CHAPTER 4720
DEPARTMENT OF HEALTH
PUBLIC WATER SUPPLIES

4720.0100 DEFINITIONS.

[For text of subpart 1, see M.R.]

Subp. 1a. **Best available technology.** "Best available technology" means the best technology, treatment, techniques, or other means which the administrator of the United States Environmental Protection Agency finds are available, after examination for efficacy under field conditions and not solely under laboratory conditions, taking cost into consideration. For the purposes of setting maximum contaminant levels for synthetic organic chemicals, the best available technology must be at least as effective as granular activated carbon.

Subp. 1b. **Central water treatment.** "Central water treatment" means providing treatment at a common location or facility and subsequently delivering it to the consumer of the public water supply.

[For text of subp 2, see M.R.]

Subp. 2a. **Composite.** "Composite" means a sampling technique in which two or more samples are combined before an analysis is performed.

[For text of subp 3, see M.R.]

Subp. 3a. **Distribution system.** "Distribution system" means a network of pipes, valves, storage reservoirs, and pumping stations that delivers water to homes, businesses, and industries for drinking and other uses.

[For text of subp 4, see M.R.]

Subp. 4a. **Entry point samples.** "Entry point samples" means water samples collected at a location after any application of treatment but before the water is delivered to any consumer.

Subp. 4b. **Environmental Protection Agency methods.** "Environmental Protection Agency methods" means methods contained in "Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water," September 1986. These methods are issued by the Environmental Monitoring and Support Laboratory (EMSL) of the United States Environmental Protection Agency, Cincinnati, Ohio 45268. The methods described in part 4720.1510, subparts 1, item J; and 3, item G, are incorporated by reference and are not subject to frequent change. The methods are available through the Minitex interlibrary loan system.

[For text of subps 5 to 9, see M.R.]

Subp. 9a. **Groundwater.** "Groundwater" means the water in the zone of saturation in which all of the pore spaces of the subsurface material are filled with water. The water that supplies a well is groundwater.

[For text of subps 10 to 13, see M.R.]

Subp. 13a. **Performance evaluation sample.** "Performance evaluation sample" means a reference sample provided to a laboratory to demonstrate that the laboratory can successfully analyze the sample within limits of performance specified by the United States Environmental Protection Agency or other laboratory accreditation organization. The true value of the concentration of the reference material is unknown to the laboratory at the time of the analysis.

[For text of subps 14 and 15, see M.R.]

Subp. 15a. **Point-of-entry treatment device.** "Point-of-entry treatment device" is a device that treats the drinking water entering a house or building to reduce contaminants in the drinking water distributed throughout the house or building.

Subp. 15b. **Point-of-use treatment device.** "Point-of-use treatment device" is a treatment device applied to a single tap used to reduce contaminants in drinking water at that one tap.

Subp. 16. **Public water supply or supply.** "Public water supply" or "supply" means a system providing piped water for human consumption, and either containing a minimum of 15 service connections or 15 living units, or serving at least 25 persons daily for 60 days of the year. The term includes:

A. Any collection, treatment, storage, and distribution facilities under control of the operator of the supply and used primarily in connection with the supply.

B. Any collection or pretreatment storage facilities used primarily in connection with the supply but not under control of the operator. A public water supply is either a community or a noncommunity water supply.

(1) "Community water supply" means a public water supply or system which serves at least 15 service connections or living units used by year-round residents, or regularly serves at least 25 year-round residents.

(2) "Noncommunity water supply" means any public water supply that is not a community water supply. The following are given as examples of noncommunity water supplies and are in no way meant to be an exhaustive list: seasonal facilities such as children's camps, recreational camping areas, resorts, or year-round facilities which serve at least 25 persons who are not residents thereof, such as churches, entertainment facilities, factories, gasoline service stations, marinas, migrant labor camps, office buildings, parks, restaurants, schools.

(3) "Nontransient, noncommunity water supply" means a public water supply that is not a community water supply and that regularly serves at least 25 of the same persons over six months per year. Factories, office buildings, day care centers, and schools are examples of nontransient, noncommunity water supplies.

[For text of subps 17 to 19, see M.R.]

Subp. 20. **Supplier.** "Supplier" means any person who owns, manages, or operates a public water supply, whether or not the supplier is an operator certified under Minnesota Statutes, sections 115.71 to 115.82.

Subp. 20a. **Surface water.** "Surface water" means water that rests or flows on the surface of the ground such as lakes and rivers.

[For text of subps 21 to 25, see M.R.]

Statutory Authority: *MS s 144.383*

History: *13 SR 2824*

4720.0700 MAXIMUM LEVEL OF INORGANICS.

Subpart 1. **Maximum levels in community water supplies.** The following are the maximum contaminant levels in milligrams per liter, for inorganic chemicals applicable to community water supplies:

[For text of subpart 1, items A to D, see M.R.]

E. fluoride, 4.0;

[For text of subpart 1, items F to J, see M.R.]

Subp. 2. **Compliance.** Compliance with maximum contaminant levels for inorganic chemicals shall be calculated in accordance with part 4720.1400, subparts 3 to 7.

[For text of subp 3, see M.R.]

