8-24-95 or emergency language will be repealed by operation of law on the following day.
4. Certificate of Compliance as to 4-26-95 order including amendment of subsection (b)(1), Table 64432-A, and subsections (e)(1)-(2) and (k) transmitted to OAL 5-5-95 and filed 6-19-95 (Register 95, No. 25).
5. Amendment of subsections (a) and (b) and table 64432-A and amendment of Note filed 3-23-98; operative 4-22-98 (Register 98, No. 13).

**§64432.1. Monitoring and Compliance--Nitrate and Nitrite.**

**§** • Note • History

- (a) To determine compliance with the MCL for nitrate in Table 64431-A, all public water systems using groundwater and transient-noncommunity systems using approved surface water shall monitor annually, and all community and nontransient-noncommunity systems using approved surface water shall monitor quarterly.
- (1) The water supplier shall require the laboratory to notify the supplier within 24 hours whenever the level of nitrate in a single sample exceeds the MCL, and shall ensure that a contact person is available to receive such analytical results 24-hours a day. The water supplier shall also require the laboratory to immediately notify the Department of any acute nitrate MCL exceedance if the laboratory cannot make direct contact with the designated contact person within 24 hours. Within 24 hours of notification, the water supplier shall:
- (A) Collect another sample, and
  - (B) Analyze the new sample; if the average of the two nitrate sample results exceeds the MCL, report the result to the Department within 24 hours. If the average does not exceed the MCL, inform the Department of the results within seven days from the receipt of the original analysis.
  - (C) If a system is unable to resample within 24 hours, it shall notify the consumers in accordance with Section 64465 and shall collect and analyze a confirmation sample within two weeks of notification of the results of the first sample.
- (2) For public water systems using groundwater, the repeat monitoring frequency shall be quarterly for at least one year following any one sample in which the concentration is greater than or equal to 50 percent of the MCL. After four consecutive quarterly samples are less than the MCL, a system may request that the Department reduce monitoring frequency to annual sampling.
- (3) For public water systems using approved surface water, the repeat monitoring frequency shall be quarterly following any one sample in which the concentration is greater than or equal to 50 percent of the MCL. After four consecutive quarterly samples are less than 50 percent of the MCL, a system may request that the Department reduce monitoring frequency to annual sampling. A system using approved surface water shall return to quarterly monitoring if any one sample is greater than or equal to 50 percent of the MCL.
- (4) After any round of quarterly sampling is completed, each community and nontransient-noncommunity system which initiates annual monitoring shall take subsequent samples during the quarter which previously resulted in the highest analytical results.
- (b) All public water systems shall monitor to determine compliance with the MCL for nitrite in Table 64431-A, by

taking one sample at each sampling site during the compliance period beginning January 1, 1993.

- (1) If the level of nitrite in a single sample is greater than the MCL, the water supplier shall proceed as for nitrate in accordance with paragraph (a)(1) of this section.
- (2) The repeat monitoring frequency for systems with an analytical result for nitrite that is greater than or equal to 50 percent of the MCL shall be quarterly monitoring for at least one year. After four consecutive quarterly samples are less than the MCL, a system may request that the Department reduce monitoring frequency to annual sampling, collecting subsequent samples during the quarter which previously resulted in the highest analytical results.
- (3) The repeat monitoring frequency for systems with an analytical result for nitrite that is less than 50 percent of the MCL shall be one sample during each compliance period (every three years).
- (c) All public water systems shall determine compliance with the MCL for nitrate plus nitrite in Table 64431-A. If the level exceeds the MCL, the water supplier shall proceed as for nitrate in accordance with paragraphs (a)(1) through (a)(4) of this section.

#### NOTE

Authority cited: Sections 100275 and 116375, Health and Safety Code. Reference: Section 116385, Health and Safety Code.

