

Minnesota Attorney General: Administrative Rules Proceedings

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August 20, 2018

CBE

RULE REVIEW CHECKLIST

File No. 1587 Docket No. 05.0009.1210

DATE RECEIVED 4/12/89 ADOPTED W/O HEARING X

REVIEW DATE 4/21/89 EMERGENCY RULE _____

DUE DATE 4/26/89 REVISOR APPROVED ✓

APPROVED 4/26/89 CBE REVISOR DISAPPROVED _____

DISAPPROVED _____ FILED W/SEC. OF STATE _____

WITHDRAWN _____ RETURNED TO AGENCY _____

✓ Rule as adopted (4 copies)

✓ Notice to Solicit Outside Information/Opinion (if applicable)
- 8/15/88 Date published in State Register
- none Comments

_____ ~~Petition for Adoption of a Rule (if applicable)~~

_____ ~~Board's Authorizing Resolution~~
- _____ ~~Date adopted~~

✓ Proposed Rule
- yes Revisor's Certificate

✓ Notice of Intent to Adopt Rule
- 144.383 Statutory Authority
- yes Small Business Statement
- yes Expenditure of public money statement
- yes Signature

✓ Statement of Need and Reasonableness (if applicable)
- yes Small Business Statement
- _____ Fees - § 16A.128

✓ Affidavit of Mailing Notice of Intent to Adopt Rule
- 1/17/89 Date 30/25 days before adoption
- yes Notice attached
- yes Copy of rule or summary attached

✓ Publication in State Register
- 1/23/89 Date 30/25 days before adoption

_____ 180-day deadline from:
- N/A Effective date of law requiring rule (14.12) (both rules)
- 2/22/89 end of comment period (§ 14.26) (rules without hearing)
- _____ effective date of statutory authority (§ 14.29) (emergency rules)

_____ ~~Resolution Adopting~~
- _____ ~~Date adopted~~

✓ Findings of Fact, Conclusions & Order Adopting
- 4/10/89 Date
- 4/26/89 Supp order

_____ ~~Written requests, submissions or comments~~

✓ Declaration of attorney Paul Zerby is now handling
- C Anna Name of SAAG representing agency

_____ ~~Notice of Submission to Atty. Gen. (if applicable)~~

_____ ~~Aff. of Mailing Notice to Atty. Gen. (if applicable)~~

file

SF-00006-05 (4/86)

DEPARTMENT : ATTORNEY GENERAL

STATE OF MINNESOTA

Office Memorandum

DATE : April 27, 1989

TO : CATHERINE E. AVINA
Special Assistant Attorney General

FROM : CHRISTIE B. ELLER
Assistant Attorney General

PHONE : 6-9421

SUBJECT : In the Matter of the Adopted Permanent Rules Relating to Public Water Supplies

The above-referenced rule has been approved as to its legality by the Attorney General on April 26, 1989.

Enclosed is the agency's copy of the approved rule. This office has already filed two copies with the Secretary of State who will forward one copy to the Revisor of Statutes. The fourth is being retained by this division of the Attorney General's Office for its records.

Also enclosed are any petitions, requests, submission or comments received by the agency and any extra copies of documents which the agency submitted to the Attorney General.

In order for a permanent rule without a hearing to become effective, your agency must publish a notice of adoption in the State Register in accoradance with Minn. Stat. § 14.27. An emergency rule becomes effective five working days after approval by the Attorney General; however, the agency must publish a notice in the State Register in accordance with Minn. Stat. § 14.34.

If you have any questions in this regard, please contact me.

MJC:klk
Enclosures

cc: Maryanne Hruby
Executive Director
Legislative Commission to Review
Administrative Rules

William Brown
Chief Administrative Law Judge
Office of Administrative Hearings

Department of Health

Adopted Permanent Rules Relating to Public Water Supplies

Rules as Adopted

4720.0100 DEFINITIONS.

Subpart 1. [Unchanged.]

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.

Subp. 2. [Unchanged.]

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

Subp. 3. [Unchanged.]

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.

Subp. 4. [Unchanged.]

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.**

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"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.

Subp. 5. to 9. [Unchanged.]

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.

Subp. 10. to 13. [Unchanged.]

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.

Subp. 14. and 15. [Unchanged.]

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

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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.

Subp. 17. to 19. [Unchanged.]

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

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and rivers.

Subp. 21. to 25. [Unchanged.]