Statutory Authority: *MS s 144.383*

History: *13 SR 2824*

4720.0800 MAXIMUM CONTAMINANT LEVEL OF ORGANIC CHEMICALS.

Subpart 1. **Levels for community water supplies.** The following are the maximum contaminant levels for synthetic organic chemicals. They apply only to community water supplies. Compliance with maximum contaminant levels for synthetic organic chemicals is calculated pursuant to part 4720.1500, subparts 2, 3, and 4.

A. Chlorinated hydrocarbons:

(1) Endrin (1,2,3,4,10, 10-hexachloro-6,7-epoxy-1, 4, 4a,5,6,7,8,8a-octa-hydro- 1,4-endo, endo-5,8-dimethano-naphthalene), 0.0002 milligrams per liter;

(2) Lindane (1,2,3,4,5,6-hexachloro-cyclohexane, gamma isomer), 0.004 milligrams per liter;

(3) Methoxychlor (1,1,1-Trichloro 2,2-bis [p-methoxyphenyl] ethane), 0.1 milligrams per liter;

(4) Toxaphene ($C_{10}H_{10}Cl_8$-Technical chlorinated camphene, 67-69 percent chlorine), 0.005 milligrams per liter.

B. Chlorophenoxys:

(1) 2,4-D, (2,4-Dichlorophenoxyacetic acid), 0.1 milligrams per liter;

(2) 2,4,5-TP Silvex (2,4,5-Trichloro- phenoxypropionic acid), 0.01 milligrams per liter.

[For text of subp 2, see M.R.]

Subp. 3. **Maximum levels for volatile organic chemicals.** The following are the maximum contaminant levels, in milligrams per liter, for volatile organic chemicals applicable to community and nontransient, noncommunity water supplies:

A. benzene, 0.005;

B. vinyl chloride, 0.002;

C. carbon tetrachloride, 0.005;

D. 1,2-dichloroethane, 0.005;

E. trichloroethylene, 0.005;

F. 1,1-dichloroethylene, 0.007;

G. 1,1,1-trichloroethane, 0.20; and

H. para-dichlorobenzene, 0.075.

Compliance with maximum contaminant levels for volatile organic chemicals is calculated according to part 4720.1510, subpart 1, item I.

Statutory Authority: *MS s 144.383*

History: *13 SR 2824*

4720.1400 INORGANIC CHEMICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

[For text of subps 1 and 2, see M.R.]

Subp. 3. **Methods of analysis.** Analyses conducted to determine compliance with part 4720.0700 shall be made in accordance with items A to J. See part 4720.1100 for complete title of reference sources.

[For text of subp 3, items A to D, see M.R.]

E. Fluoride: EPA Chemical, Method 340.1 or 340.2, or 340.3; or Standard Methods, Method 413-A and 413-C, or 413-B, or 413-E; or USGS 1979, Method I-3325-78; or ASTM, Method D-1179-72A, or D-1179-72B; or Industrial Method #129-71W, Fluoride in Water and Wastewater, Technicon Industrial Systems, Tarrytown, New York 10591, December 1972; or Industrial Method #380-75WE, Automated Electrode Method, Fluoride in Water and Wastewater, Technicon Industrial Systems, Tarrytown, New York, February 1976.

[For text of subp 3, items F to J, see M.R.]

Subp. 4. **Notification of commissioner when maximum contaminant level exceeded.** If the result of an analysis made pursuant to subpart 1 indicates that the level of any contaminant listed in part 4720.0700 exceeds the maximum contaminant level, the supplier of water shall report to the commissioner within seven days from the time the supplier receives the results and shall collect and submit for analysis three additional samples taken at the same sampling point within one month from the time the commissioner is notified.

[For text of subp 5, see M.R.]

Subp. 6. **Compliance.** The provisions of subparts 4 and 5 notwithstanding, compliance with the maximum contaminant level for nitrate shall be determined on the basis of the mean of two analyses. When a level exceeding the maximum contaminant level for nitrate is found, a second analysis shall be initiated within 24 hours, and if the mean of the two analyses exceeds the maximum contaminant level, the supplier of water shall report any findings to the commissioner within 48 hours pursuant to part 4720.3700 and shall notify the public pursuant to part 4720.3900.

Subp. 7. **Fluoride monitoring.** In addition to complying with subparts 1 to 6, public water supplies that monitor for fluoride must comply with this subpart.

A. Sampling of water sources must comply with the following procedures:

(1) If the public water supply draws water from one source, the supplier shall take one sample at the entry point to the distribution system.

(2) If the public water supply draws water from more than one source, the supplier must sample each source at the entry points to the distribution system.

(3) If the public water supply draws water from more than one source and sources are combined before distribution, the supplier must take one sample at an entry point to the distribution system during periods representative of the maximum fluoride levels occurring under normal operating conditions.

B. The commissioner may alter the frequencies for fluoride monitoring

in subpart 1 to increase or decrease the frequency considering the following factors:

(1) reported concentrations from previously required monitoring;

(2) the degree of variation in reported concentrations; and

(3) other factors which may affect fluoride concentration such as changes in pumping rates in groundwater supplies or significant changes in the system's configuration, operating procedures, source of water, and changes in stream flows.