#### HISTORY

1. New section filed 9-8-94 as an emergency; operative 9-8-94 (Register 94, No. 36). A Certificate of Compliance must be transmitted to OAL by 1-6-95 or emergency language will be repealed by operation of law on the following day.
2. New section refiled 1-3-95 as an emergency; operative 1-3-95 (Register 95, No. 1). A Certificate of Compliance must be transmitted to OAL by 5-3-95 or emergency language will be repealed by operation of law on the following day.
3. New section refiled 4-26-95 as an emergency; operative 4-26-95 (Register 95, No. 17). A Certificate of Compliance must be transmitted to OAL by 8-24-95 or emergency language will be repealed by operation of law on the following day.
4. Certificate of Compliance as to 4-26-95 order including amendment of subsections (a)(2)-(3) and (b)(2) transmitted to OAL 5-5-95 and filed 6-19-95 (Register 95, No. 25).
5. Amendment of subsection (a)(1) and Note filed 5-15-2001; operative 6-14-2001 (Register 2001, No. 20).

#### §64432.2. Monitoring and Compliance - Asbestos.

**§** • Note • History

- (a) All community and nontransient-noncommunity water systems are required to monitor to determine compliance with the MCL for asbestos in Table 64431-A during the year designated by the Department of the first compliance period of each nine-year compliance cycle, beginning in the compliance period starting January 1, 1993. The Department will designate the year based on historical monitoring frequency and laboratory capacity.
  - (1) If a groundwater system is vulnerable to asbestos contamination solely in its source water, it shall collect one sample at every entry point to the distribution system which is representative of each water source after treatment and proceed in accordance with Subsections 64432(b)(2) through (d) and Subsections 64432(f) through (j).
  - (2) All approved surface water systems shall be designated vulnerable to asbestos contamination in their source waters. If a surface water system is vulnerable solely in its source water, it shall proceed as in paragraph (1) above.
  - (3) If a system is vulnerable to asbestos contamination due to leaching of asbestos-cement pipe, with or without vulnerability to asbestos contamination in its source water, it shall take one sample at a tap served by asbestos-cement pipe under conditions where asbestos contamination is most likely to occur.
- (b) If the level of asbestos exceeds the MCL in Table 64431-A, the supplier shall report to the Department within 48 hours and monitor quarterly beginning in the next quarter after the violation occurred. A system may request that the Department reduce monitoring frequency to one sample every compliance cycle, pursuant to Section 64432(h).

**TITLE 22. Social Security**  
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**§64432. Monitoring and Compliance - Asbestos.**

(c) If a system is not vulnerable either to asbestos contamination in its source water or due to leaching of asbestos-cement pipe, it may apply to the Department for a waiver of the monitoring requirements in paragraphs (a)(1) through (3) of this section. The Department will determine the vulnerability of groundwater sources on the basis of historical monitoring data and possible influence of serpentine formations. Vulnerability due to leaching of asbestos-cement pipe will be determined by the Department on the basis of the presence of such pipe in the distribution system and evaluation of the corrosivity of the water. The period of the waiver shall be three years.

NOTE

Authority cited: Sections 208 and 4023.3, Health and Safety Code. Reference: Section 4024, Health and Safety Code.

HISTORY

1. New section filed 9-8-94 as an emergency; operative 9-8-94 (Register 94, No. 36). A Certificate of Compliance must be transmitted to OAL by 1-6-95 or emergency language will be repealed by operation of law on the following day.
2. New section refiled 1-3-95 as an emergency; operative 1-3-95 (Register 95, No. 1). A Certificate of Compliance must be transmitted to OAL by 5-3-95 or emergency language will be repealed by operation of law on the following day.
3. New section refiled 4-26-95 as an emergency; operative 4-26-95 (Register 95, No. 17). A Certificate of Compliance must be transmitted to OAL by 8-24-95 or emergency language will be repealed by operation of law on the following day.
4. Certificate of Compliance as to 4-26-95 order including amendment of subsections (a), (b), and (c) transmitted to OAL 5-5-95 and filed 6-19-95 (Register 95, No. 25).