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:

A. to D. [Unchanged.]

E. fluoride, 4.0;

F. to J. [Unchanged.]

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

Subp. 3. [Unchanged.]

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;

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

Subp. 2. [Unchanged.]

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.

4720.1400 INORGANIC CHEMICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

Subpart 1. and 2. [Unchanged.]

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.

A. to D. [Unchanged.]

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.

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F. to I. [Unchanged.]

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.

Subp. 5. [Unchanged.]

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

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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/l to 10.0 mg/l, 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.

4720.1500 SYNTHETIC ORGANIC CHEMICAL CONTAMINANT SAMPLING AND

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ANALYTICAL REQUIREMENTS.

Subpart 1. to 4. [Unchanged.]

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 ~~3,000~~ 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

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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 ~~may be required to~~ 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

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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 ~~at the discretion of~~ 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):

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(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.

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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

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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

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(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;

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(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

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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

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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.

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

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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

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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

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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.

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

Subpart 1. to 6. [See Repealer.]

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

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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

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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 conspicuous

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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

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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 multi-lingual.

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

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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

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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-dichloroethylene is a health concern at certain levels of exposure. This chemical is

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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

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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/l in drinking water. This is an enforceable standard called a Maximum Contaminant Level (MCL), and it has been

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established to protect the public health. Exposure to drinking water levels above 4.0 mg/l 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.

REPEALER. Minnesota Rules, part 4720.3900, subparts 1, 2, 3, 4, 5, and 6 are repealed.

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STATE OF MINNESOTA
DEPARTMENT OF STATE
FILED

APR 27 1989

Joan Anderson Growe

Secretary of State

3:30 PM

APPROVED AS TO FORM AND LEGALITY

April 24 1989

HUBERT H. HUMPHREY, III

ATTORNEY GENERAL

BY Christie B Eller

ASSISTANT ATTORNEY GENERAL

Board of Chiropractic Examiners

Notice of Solicitation of Outside Information or Opinions Regarding Proposed Rule Defining the Practice of Chiropractic and Chiropractic Adjustment

NOTICE IS HEREBY GIVEN that the Minnesota Board of Chiropractic Examiners is seeking information or opinions from sources outside the agency in preparing to propose the adoption of Rules defining the practice of Chiropractic and the Chiropractic Adjustment. The adoption of the Rule is authorized by *Minnesota Statutes* Section 148.08, which permits the Board to define terms related to the governance of the Practice of Chiropractic.

The Board requests information and opinions concerning the subject matter of the Rule. Interested persons or groups may submit data or views on the subject matter of concern to Dr. Kent Erickson, 2700 University Avenue West, Suite 20, St. Paul, Minnesota 55114-1089. Oral statements will be received during regular business hours over the telephone at (612) 642-0591 or in person at the above address.

All statements of information and opinions shall be accepted until September 15, 1988. Any written material received by the Minnesota Board of Chiropractic Examiners shall become part of the rulemaking record to be submitted to the Attorney General or Administrative Law Judge in the event that a Rule is adopted.

Dated: 4 August 1988

Kent J. Erickson, D.C., Executive Director
Minnesota Board of Chiropractic Examiners

Minnesota Department of Education

Management Effectiveness Division

Announcement of the Availability of Data Dictionary for Essential Data Elements, Integrated Data Base

The Minnesota Department of Education (MDE) announced that a data dictionary description of the essential data elements included in the statewide Integrated Data Base (IDB) is available upon request.

This document specifies the definitions, coding structure, picture and grouping for the IDB data which school districts must capture, maintain and submit to the MDE pursuant to *Minnesota Statutes*, Section 121.932, Subdivision 5. This data dictionary will be distributed upon written request only. Requests for this document should be sent to Mark Manning, Minnesota Department of Education, 848 Capitol Square Building, 550 Cedar Street, St. Paul, Minnesota 55101.

Department of Health

Notice of Intent to Solicit Outside Information or Opinions on Proposed Amendments to Rules Relating to Public Water Supplies

NOTICE IS HEREBY GIVEN that the Department of Health is seeking information or opinions from sources outside the Department in preparing to amend rules relating to public water supplies for the purpose of complying with the requirements contained in federal safe drinking water rules.

Amendment of the rules is authorized by *Minnesota Statutes* § 144.383(e) (1980) which allows the Department to promulgate rules which are no less stringent than federal regulations relating to public water supplies in order to retain primacy for enforcement of the U.S.E.P.A. drinking water rules.