C. Monitoring may be decreased from the frequencies in subpart 1 upon application in writing by the supplier if the commissioner determines in writing that the supply is unlikely to exceed the maximum contaminant level, considering the factors in item B. The determination must state the basis for the determination. Monitoring must not be reduced to less than one sample every ten years. For public water supplies that monitor once every ten years, the commissioner shall review the monitoring results every ten years to determine whether more frequent monitoring is necessary.

D. Analyses for fluoride under this part shall only be used for determining compliance with maximum contaminant levels if conducted by laboratories that have analyzed performance evaluation samples to within plus or minus ten percent of the references value at fluoride concentrations from 1.0 mg/1 to 10.0 mg/1, within the last 12 months.

E. Compliance with the maximum contaminant level is determined based on each sampling point. If any sampling point is determined to be out of compliance, the public water supply is considered out of compliance.

Statutory Authority: *MS s 144.383*

History: *13 SR 2824*

4720.1500 SYNTHETIC ORGANIC CHEMICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

[For text of subps 1 to 4, see M.R.]

Statutory Authority: *MS s 144.383*

History: *13 SR 2824*

4720.1510 VOLATILE ORGANIC CHEMICALS CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

Subpart 1. **Analysis.** Analysis of the contaminants listed in part 4720.0800, subpart 3, to determine compliance with maximum levels allowed in part 4720.0800, subpart 3, must follow the procedures in items A to M.

A. A supplier of groundwater must take samples at points of entry to the distribution system representative of each well after any application of treatment. Sampling must be conducted at the same locations or more representative locations every three months for one year except as provided in item H, subitem (1).

B. A supplier of surface water must take samples at points in the distribution system representative of each source or at entry points to the distribution system after any application of treatment. Each source of surface water supply must be sampled every three months except as provided in item H, subitem (2). Sampling must be conducted at the same location or a more representative location each quarter.

C. If the supply draws water from more than one source and sources are combined before distribution, the supplier must sample at an entry point to the distribution system during periods of normal operating conditions.

D. The supplier of a community water supply and nontransient, noncommunity water supply as defined in part 4720.0100, subpart 16, serving more

than 10,000 people shall analyze all distribution or entry-point samples, as appropriate, representing all source waters beginning no later than January 1, 1988. A supplier of a community water supply and nontransient, noncommunity water supply serving from 3,300 to 10,000 people shall analyze all distribution or entry-point samples, as required in this subpart, representing source waters no later than January 1, 1989. All other community and nontransient, noncommunity water suppliers shall analyze distribution or entry-point samples, as required in this subpart, representing all source waters beginning no later than January 1, 1991.

E. The commissioner may require samples to confirm positive or negative results. If a confirmation sample is required, then the confirmation sample result is averaged with the first sampling result and used for compliance determination in accordance with item I. The commissioner may delete results of obvious sampling errors from this calculation.

F. Analysis for vinyl chloride is required only for groundwater supplies that have detected one or more of the following two-carbon organic compounds: trichloroethylene, tetrachloroethylene, 1,2-dichloroethane, 1,1,1-trichloroethane, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, or 1,1-dichloroethylene. The groundwater supplier must analyze for vinyl chloride at each distribution or entry point where one or more of the two-carbon organic compounds were found. If the first analysis does not detect vinyl chloride, vinyl chloride monitoring must be conducted every three years for that sample location or other sample locations which are more representative of the same source. If vinyl chloride is detected in the first analysis, monitoring shall be conducted according to item A. Surface water suppliers must analyze for vinyl chloride, when the commissioner determines the supply may be vulnerable to vinyl chloride contamination.

G. The public water suppliers may composite up to five samples from one or more public water supplies for analysis under this subpart. Composite samples must be analyzed within 14 days of collection. If any volatile organic contaminant listed in part 4720.0800, subpart 3, is detected in the composite sample, a sample from each source that made up the composite sample must be reanalyzed individually. The sample for reanalysis must be a duplicate sample from each source, taken when the sample for the composite sample was taken. If a duplicate sample is not available, new samples must be taken from each source and analyzed for volatile organic contaminants. Reanalysis must be accomplished within 14 days of the collection of the duplicate sample or new sample.

H. The commissioner may reduce the monitoring frequency specified in items A and B as explained in this item:

(1) Monitoring frequency for groundwater supplies is as follows:

(a) When volatile organic contaminants are not detected in the first sample, or any subsequent samples, and the supply is not determined to be vulnerable under subitem (4), monitoring may be reduced to one sample and must be repeated every five years.

(b) When volatile organic contaminants are not detected in the first sample, or any subsequent sample, and the supply is determined to be vulnerable under subitem (4):

(i) monitoring must be repeated every three years for a supply with more than 500 service connections; and

(ii) monitoring must be repeated every five years for a supply with less than 500 service connections.

(c) If volatile organic contaminants are detected in the first sample, or any subsequent sample, regardless of vulnerability, monitoring must be repeated every three months, as required under item A.

(2) Monitoring frequency for surface water supplies is as follows:

(a) When volatile organic contaminants are not detected in samples taken during the first year of sampling, or in subsequent samples, and the supply is not determined to be vulnerable under subitem (4), monitoring is required if the commissioner determines that monitoring is necessary to protect the public health.