**§64433. System Requirements and Exemptions.**



• Note • History

(a) Any public water system with 10,000 service connections or more that does not have a fluoridation system shall install such a system pursuant to the requirements in this article if the Department identifies a source of sufficient funds not excluded by Health and Safety Code section 116415 to cover capital and any associated costs necessary to install such a system. Installation shall be completed within two years of the date the funds are received by the water system; the water system may apply to the Department for an extension of the deadline. Following installation, if the Department identifies a source of sufficient funds not excluded by Health and Safety Code section 116415 to cover the noncapital operations and maintenance costs for the period of a year or more, the system shall fluoridate within three months of receiving the funds and shall continue fluoridating so long as such funds are received.

(b) Any public water system with 10,000 service connections or more that has a fluoridation system but ceased fluoridating prior to December 31, 1995 shall fluoridate the drinking water if its fluoridation system is determined to be capable of fluoridating the drinking water in compliance with Section 64433.2, based on a Departmental review, and the Department identifies a source of sufficient funds not excluded by Health and Safety Code section 116415 to cover the noncapital operations and maintenance costs for the period of a year or more. Such a system shall fluoridate within one month of receiving the funds and shall continue fluoridating so long as such funds are received.

(c) Any public water system required to install a fluoridation system pursuant to subsection (a) or required to fluoridate pursuant to subsection (b) shall annually submit an estimate of anticipated fluoridation operations and maintenance costs for the next fiscal year (July 1 through June 30) to the Department by the January 1 preceding that fiscal year.

(d) Any public water system with 10,000 service connections or more that has naturally-occurring fluoride and cannot demonstrate that it maintains an average annual fluoride level that is equal to or greater than the low level specified in the temperature-appropriate "control range" in Table 64433.2-A shall be subject to subsections (a) and (b).

(e) Any public water system which achieves 10,000 service connections or more subsequent to July 1, 1996, that does not have a fluoridation system, or that has naturally-occurring fluoride and meets the criteria in subsection (d)

shall provide an estimate to the Department of capital and any associated costs necessary to install a fluoridation system within one year of achieving at least 10,000 service connections:

(f) Any public water system with 10,000 service connections or more shall be exempted from fluoridation in either of the following cases:

(1) The water system does not receive sufficient funds from a source identified by the Department and not excluded by Health and Safety Code section 116415 to cover the capital and associated costs needed to install a fluoridation system; or

(2) The water system received sufficient capital funds from a source identified by the Department and not excluded by Health and Safety Code section 116415 and subsequently installed a fluoridation system or the water system meets the criteria in subsection (b), and the water system did not receive sufficient funds from a source identified by the Department and not excluded by Health and Safety Code section 116415 to cover the noncapital operation and maintenance costs to fluoridate. The water system shall be exempted for any fiscal year (July 1 through June 30) for which it does not receive the funds for noncapital operation and maintenance costs.

#### NOTE

Authority cited: Sections 100275, 116410 and 116415, Health and Safety Code. Reference: Sections 116410 and 116415, Health and Safety Code.


#### HISTORY

1. New section filed 3-23-98; operative 4-22-98 (Register 98, No. 13). For prior history, see Register 95, No. 25.



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**Article 4. Primary Standards--Inorganic Chemicals**  
**§64433.2. Optimal Fluoride Levels.**

**§64433.2. Optimal Fluoride Levels.**

 • [Note](#) • [History](#)

Any public water system that is fluoridating shall comply with the temperature-appropriate fluoride levels in Table 64433.2-A. The system shall determine, and submit to the Department, its annual average of maximum daily air temperatures based on the five calendar years immediately preceding the current calendar year.

Table 64433.2-A  
 Optimal Fluoride Levels

<i>Annual average of maximum daily air temperatures, degrees</i>	<i>Optimal fluoride</i>		<i>Control Range, mg/L</i>	
	<i>Fahrenheit</i>		<i>Low</i>	<i>High level, mg/L</i>
50.0 to 53.7	10.0 to 12.0	1.2	1.1	1.7
53.8 to 58.3	12.1 to 14.6	1.1	1.0	1.6
58.4 to 63.8	14.7 to 17.7	1.0	0.9	1.5
63.9 to 70.6	17.8 to 21.4	0.9	0.8	1.4
70.7 to 79.2	21.5 to 26.2	0.8	0.7	1.3
79.3 to 90.5	26.3 to 32.5	0.7	0.6	1.2


NOTE

Authority cited: Sections 100275, 116410 and 116415, Health and Safety Code. Reference: Sections 116410 and 116415, Health and Safety Code.