The Department requests information and comments concerning the subject matter of the rules. Interested or affected persons or groups may submit statements of information or comment in writing or by telephone.

Comments should be addressed to Richard D. Clark, Division of Environmental Health, Minnesota Department of Health, 717 Delaware Street, S.E., P.O. Box 9441, Minneapolis, Minnesota 55440 (612/623-5227).

Any material received by the Department shall become part of the rulemaking record to be submitted to the Attorney General.

Department of Health

Proposed Permanent Rules Relating to Public Water Supplies

Rules as Proposed

4720.0100 DEFINITIONS.

Subpart 1. [Unchanged.]

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.

Subp. 2. [Unchanged.]

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

Subp. 3. [Unchanged.]

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.

Subp. 4. [Unchanged.]

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**

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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.

Subp. 5. to 9. [Unchanged.]

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.

Subp. 10. to 13. [Unchanged.]

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.

Subp. 14. and 15. [Unchanged.]

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

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connections or 15 living units, or serving at least 25 persons daily for 60 days of the year. ~~Such~~ 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~~;--and~~.

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.

Subp. 17. to 19. [Unchanged.]

Subp. 20. **Supplier.** "Supplier" means any person who owns, manages, or operates a public water supply, whether or not ~~he~~ the supplier is an operator certified ~~pursuant to~~ 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

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and rivers.

Subp. 21. to 25. [Unchanged.]

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:

A. to D. [Unchanged.]

E. fluoride, ~~2.2~~ 4.0;

F. to J. [Unchanged.]

Subp. 2. **Compliance.** Compliance with maximum contaminant levels for inorganic chemicals shall be calculated in accordance with part 4720.1400, subparts 3 to ~~6~~ 7.

Subp. 3. [Unchanged.]

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;

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

Subp. 2. [Unchanged.]

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.

4720.1400 INORGANIC CHEMICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

Subpart 1. and 2. [Unchanged.]

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.

A. to D. [Unchanged.]

E. Fluoride: EPA Chemical, Method 340.1 or 340.2, or 340.3; or Standard Methods, Method ~~414-A~~ 413-A and 413-C, or ~~414-B~~ 413-B, or ~~414-C, or 603~~ 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.

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F. to I. [Unchanged.]

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 ~~he~~ the supplier receives the results and ~~he~~ 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.

Subp. 5. [Unchanged.]

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 ~~his~~ 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

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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/l to 10.0 mg/l, 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.

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4720.1500 SYNTHETIC ORGANIC CHEMICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

Subpart 1. to 4. [Unchanged.]

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 3,000 to 10,000 people shall analyze all distribution or entry-point samples, as required in this subpart, representing source waters

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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 may be required to 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

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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 at the discretion of the commissioner.

(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):

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(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.

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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

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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

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(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;

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(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

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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

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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.

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

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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

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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

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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.

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

Subpart 1. to 6. [See Repealer.]

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

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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

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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 conspicuous

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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

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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 multi-lingual.

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

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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

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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-dichloroethylene is a health concern at certain levels of exposure. This chemical is

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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

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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/l in drinking water. This is an enforceable standard called a Maximum Contaminant Level (MCL), and it has been

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established to protect the public health. Exposure to drinking water levels above 4.0 mg/l 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.

REPEALER. Minnesota Rules, part 4720.3900, subparts 1, 2, 3, 4, 5, and 6 are repealed.

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Office of the Revisor of Statutes

Administrative Rules

TITLE: Proposed Permanent Rules Relating to Public Water Supplies

AGENCY: Department of Health

MINNESOTA RULES: Chapter 4720

INCORPORATIONS BY REFERENCE:

Part 4720.0100, subpart 4b

Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water, September 1986, issued by the Environmental Monitoring and Support Laboratory of the United States Environmental Protection Agency.

The attached rules are approved for publication in the State Register

Kathleen M. Traxler

Kathleen M. Traxler
Assistant Revisor

STATE OF MINNESOTA

COUNTY OF HENNEPIN

BEFORE THE MINNESOTA

DEPARTMENT OF HEALTH

In the Matter of the Proposed Adoption of Rule Amendments of the Department of Health Relating to Public Water Supplies

NOTICE OF INTENT TO ADOPT RULE AMENDMENTS WITHOUT A PUBLIC HEARING

Notice is hereby given that the Minnesota Department of Health (hereinafter "Department") intends to adopt the above-entitled rule amendments without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rules without a public hearing in Minn. Stat. §§ 14.22 to 14.28 (1988). The statutory authority to adopt the rule amendments is Minn. Stat. § 144.383 (1988).