(b) When volatile organic contaminants are not detected in samples taken during the first year of sampling, or in subsequent samples, and the supply is vulnerable as defined in subitem (4):

(i) monitoring must be repeated every three years for a supply with more than 500 service connections; and

(ii) monitoring must be repeated every five years for a supply with less than 500 service connections.

(c) When volatile organic contaminants are detected in samples taken during the first year of quarterly sampling, or in subsequent samples, regardless of vulnerability, monitoring must be repeated every three months, as required under item B.

(3) Monitoring may be reduced to once per year for a groundwater supply or surface water supply that has volatile organic contaminants at levels consistently less than the maximum contaminant levels for three consecutive years.

(4) The commissioner shall determine whether each public water supply is vulnerable to contamination, assessing the following factors:

(a) previous monitoring results;

(b) number of persons served by public water supply;

(c) proximity of a smaller public water supply to a larger supply;

(d) proximity to commercial or industrial use, disposal, or storage of volatile synthetic organic chemicals; and

(e) protection of the water source.

(5) A supply is considered vulnerable for a period of three years after any positive measurement of one or more contaminants listed in part 4720.0800, subpart 3, or 4720.1510, subpart 3, item E, except for trihalomethanes or other demonstrated disinfection byproducts.

I. Compliance with contaminant levels allowed in part 4720.0800, subpart 3, is determined based on the running annual average of the results of quarterly sampling for each sampling location. If one location's average is greater than the maximum contaminant level, the supply is considered out of compliance. If a public water supply has a distribution system that is separate from other parts of the distribution system with no interconnections, only that part of the supply that has a contaminant level that exceeds the maximum levels in part 4720.0800, subpart 3, is considered out of compliance. The commissioner may authorize that the public notice required in part 4720.3900 need only be given to the area served by the portion of the supply that is out of compliance. If a sample result causes the annual average to be exceeded, then the supply is considered out of compliance immediately. For supplies that only take one sample per location because no volatile organic contaminants were detected, compliance is based on that sample. If a supply does not comply with a maximum contaminant level allowed in part 4720.0800, subpart 3, the supplier must report to the commissioner according to part 4720.3700 and notify the public according to part 4720.3900.

J. A supplier must conduct analysis under this item, using the following Environmental Protection Agency methods or their equivalent, as approved by the Environmental Protection Agency.

(1) Method 502.1, "Volatile Halogenated Organic Chemicals in Water by Purge and Trap Gas Chromatography."

(2) Method 503.1, "Volatile Aromatic and Unsaturated Organic Compounds in Water by Purge and Trap Gas Chromatography."

(3) Method 524.1, "Volatile Organic Compounds in Water by Purge and Trap Gas Chromatography/Mass Spectrometry."

(4) Method 524.2, "Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography/Mass Spectrometry."

(5) Method 502.2, "Volatile Organic Compounds in Water by Purge and Trap Capillary Gas Chromatography with Photoionization and Electrolytic Conductivity Detectors in Series."

Subp. 2. **Reporting and public notification for certain unregulated contaminants.** The requirements of this subpart apply only to the contaminants listed in subpart 3, item E.

A. A supplier of a community water supply or nontransient, noncommunity water supply who is required to monitor under subpart 3 must send to the commissioner a copy of the results of the monitoring within 30 days of receipt and provide public notice under item C.

B. The supplier of a community water supply or a nontransient, noncommunity water supply must give the following information to the commissioner for each sample analyzed under subpart 3:

(1) results of all analytical methods, including negatives;

(2) name and address of the supply from which the sample was taken and location from which it was taken;

(3) contaminants found;

(4) analytical methods used;

(5) date of sample; and

(6) date of analysis.

C. The supplier must notify, in writing, persons served by the supply of the availability of the results of sampling conducted under subpart 3. The supplier must include the notice in the first set of water bills issued by the supplier after the receipt of the results or must give persons a written notice within three months after receipt of the results. The notice must tell people whom to contact and what telephone number to call for information about the monitoring results.

For surface water systems, public notification is required only after the first quarter's monitoring. The notice must include a statement that additional monitoring will be conducted for three more quarters and that the results will be available upon request.

Subp. 3. **Special monitoring for organic chemicals.**

A. Suppliers of community and nontransient, noncommunity water supplies must monitor the supplies for the contaminants listed in item E as specified in subitems (1) to (3):

(1) for supplies serving over 10,000 persons, sampling must begin no later than January 1, 1988;

(2) for supplies serving 3,300 to 10,000 persons, sampling must begin no later than January 1, 1989; and

(3) for supplies serving less than 3,300 persons, sampling must begin no later than January 1, 1991.

B. All community and nontransient, noncommunity water supplies must conduct the monitoring required in this subpart at least every five years from the dates specified in item A.

C. Suppliers of surface water shall take samples in the distribution system representative of each water source or at entry points to the distribution system after any application of treatment. At least one sample per water source must be taken every three months.

D. Suppliers of groundwater shall take samples at points of entry to the distribution system representative of each well after any application of treatment. At least one sample per entry point to the distribution system must be taken.