HISTORY

1. New section filed 3-23-98; operative 4-22-98 (Register 98, No. 13).

**§64433.3. Monitoring and Compliance--Fluoride Levels.**

 • [Note](#) • [History](#)

(a) If a water system has a single fluoridation system which treats all the water distributed to consumers, the supplier shall collect a daily sample for fluoride analysis, pursuant to [Section 64415\(b\)](#), either in the distribution system or at the entry point. If a water system does not fluoridate all its water and/or has more than one fluoridation system, the supplier shall collect one sample daily in the distribution system and rotate the sample sites in order to be representative of the water throughout the distribution system according to a monitoring plan the Department has determined to be representative. For water systems fluoridating as of January 1, 1997, the plan shall be submitted by July 1, 1998. For all others, the plan shall be submitted prior to initiating fluoridation treatment. A water system shall monitor only when it is operating its fluoridation system.

(b) If more than 20 percent of the daily fluoride samples collected in a month by a water system pursuant to subsection (a) fall outside the control range of optimal levels as determined by temperature for that system pursuant to Section 64433.2, the system shall be out of compliance with Section 64433.2.

(c) At least once a month, any water supplier with an operating fluoridation system shall divide one sample and have one portion analyzed for fluoride by water system personnel and the other portion analyzed pursuant to Section 64415(a).

(d) Any water system with an operating fluoridation system shall sample the raw source waters annually and analyze for fluoride pursuant to Section 64415(a); samples collected pursuant to Section 64432(b)(1) may be used toward satisfying this requirement. All raw source water samples collected under this subsection are subject to compliance with the fluoride MCL in Table 64431-A.

(e) If any sample result obtained pursuant to subsection (a) does not fall within the temperature-appropriate fluoride level control range in Table 64433.2-A, the water supplier shall take action as detailed in the water system's approved fluoridation system operations contingency plan as specified in section 64433.8.

#### NOTE

Authority cited: Sections 100275, 116385, 116410 and 116415, Health and Safety Code. Reference: Sections 116365, 116410 and 116415, Health and Safety Code.

#### HISTORY

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**TITLE 22. Social Security**  
**Division 4. Environmental Health**  
**Chapter 15. Domestic Water Quality and Monitoring Regulations**  
**Article 4. Primary Standards--Inorganic Chemicals**  
**§64437. Sampling of System Sources.**  
**HISTORY**

HISTORY

1. New NOTE filed 12-7-84 (Register 84, No. 49).
2. Renumbering and amendment of former Section 64437 to Section 64447 filed 11-22-88; operative 12-22-88 (Register 88, No. 51).

**Article 4.5. Trihalomethanes**

**§64439. Requirements.**

**§** • Note • History

Community water systems shall comply with the National Interim Primary Drinking Water Regulations for the control of Trihalomethanes in Drinking Water, Sections 141.2(p), (q), (r), (s) and (t), 141.6, 141.12 and 141.30 of Title 40, Code of Federal Regulations, as published in the November 29, 1979, Federal Register (Vol. 44, No. 231) and revised in the March 11, 1980, Federal Register (Vol. 45, No. 49).

NOTE

Authority cited: Sections 208 and 4026, Health and Safety Code. Reference: Section 4026, Health and Safety Code.

HISTORY

1. New Article 4.5 (Section 64439) filed 3-14-83; effective thirtieth day thereafter (Register 83, No. 12).

**Article 5. Radioactivity**

**§64441. Natural Radioactivity.**

**§** • Note • History

(a) All community water systems shall monitor their water supplies for radium-226, radium-228 and uranium at least once every four years. Compliance with maximum radioactivity levels shall be based on the average of the analysis of four consecutive quarterly samples.

(b) Gross alpha particle measurement may be substituted for measurement of radium-226 and radium-228.