All persons have 30 days in which to submit comment in support of or in opposition to the proposed rule amendments or any part or subpart of the rule amendments. Comment is encouraged. Each comment should identify the portion of the proposed rule amendments addressed, the reason for the comment, and any change proposed.

Any person may make a written request for a public hearing on the rule amendments within the 30-day comment period. If 25 or more persons submit a written request for a public hearing within the 30-day comment period, a public hearing will be held unless a sufficient number withdraw their request in writing. Any person requesting a public hearing should state his or her name and address and is encouraged to identify the portion of the proposed rule amendments addressed, the reason for the request, and any change proposed. If a public hearing is required, the Department will proceed pursuant to Minn. Stat. §§ 14.131 to 14.20 (1988).

Comments or written requests for a public hearing must be submitted to:

Richard D. Clark
Division of Environmental Health
Minnesota Department of Health
717 Delaware Street Southeast
PO Box 9441
Minneapolis, Minnesota 55440
Telephone: (612) 623-5227

The proposed rule amendments may be modified if the modifications are supported by data and views submitted to the Department and do not result in a substantial change in the proposed rule amendments as noticed.

The rule amendments proposed for adoption would allow Minnesota to remain primacy for enforcement of the requirements contained in federal safe drinking water rules. The federal law requires that a state which assumes primacy must meet certain minimum requirements prescribed in federal rules in order to be eligible to receive federal grant monies to support its administration of the federal program. Since the United States Environmental Protection Agency ("EPA") granted primacy enforcement responsibility to the state in 1977 the EPA has amended the federal rules and Minnesota must now amend its rules similarly if it wishes to retain primacy. The proposed amendment defines a nontransient, noncommunity water supply as a supply that serves at least 25 of the same persons over six months per year. If the state does not require these systems to monitor for volatile organic chemicals ("VOC"s) the federal rules will require it. The proposed rule amendments also adjust the maximum contaminant level ("MCL") for flouride to reflect the MCL in the federal rule. The term "synthetic" is added to "organic chemicals" to describe pesticides now included in the EPA classification. Eight VOCs are listed for which MCLs are being established consistent with federal rules. Changes are made to reflect the analytical

methods for determining flouride concentrations and revised flouride monitoring requirements are included. A new part is added to establish sampling and analytical requirements for VOCs. Special reporting and public notification requirements are set forth for eight VOCs for which MCLs are established. Monitoring requirements are established for up to 51 VOCs for which no MCLs are established. A new part is created to specify conditions under which the use of point-of-entry and point-of-use treatment devices and bottled water are appropriate methods of addressing water system contamination. Changes are also made to reflect revised federal rules pertaining to public notification. A free copy of the rule amendments is available upon request from Richard D. Clark.

A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule amendments and identifies the data and information relied upon to support the proposed rule amendments has been prepared and is available from Richard D. Clark upon request.

The Department is subject to Minn. Stat. § 14.115 (1986) regarding small business considerations in rulemaking. The Department's evaluation of the applicability of the methods contained in Minn. Stat. § 14.115, subd. 2 (1986) for reducing the impact of the proposed rule amendments are addressed in the statement of need and reasonableness.

The total cost to local governments of the sampling that will be required under the proposed rule amendments may exceed $100,000 in either of the first two years immediately following adoption of the rule. The number of samples to be analyzed is dependent upon a number of factors and the Department's estimate of the range of costs is addressed in the statement of need and reasonableness as set forth in Minn. Stat. § 14.11, subd. 1 (1986). However, as also stated in the statement of need and reasonableness even if the proposed state rules were not adopted the local public

water systems would still be obligated to perform the monitoring under federal rules enforceable by the United States Environmental Protection Agency.

There is no impact on agricultural lands within Minn. Stat. §§ 14.11, subd. 2 and 17.80 to 17.84 (1986) from the proposed rule amendments.

If no hearing is required, upon adoption of the rule amendments, the rule amendments and the required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent the form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General or who wish to receive a copy of the adopted rule amendments must submit the written request to Richard D. Clark.