E. Community water suppliers and nontransient, noncommunity water suppliers shall monitor for the following contaminants except as provided in item F:

(1) Chloroform;
(2) Bromodichloromethane;
(3) Chlorodibromomethane;
(4) Bromoform;
(5) trans-1,2-Dichloroethylene;
(6) Chlorobenzene;
(7) m-Dichlorobenzene;
(8) Dichloromethane;
(9) cis-1,2-Dichloroethylene;
(10) o-Dichlorobenzene;
(11) Dibromomethane;
(12) 1,1-Dichloropropene;
(13) Tetrachloroethylene;
(14) Toluene;
(15) p-Xylene;
(16) o-Xylene;
(17) m-Xylene;
(18) 1,1-Dichloroethane;
(19) 1,2-Dichloropropane;
(20) 1,1,2,2-Tetrachloroethane;
(21) Ethylbenzene;
(22) 1,3-Dichloropropane;
(23) Styrene;
(24) Chloromethane;
(25) Bromomethane;
(26) 1,2,3-Trichloropropane;
(27) 1,1,1,2-Tetrachloroethane;
(28) Chloroethane;
(29) 1,1,2-Trichloroethane;
(30) 2,2-Dichloropropane;
(31) o-Chlorotoluene;
(32) p-Chlorotoluene;
(33) Bromobenzene;
(34) 1,3-Dichloropropene;
(35) Ethylene dibromide (EDB); and
(36) 1,2-Dibromo-3-chloropropane (DBCP).

F. Community water suppliers and nontransient, noncommunity water suppliers must monitor supplies for EDB and DBCP only if the commissioner determines the supplies are vulnerable to contamination by either or both of these substances. For the purpose of this item, a "vulnerable supply" is a supply that has the potential to be contaminated by EDB and DBCP. Vulnerable supply includes surface water supplies where these two compounds are applied, manufactured, stored, disposed of, or shipped upstream; groundwater supplies where the compounds are applied, manufactured, stored, disposed of, or shipped in the

groundwater recharge basin; and groundwater supplies that are close to underground storage tanks that contain leaded gasoline.

G. Analysis under this subpart shall be conducted using Environmental Protection Agency methods listed in subitems (1) to (5), or other equivalent methods as determined by the Environmental Protection Agency.

(1) 502.1, "Volatile Halogenated Organic Compounds in Water by Purge and Trap Gas Chromatography";

(2) 503.1, "Volatile Aromatic and Unsaturated Organic Compounds in Water by Purge and Trap Gas Chromatography";

(3) 524.1, "Volatile Organic Compounds in Water by Purge and Trap Gas Chromatography/Mass Spectrometry";

(4) 524.2, "Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography/Mass Spectrometry";

(5) 502.2, "Volatile Organic Compounds in Water by Purge and Trap Gas Chromatography with Photoionization and Electrolytic Conductivity Detectors in Series"; or

(6) Analysis of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) shall be conducted by Method 504, "Measurement of 1,2-Dibromoethane (EDB) and 1,2-Dibromo-3-chloropropane (DBCP) in Drinking Water by Microextraction and Gas Chromatography."

H. Instead of performing the monitoring required by this subpart, the supplier of a community water supply or nontransient, noncommunity water supply serving fewer than 150 service connections may send a letter to the commissioner stating that its supply is available for sampling. This letter must be sent no later than January 1, 1991. The supplier shall not send such samples unless requested to do so by the commissioner.

I. The public water suppliers may composite up to five samples from one or more public water supplies for analysis under this subpart. Composite samples must be analyzed within 14 days of collection. If any volatile organic contaminant listed in item D is detected in the composite sample, a sample from each source that made up the composite sample must reanalyzed individually. The sample for reanalysis must be a duplicate sample from each source, taken when the sample for the composite sample was taken. If a duplicate sample is not available, new samples must be taken from each source and analyzed for volatile organic contaminants. Reanalysis must be accomplished within 14 days of the collection of the duplicate sample or new sample.

Statutory Authority: *MS s 144.383*

History: *13 SR 2824*

4720.3510 STANDARDS FOR ALTERNATIVE COMPLIANCE TECHNOLOGIES.

Subpart 1. **Criteria and procedures for public water supplies using point-of-entry devices.** The criteria and procedures for public water supplies using point-of-entry devices are described in items A to E.

A. A public water supply may use point-of-entry devices to comply with maximum contaminant levels only if they meet the requirements of this subpart.

B. The supplier must operate and maintain the point-of-entry treatment system.

C. The supplier must develop and obtain approval from the commissioner for a monitoring plan before point-of-entry devices are installed for compliance. Under the approved plan, point-of-entry devices must provide health protection equivalent to central water treatment. "Equivalent" means that the water would meet all maximum contaminant levels contained in this chapter and would be of acceptable quality similar to water distributed by a well-operated

central treatment plant. In addition to providing for monitoring of volatile organic contaminants, the plan must also include monitoring of physical measurements and observations such as total flow treated and mechanical condition of the treatment equipment.

D. Effective technology must be properly applied under a plan approved by the commissioner and the microbiological safety of the water must be maintained.

(1) The plan must include methods to ensure proper performance of point-of-entry devices, field testing, and an engineering design review of the point-of-entry devices.

(2) The design and application of the point-of-entry devices must address the tendency for increase in heterotrophic bacteria concentrations in water treated with activated carbon and allow frequent backwashing, postcontractor disinfection, and heterotrophic plate count monitoring to ensure the microbiological safety of the water.