(1) The supply is considered to be in compliance with maximum radioactivity levels if the gross alpha particle activity does not exceed 5 picocuries per liter (pCi/l).

(2) If gross alpha activity exceeds 5 pCi/l, measurement of radium-226 shall be made.

(3) If radium-226 exceeds 3 pCi/l, measurement of radium-228 shall be made.

(4) The sum of the radium-226 and radium-228 shall not exceed 5 pCi/l.

(c) If the average maximum contaminant level for gross alpha particle activity, total radium or uranium exceeds the levels shown on Table 4, the water supplier shall report this information to the Department within 48 hours.

NOTE


**TITLE 22. Social Security**  
**Division 4. Environmental Health**  
**Chapter 15. Domestic Water Quality and Monitoring Regulations**  
**Article 5. Radioactivity**  
**§64441. Natural Radioactivity.**  
**NOTE**

Authority cited: Sections 208 and 4026, Health and Safety Code. Reference: Section 4024, Health and Safety Code.

HISTORY

1. Amendment of subsections (a) and (c) filed 10-7-88; operative 1-1-89 (Register 88, No. 42).
2. Amendment of subsections (a) and (b) filed 11-22-88; operative 12-22-88 (Register 88, No. 51).

**§64443. Man-Made Radioactivity.**

 • Note • History

Water systems with greater than 30,000 service connections and using surface water sources shall monitor their water supplies for tritium, strontium-90 and gross beta particle activity at least once every four years.

(a) The average concentration of beta particle activity and photon radioactivity from man-made radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than four millirem/year.

(b) Compliance with this requirement is assumed if the average concentration of gross beta particle activity is less than 50 pCi/l and if the average concentration of tritium and strontium-90 are less than those listed on Table 4.

(c) If the gross beta particle activity exceeds 50 pCi/l, an analysis of the sample shall be performed to identify the major radioactive constituent present and the appropriate organ and total body doses shall be calculated.

(d) The water supplier shall report information on sample results that exceed the maximum contaminant levels to the Department within 48 hours.

Table 4

*MCL Radioactivity*

<i>Constituent</i>	<i>Maximum Contaminant Level, pCi/l</i>
Combined Radium-226 and Radium-228	5
Gross Alpha particle activity (including Radium-226 but excluding Radon and Uranium)	15
Tritium	20,000
Strontium-90	8
Gross Beta particle activity	50
Uranium	20

NOTE

Authority cited: Sections 208 and 4026, Health and Safety Code. Reference: Sections 4017 and 4024, Health and Safety Code.

HISTORY



1. New NOTE filed 12-7-84 (Register 84, No. 49).
2. Amendment of subsection (c) filed 10-7-88; operative 1-1-89 (Register 88, No. 42).
3. Amendment of subsections (b) and (c), and renumbering of Table 5 to Table 4 filed 11-22-88; operative 12-22-88 (Register 88, No. 51).

### Article 5.5. Primary Standards--Organic Chemicals

#### §64444. Maximum Contaminant Levels--Organic Chemicals.

**§** • Note • History

The MCLs for the primary drinking water chemicals shown in Table 64444-A shall not be exceeded in the water supplied to the public.

Table 64444-A  
Maximum Contaminant Levels  
Organic Chemicals

Chemical	Maximum Contaminant Level, mg/L
(a) Volatile Organic Chemicals (VOCs)	
Benzene	0.001
Carbon Tetrachloride	0.0005
1,2-Dichlorobenzene	0.6
1,4-Dichlorobenzene	0.005
1,1-Dichloroethane	0.005
1,2-Dichloroethane	0.0005
1,1-Dichloroethylene	0.006
cis-1,2-Dichloroethylene	0.006
trans-1,2-Dichloroethylene	0.01
Dichloromethane	0.005
1,2-Dichloropropane	0.005
1,3-Dichloropropene	0.0005
Ethylbenzene	0.3
Methyl-tert-butyl ether	0.013
Monochlorobenzene	0.07
Styrene	0.1
1,1,2,2-Tetrachloroethane	0.001
Tetrachloroethylene	0.005
Toluene	0.15
1,2,4-Trichlorobenzene	0.005
1,1,1-Trichloroethane	0.200