Date: 1/6, 1989

SISTER MARY MADONNA ASHTON
Commissioner of Health

MINNESOTA DEPARTMENT OF HEALTH

Division of Environmental Health

In the Matter of Amendments
to Rules Relating to Public
Water Supplies

STATEMENT OF NEED AND REASONABLENESS

The amendments to rules relating to public water supplies, Minn. Rules, Chapter 4720, are being proposed by the Commissioner of Health for the purpose of complying with requirements contained in federal safe drinking water rules.

HISTORY

The Minnesota Safe Drinking Water Act (SDWA) enacted in 1977 (Minn. Stat. § 144.381 to 144.387 (1986) authorizes the Commissioner of Health to promulgate rules which are no less stringent than federal regulations relating to public water supplies (Minn. Stat. § 144.383 (e) (1980)). This authority was granted for the purpose of allowing the State, pursuant to the federal SDWA of 1974 (PL 93-523 and amendments thereto) to assume primacy for enforcement of the U.S. Environmental Protection Agency (EPA) drinking water standards. The federal law requires that a state which assumes primacy must meet certain minimum requirements prescribed in federal rules in order to be eligible to receive federal grant monies to support its administration of the federal program.

The Commissioner of Health promulgated the necessary rules Minn. Rules, Chapter 4720, and the U.S. EPA granted primacy enforcement responsibility to the State in 1977. Since that time, the U.S. EPA has amended the federal rules. Minnesota must now amend its rules similarly if it wishes to retain primacy. Amendments to the state rules which are discussed here are being proposed for the purpose of complying with the federal requirements contained in 51 Fed. Reg. 11410-11412, April 2, 1986, 52 Fed. Reg. 25712-25717, July 8, 1987, and 52 Fed. Reg. 41546-41550, October 28, 1987.*

SMALL BUSINESS CONSIDERATIONS

Minn. Statutes, Sec. 14.115, (1986) requires that an agency consider five factors for reducing the impact of proposed rules on small businesses. Since this rule revision contains a new category of public water supply called nontransient, noncommunity water supplies that will include small places of business, the Department has addressed each of the five factors as presented below.

1. <u>The establishment of less stringent compliance or reporting requirements</u>. The compliance requirements in the proposed rules are minimally stringent, requiring public water systems to test for certain contaminants in their water supplies and to assure that the levels of contaminants found are maintained below a prescribed level to protect the health of consumers of the water. The proposed rule defines a nontransient, noncommunity water supply as a supply that serves 25

*A copy of the referenced pages is attached as Appendix A.

persons or more per day. Thus small businesses with their own water systems serving fewer than 25 employees per day will not be impacted by this rule. If the state does not include the rule revision requiring nontransient, noncommunity systems to monitor for drinking water contaminants, these water systems will still be obligated to perform the monitoring under federal rules which would be enforced by the U.S. EPA (52 Fed. Reg. 25712-25715, §141.24g and 141.40).

2. The establishment of less stringent schedules or deadlines for compliance or reporting requirements. The monitoring requirements in the proposed rule are being phased in by population served by the water system. Systems serving less than 3,300 persons, which would include all small businesses, are allowed the greatest amount of time to complete their initial monitoring (Jan. 1, 1991). The reporting requirements in the proposed rule are minimal and since MDH intends to collect the water samples required by the rule and report the findings to the small businesses, the small businesses will not be obligated to file any reports with MDH.

3. The consolidation of simplification of compliance or reporting requirements. The proposed rules require a small business to test their water for specific contaminants, to report the results to MDH, and to take remedial action if contaminant levels are exceeded. To lessen the burden on small businesses, MDH will collect all required samples and report the results to the small businesses.

4. The establishment of performance standards for small businesses to replace design or operational standards. The proposed rule does not contain design or operational standards but does use a performance standard concept requiring testing of drinking water and establishing contaminant levels that must be met by the water system for the water to be considered acceptable for consumption.

5. The exemption of small businesses from any or all requirements of the rule. As previously mentioned small businesses serving water to less than 25 persons per day are exempted from the requirements of this proposed rule.

If a water system is contaminated in excess of permissible levels, the health threat posed to the individual that regularly consumes the water is present regardless of the number of persons that are served by the water system. The health threat to the general public increases as the population served by a water system increases. The current state law defines a public water supply as one serving 25 persons or more and therefore establishes the minimum for the rules.