E. Every building connected to the supply must have a point-of-entry device installed, maintained, and adequately monitored. The public water supply must provide documentation to the commissioner that every building is subject to treatment and monitoring, and that the rights and responsibilities of the public water supply customer convey with title upon sale of property.

Subp. 2. **Bottled water; point-of-use devices; limitations.** Public water supplies shall not use bottled water or point-of-use devices to achieve compliance with a maximum contaminant level. Bottled water or point-of-use devices may be used on a temporary basis to avoid an unreasonable risk to health, or as provided under subpart 3.

Subp. 3. **Bottled water and point-of-use devices.**

A. A public water supply may be required to use bottled water or point-of-use devices as a condition for receiving an exemption or variance from the requirements of part 4720.0800, subpart 3.

B. A public water supply that uses bottled water as a condition of obtaining an exemption or variance from the requirements of part 4720.0800, subpart 3, must meet the requirements in either subitem (1) or (2), in addition to requirements in subitem (3).

(1) The commissioner must approve a monitoring program for bottled water. The supplier must develop and use a monitoring program that provides reasonable assurances that the bottled water contains contaminants that are below the maximum contaminant level for all contaminants regulated under part 4720.0800, subpart 3. Notice of the results of this monitoring shall be provided to the commissioner during the first quarter that it supplies the bottled water to the public. After the first quarter, the supplier shall provide the commissioner with notice of the results of this monitoring on an annual basis.

(2) The public water supply must receive a certification from the bottled water company that the bottled water supplied has been taken from an approved source as defined in Code of Federal Regulations, title 21, section 129.3, paragraph (a); the bottled water company has conducted monitoring in accordance with Code of Federal Regulations, title 21, section 129.80, paragraph (g), clauses (1) to (3); and the bottled water does not exceed any maximum contaminant levels or quality limits in Code of Federal Regulations, title 21, sections 103.35, 110, and 129. The public water supply shall provide the certification to the commissioner during the first quarter it supplies bottled water. After the first quarter, the supplier shall provide the commissioner with the certification on an annual basis.

(3) The supplier must provide sufficient quantities of bottled water to every person supplied by the public water supply, by door-to-door bottled water delivery.

C. Public water supplies that use point-of-use devices for an exemption or variance from the requirements of part 4720.0800, subpart 3, must meet the following requirements:

(1) The supplier must operate and maintain the point-of-use treatment system.

(2) The supplier must develop a monitoring plan and obtain approval from the commissioner for the plan before point-of-use devices are installed for compliance. This monitoring plan must include health protection equivalent to a monitoring plan for central water treatment.

(3) The plan must provide for effective technology to maintain the microbiological safety of the water.

(4) The design and application of the point-of-use devices must consider the tendency for increase in heterotrophic bacteria concentrations in water treated with activated carbon. It may be necessary to use frequent backwashing, postcontractor disinfection, and heterotrophic plate count monitoring to maintain the microbiological safety of the water.

(5) The plan must include methods to ensure proper performance of point-of-use devices, field testing, and rigorous review of the engineering design of the point-of-use devices.

(6) Every building connected to the supply must have a point-of-use device installed, maintained, and adequately monitored. The plan must include procedures the supplier must follow to assure the commissioner that every building is subject to treatment and monitoring, and that the rights and responsibilities of the public water supply customer convey with title upon sale of property.

Statutory Authority: *MS s 144.383*

History: *13 SR 2824*

4720.3900 PUBLIC NOTIFICATION OF VIOLATIONS OF MAXIMUM CONTAMINANT LEVELS, TREATMENT TECHNIQUES, OR VARIANCES.

Subpart 1. [Repealed, 13 SR 2824]

Subp. 2. [Repealed, 13 SR 2824]

Subp. 3. [Repealed, 13 SR 2824]

Subp. 4. [Repealed, 13 SR 2824]

Subp. 5. [Repealed, 13 SR 2824]

Subp. 6. [Repealed, 13 SR 2824]

Subp. 7. **Notice of violations and exemptions required.** If a supplier fails to comply with a maximum contaminant level, variance or exemption, or monitoring or testing technique, or receives an exemption under part 4720.3100, the supplier must notify persons served by the supply of the violation, failure, or exemption. Subparts 2 to 8 describe requirements for notice under this part.

Subp. 8. **Notice of violation of a maximum contaminant level, variance, or exemption.** The supplier must issue notice of a violation of a maximum contaminant level, variance, or exemption according to the procedures in items A to D.

A. Except as provided in item C, the owner or operator of a public water supply must:

(1) Publish the notice in a daily newspaper of general circulation in the area served by the supply as soon as possible, but no later than 14 days after the violation or failure is determined. If the area served by a public water supply is not served by a daily newspaper of general circulation, notice must be published in a weekly newspaper of general circulation serving the area;

(2) Mail or hand deliver the notice not later than 45 days after the violation or failure is determined. The notice may be mailed separate from or

along with the water bill. Mail or hand delivery may be waived if the commissioner determines in writing that the supplier has corrected the violation or failure within the 45-day period. The commissioner must issue the waiver within the 45-day period; and

(3) For violations of the maximum contaminant levels of contaminants that may pose an acute risk to human health, furnish a copy of the notice to the radio and television stations in the area served by the public water supply as soon as possible but in no case later than 72 hours after the violation or failure is determined. The following violations require radio and television notices as required under this subitem:

(a) violations specified by the commissioner as posing an acute risk to human health; and

(b) violation of the maximum contaminant level for nitrate as defined in part 4720.0700, subpart 1, and determined according to part 4720.1400, subpart 6.