1,1,2-Trichloroethane	0.005
Trichloroethylene	0.005
Trichlorofluoromethane	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2
Vinyl Chloride	0.0005
Xylenes	1.750*
<b>(b) Non-Volatile Synthetic Organic Chemicals (SOCs)</b>	
Alachlor	0.002
Atrazine	0.001
Bentazon	0.018
Benzo(a)pyrene	0.0002
Carbofuran	0.018
Chlordane	0.0001
2,4-D	0.07
Dalapon	0.2
Dibromochloropropane	0.0002
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate	0.004
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylene Dibromide	0.00005
Glyphosate	0.7
Heptachlor	0.00001
Heptachlor Epoxide	0.00001
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.03
Molinate	0.02
Oxamyl	0.05
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated Biphenyls	0.0005
Simazine	0.004

Thiobencarb	0.07
Toxaphene	0.003
2,3,7,8-TCDD (Dioxin)	$3 \times 10^{-8}$
2,4,5-TP (Silvex)	0.05



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      - ☐ Chapter 15. Domestic Water Quality and Monitoring Regulations
- 



**ARTICLE 5.5. PRIMARY STANDARDS—ORGANIC CHEMICALS**

**Section 64444. General requirements**

**Table 64444-A**  
**Maximum Contaminant Levels**  
**Organic Chemicals**

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
(a) Volatile Organic Chemicals (VOCs)	
Benzene	0.001
Carbon Tetrachloride	0.0005
1,2-Dichlorobenzene	0.6
1,4-Dichlorobenzene	0.005
1,1-Dichloroethane	0.005
1,2-Dichloroethane	0.0005
1,1-Dichloroethylene	0.006
cis-1,2-Dichloroethylene	0.006
trans-1,2-Dichloroethylene	0.01
Dichloromethane	0.005
1,2-Dichloropropane	0.005
1,3-Dichloropropene	0.0005
Ethylbenzene	0.3
Methyl- <i>tert</i> -butyl ether	0.013
Monochlorobenzene	0.07
Styrene	0.1
1,1,2,2-Tetrachloroethane	0.001
Tetrachloroethylene	0.005
Toluene	0.15
1,2,4-Trichlorobenzene	0.005
1,1,1-Trichloroethane	0.200
1,1,2-Trichloroethane	0.005
Trichloroethylene	0.005
Trichlorofluoromethane	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2
Vinyl Chloride	0.0005
Xylenes	1.750*

**Table 64444-A (continued)**  
**Maximum Contaminant Levels**  
**Organic Chemicals**

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
<b>(b) Non-Volatile Synthetic Organic Chemicals (SOCs)</b>	
Alachlor	0.002
Atrazine	0.001
Bentazon	0.018
Benzo(a)pyrene	0.0002
Carbofuran	0.018
Chlordane	0.0001
2,4-D	0.07
Dalapon	0.2
Dibromochloropropane (DBCP)	0.0002
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate	0.004
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylene Dibromide (EDB)	0.00005
Glyphosate	0.7
Heptachlor	0.00001
Heptachlor Epoxide	0.00001
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.03
Molinate	0.02
Oxamyl	0.05
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated Biphenyls	0.0005
Simazine	0.004
Thiobencarb	0.07
Toxaphene	0.003
2,3,7,8-TCDD (Dioxin)	$3 \times 10^{-8}$
2,4,5-TP (Silvex)	0.05

\*MCL is for either a single isomer or the sum of the isomers.