B. Except as provided in item C, following the initial notice given under item A, the owner or operator of the public water supply must give notice at least once every three months by mail delivery or by hand delivery, for as long as the violation or failure exists. The notice may be mailed separate from or along with the water bill.

C. In place of the requirements of item A, subitem (1), the owner or operator of a community water supply in an area that is not served by either a daily or weekly newspaper of general circulation must give notice by hand delivery or by continuous posting in conspicuous places in the area served by the supply. The notice must be given within 14 days after the violation or failure is determined. Posting must continue for as long as the violation or failure exists. Notice by hand delivery must be repeated at least every three months for as long as the violation or failure exists.

D. In place of the requirements of items A and B, the owner or operator of a noncommunity water supply may give notice by hand delivery or by continuous posting in conspicuous places within the area served by the supply. The notice must be given within 14 days after the violation or failure is determined. Posting must continue for as long as the violation or failure exists. Notice by hand delivery must be repeated at least every three months for as long as the violation or failure exists.

Subp. 9. **Notice of a violation of monitoring or testing techniques or issuance of an exemption.** A supplier who fails to perform monitoring according to parts 4720.1000 to 4720.2500, fails to comply with an applicable testing method established in parts 4720.1000 to 4720.2500, or is granted an exemption under part 4720.3100, must notify persons served by the supply as follows:

A. Except as provided in item C, D, or E, the supplier must publish notice of the violation, variance, or exemption in a daily newspaper of general circulation in the area served by the supply. The notice must be published within three months after the violation is determined or a variance or exemption is granted. If the area served by a public water supply is not served by a daily newspaper of general circulation, the supplier must publish the notice in a weekly newspaper of general circulation serving the area.

B. Except as provided in item C, D, or E, after the notice under item A, the supplier must, at least once every three months, notify persons served by the supply of the violation, or the granting of the exemption or variance. Notice may be mailed or hand delivered. Notice must be given for as long as the violation exists or the variance or exemption is in effect.

C. In place of the requirements of items A and B, the supplier of a community water supply in an area that is not served by a daily or weekly newspaper of general circulation must hand deliver the notice or post the notice in conspicu-

ous places in the area served by the supply. The notice must be issued within three months after the violation is determined or the variance or exemption is granted. Posting must continue for as long as the violation exists in a variance or exemption remains in effect. Notice by hand delivery must be repeated at least every three months for as long as the violation exists or a variance or exemption is in effect.

D. In place of the requirements of items A and B, the supplier of a noncommunity water supply must hand deliver the notice or post the notice in conspicuous places in the area served by the supply. The notice must be issued within three months after the violation is determined or the variance or exemption is granted. Posting must continue for as long as the violation exists, or a variance or exemption remains in effect. Notice by hand delivery must be repeated at least every three months for as long as the violation exists or a variance or exemption remains in effect.

E. In place of the requirements of items A to D, the supplier of a public water supply, at the discretion of the commissioner, may provide less frequent notice for minor monitoring violations as defined by the commissioner, if EPA has approved the commissioner's application for a program revision under Code of Federal Regulations, title 40, section 142.16. Notice of violations must be given at least annually.

Subp. 10. **Notice to new consumers.** A supplier of a community water supply must give to new consumers of the supply a copy of the most recent public notice required under this part. The notice must be given to new consumers before or when service begins.

Subp. 11. **General content of public notice.** A notice required by this part must provide a clear and readily understandable explanation of the violation, potential adverse health effects, the population at risk, the steps that the supplier is taking to correct the violation, the need to seek alternative water supplies, if any, and preventive measures the consumer should take until the violation is corrected. A notice must be conspicuous and written in plain language and readable print. Each notice must include the telephone number of the supplier as a source of additional information concerning the notice. When appropriate, the notice shall be multilingual.

Subp. 12. **Mandatory health effects language.** If a variance, violation, or exemption involves one of the contaminants described in items A to H, the notice required under this part must include the language in items A to H for the particular contaminant involved.

A. Trichloroethylene. The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that trichloroethylene is a health concern at certain levels of exposure. This chemical is a common metal cleaning and dry cleaning fluid. It generally gets into drinking water by improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The EPA has set forth the enforceable drinking water standard for trichloroethylene at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of the risk and should be considered safe.

B. Carbon tetrachloride. The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that carbon tetrachloride is a health concern at certain levels of exposure. This chemical was once a popular household cleaning fluid. It generally gets into drinking water by improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels

over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The EPA has set the enforceable drinking water standard of carbon tetrachloride at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which may have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

C. 1,2-Dichloroethane. The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that 1,2-dichloroethane is a health concern at certain levels of exposure. This chemical is used as a cleaning fluid for fats, oils, waxes, and resins. It generally gets into drinking water from improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The EPA has set the enforceable drinking water standard for 1,2-dichloroethane at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of the risk and should be considered safe.

D. Vinyl chloride. The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that vinyl chloride is a health concern at certain levels of exposure. This chemical is used in industry and is found in drinking water as a result of the breakdown of related solvents. The solvents are used as cleaners and degreasers of metals and generally get into drinking water by improper waste disposal. This chemical has been associated with significantly increased risks of cancer among certain industrial workers who were exposed to relatively large amounts of this chemical during their working careers. This chemical has also been shown to cause cancer in laboratory animals when the animals are exposed at high levels over their lifetimes. Chemicals that cause increased risk of cancer among exposed industrial workers and in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The EPA has set the enforceable drinking water standard for vinyl chloride at 0.002 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in humans and laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

E. Benzene. The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that benzene is a health concern at certain levels of exposure. This chemical is used as a solvent and degreaser of metals. It is also a major component of gasoline. Drinking water contamination generally results from leaking underground gasoline and petroleum tanks or improper waste disposal. This chemical has been associated with significantly increased risks of leukemia among certain industrial workers who were exposed to relatively large amounts of this chemical during their working careers. This chemical has also been shown to cause cancer in laboratory animals when the animals are exposed at high levels over their lifetimes. Chemicals that cause increased risk of cancer among exposed industrial workers and in laboratory animals also may increase the risk of cancer in humans who are exposed at lower levels over long periods of time. The EPA has set the enforceable drinking water standard for benzene at 0.005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in humans and laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

F. 1,1-Dichloroethylene. The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that 1,1-di-

chloroethylene is a health concern at certain levels of exposure. This chemical is used in industry and is found in drinking water as a result of the breakdown of related solvents. The solvents are used as cleaners and degreasers of metals and generally get into drinking water by improper waste disposal. This chemical has been shown to cause liver and kidney damage in laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Chemicals which cause adverse effects in laboratory animals also may cause adverse effects in humans who are exposed at lower levels over long periods of time. The EPA has set the enforceable drinking water standard for 1,1-dichloroethylene at 0.007 parts per million (ppm) to reduce the risk of these adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

G. Para-dichlorobenzene. The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that para-dichlorobenzene is a health concern at certain levels of exposure. This chemical is a component of deodorizers, moth balls, and pesticides. It generally gets into drinking water by improper waste disposal. This chemical has been shown to cause liver and kidney damage in laboratory animals such as rats and mice when the animals are exposed to high levels over their lifetimes. Chemicals which cause adverse effects in laboratory animals also may cause adverse health effects in humans who are exposed at lower levels over long periods of time. The EPA has set the enforceable drinking water standard for para-dichlorobenzene at 0.075 parts per million (ppm) to reduce the risk of these adverse health effects which have been observed in laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

H. 1,1,1-Trichloroethane. The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that the 1,1,1-trichloroethane is a health concern at certain levels of exposure. This chemical is used as a cleaner and degreaser of metals. It generally gets into drinking water by improper waste disposal. This chemical has been shown to damage the liver, nervous system, and circulatory system of laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Some industrial workers who were exposed to relatively large amounts of this chemical during their working careers also suffered damage to the liver, nervous system, and circulatory system. Chemicals which cause adverse effects among exposed industrial workers and in laboratory animals may also cause adverse health effects in humans who are exposed at lower levels over long periods of time. The EPA has set the enforceable drinking water standard for 1,1,1-trichloroethane at 0.2 parts per million (ppm) to protect against the risk of these adverse health effects which have been observed in humans and laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.

Subp. 13. **Public notices for fluoride.** A notice of violations of the maximum contaminant level for fluoride, a notice of a variance or exemption from the maximum contaminant level for fluoride, and a notice of failure to comply with variance and exemption schedules for the maximum contaminant level for fluoride must describe steps the supplier is taking to comply with standards and must use the following language:

Public Notice

Dear User:

The United States Environmental Protection Agency requires that we send you this notice on the level of fluoride in your drinking water. The drinking water in your community has a fluoride concentration of (insert the test result) milligrams per liter (mg/l).

Federal regulations require that fluoride, which occurs naturally in your water supply, not exceed a concentration of 4.0 mg/1 in drinking water. This is an enforceable standard called a Maximum Contaminant Level (MCL), and it has been established to protect the public health. Exposure to drinking water levels above 4.0 mg/1 for many years may result in some cases of crippling skeletal fluorosis, which is a serious bone disorder.

Your water supplier can lower the concentration of fluoride in your water so that you will still receive the benefits of cavity prevention while the possibility of stained and pitted teeth is minimized. Removal of fluoride may increase your water costs. Treatment systems are also commercially available for home use. Information on such systems is available at the address given below. Low fluoride bottled drinking water that would meet all standards is also commercially available.

For further information contact (insert the name, address, and telephone number of the supplier and the name of contact person) at your public water supply.

Subp. 14. **Public notification by the commissioner.** The commissioner may give notice required by this part to the public on behalf of the supplier. A notice given by the commissioner must meet the requirements of this part. However, the supplier is legally responsible for ensuring that the requirements of this part are met.

Statutory Authority: *MS s 144.383*

History: *13 SR 2824*