September 12, 2003

*NOTE: This extract from Title 22 of the California Code of Regulations is prepared as an aid to staff of the DHS Drinking Water Program and cannot be relied upon by the regulated community as the State of California's representation of the law. The published codes are the only official representation of the law.*

**TITLE 22, CALIFORNIA CODE OF REGULATIONS**

**DIVISION 4. ENVIRONMENTAL HEALTH**

**CHAPTER 15. DOMESTIC WATER QUALITY AND MONITORING**

**ARTICLE 4. PRIMARY STANDARDS—INORGANIC CHEMICALS**

**Section 64431. Maximum contaminant levels - inorganic chemicals**

**Table 64431-A**

**Maximum Contaminant Levels  
Inorganic Chemicals**

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
Aluminum	1.
Antimony	0.006
Arsenic	0.05
Asbestos	7 MFL*
Barium	1.
Beryllium	0.004
Cadmium	0.005
Chromium	0.05
Cyanide	0.15
Fluoride	2.
Mercury	0.002
Nickel	0.1
Nitrate (as NO <sub>3</sub> )	45.
Nitrate + Nitrite (sum as nitrogen)	10.
Nitrite (as nitrogen)	1.
Selenium	0.05
Thallium	0.002

\*MFL = million fibers per liter; MCL for fibers exceeding 10 um in length.

**Article 4.1. FLUORIDATION**

**Section 64433.2. Optimal fluoride levels**

**Table 64433.2-A**  
Optimal Fluoride Levels

<i>Annual average of maximum daily air temperatures, degrees</i>		<i>Optimal fluoride level, mg/L</i>	<i>Control Range, mg/L</i>	
<i>Fahrenheit</i>	<i>Celsius</i>		<i>Low</i>	<i>High</i>
50.0 to 53.7	10.0 to 12.0	1.2	1.1	1.7
53.8 to 58.3	12.1 to 14.6	1.1	1.0	1.6
58.4 to 63.8	14.7 to 17.7	1.0	0.9	1.5
63.9 to 70.6	17.8 to 21.4	0.9	0.8	1.4
70.7 to 79.2	21.5 to 26.2	0.8	0.7	1.3
79.3 to 90.5	26.3 to 32.5	0.7	0.6	1.2

**ARTICLE 5. RADIOACTIVITY**

**Section 64441. Natural radioactivity**

**Section 64443. Man-made radioactivity**

**Table 4**  
MCL Radioactivity

<i>Constituent</i>	<i>Maximum Contaminant Level, pCi/l</i>
Combined Radium-226 and Radium-228	5
Gross Alpha particle activity (including Radium-226 but excluding Radon and Uranium)	15
Tritium	20,000
Strontium-90	8
Gross Beta particle activity	50
Uranium	20

**ARTICLE 16. SECONDARY DRINKING WATER STANDARDS**

**Section 64449. Secondary maximum contaminant levels and compliance**

**Table 64449-A**  
 Secondary Maximum Contaminant Levels  
 Consumer Acceptance Limits

<i>Constituents</i>	<i>Maximum Contaminant Levels/Units</i>
Aluminum	0.2 mg/L
Color	15 Units
Copper	1.0 mg/L
Corrosivity	Non-corrosive
Foaming Agents (MBAS)	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Methyl- <i>tert</i> -butyl ether (MTBE)	0.005 mg/L
Odor—Threshold	3 Units
Silver	0.1 mg/L
Thiobencarb	0.001 mg/L
Turbidity	5 Units
Zinc	5.0 mg/L

**Table 64449-B**  
 Secondary Maximum Contaminant Levels - Ranges

<i>Constituent, Units</i>	<i>Maximum Contaminant Level Ranges</i>		
	<i>Recommended</i>	<i>Upper</i>	<i>Short Term</i>
Total Dissolved Solids, mg/L or	500	1,000	1,500
Specific Conductance, micromhos	900	1,600	2,200
Chloride, mg/L	250	500	600
Sulfate, mg/L	250	500	600

## **CHAPTER 17.5. LEAD AND COPPER**

### **ARTICLE 1. GENERAL REQUIREMENTS AND DEFINITIONS**

#### **Section 64672.3. Determination of compliance with lead and copper action levels.**

(a) The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with Article 6 is greater than 0.015 mg/L (i.e., if the "90th percentile" lead level is greater than 0.015 mg/L).

(b) The copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with Article 6 is greater than 1.3 mg/L (i.e., if the "90th percentile" copper level is greater than 1.3 mg/L).