If the state does not include the rule revision requiring nontransient, noncommunity systems to monitor for volatile organic chemicals, these water systems will be obligated to perform the monitoring under federal rules which would be enforced by the U.S. EPA. MDH's past experience with public water supply rule enforcement has been that the rules are more effectively and consistently applied by a state agency rather than a federal agency.

In an attempt to mitigate the financial impact to small businesses caused by the increased monitoring imposed by this proposed rule revision and additional monitoring anticipated in future federal rule revisions, the MDH has prepared for the 1988 Legislature, at their request, revenue generating options which would minimize or eliminate the costs to small businesses.

COST OF IMPLEMENTATION TO LOCAL GOVERNMENTS

Local units of government that provide water to their residents through a community water system will be impacted by the additional monitoring for volatile organic chemicals required by these rule revisions. The cost of analyzing one sample for volatile organic chemicals is approximately $120-150. The number of samples to be analyzed for volatile organic chemicals for a community is dependent upon several factors: (1) number of community wells, (2) detection of volatile organic chemicals in initial monitoring and (3) vulnerability of wells to contamination. A very small system, with one well in which no volatile organic chemicals are detected in the initial sample, and the well is determined to be not vulnerable to contamination would have the minimum monitoring requirements and pay the least cost. For this scenario only one sample would need to be analyzed every 5 years at a cost of $120-150 or an annual cost of $24-30. At the other end of the cost range, very large system, with 25 wells, which had detectable levels of volatile organic chemicals in each initial sample for each well would pay the highest cost. This scenario would require quarterly

monitoring of each well for a total annual cost of (25 wells x 4 samples per year X $120-150 per sample) $12,000-15,000. Given the considerable variability of the factors involved in determining monitoring frequency, it is not possible to estimate an average cost for a community but only to establish the range of costs as provided above.

Even if the state were not to adopt rules requiring the monitoring of volatile organic chemicals in community water systems, the water systems will still be obligated to perform the monitoring under federal rules which are enforceable by the U.S. EPA when a state does not act. As mentioned previously, past experience has shown that public drinking water programs are more effective when administered by a state agency rather than U.S. EPA.

In an attempt to mitigate the financial impact to local units of government caused by the increased costs of monitoring imposed by this proposed rule revision and additional monitoring anticipated in future federal rule revisions, the MDH has prepared for the 1989 Legislature, at their request, revenue options designed to defray the costs associated with these and related future rule revisions.

NEED AND REASONABLENESS

Nearly all of the amendments being proposed below are required by the federal rules. Where that is the basis for the amendment a simple reference to the federal citation is given without additional comment. Other minor changes pertain to a clarification of terminology used.

Part 4720.0100 New terms are being added to the existing list of defined terms. The new terms are contained in the federal rules definition section, 40 CFR., § 1412. (51 Fed. Reg. 11410 and 52 Fed. Reg. 25712). The terms already contained in the state rule are being relabelled to maintain alphabetic order.

Part 4720.0700 In subpart 1 the maximum contaminant level (MCL) for fluoride is being adjusted to reflect the MCL contained in the federal rule, 51 Fed. Reg. 11410, § 141.11(c). Subpart 2 is modified to include a reference to the new subpart 7 of part 4720.1400 which contains the requirements for fluoride monitoring.

Part 4720.0800 Subpart 1 is changed by adding the term "synthetic" to precede "organic chemicals" to differentiate the type of organic chemicals referred to in this subpart from other types of organic chemicals regulated elsewhere in these rules, e.g. volatile organic chemicals. The individual chemicals currently listed in subpart 1 are pesticides which U.S. EPA is now including in their classification of synthetic organic chemicals so this designation will maintain consistency with EPA terminology. Subpart 3 is added to include a list of eight volatile organic chemicals for which MCLs are established consistent with 51 Fed. Reg. 25716, § 141.61(a).

Part 4720.1400 Subpart 3, item E. has been changed to reflect the analytical methods for determining fluoride concentrations as contained in

51 Fed. Reg. 11410-11411, § 141.23(f)(10). A new subpart 7 is added to include the revised fluoride monitoring requirements as contained in 51 Fed. Reg. 11411, § 141.23(g).

Part 4720.1500 As previously mentioned in the comments for part 4720.0800 subpart 1, the term "synthetic" is being added preceding "organic chemicals" to differentiate this category of organic chemical from other organic chemicals that are also contained in these rules.

Part 4720.1510 A new part added to establish sampling and analytical requirements for volatile organic chemicals. Subpart 1 prescribes the sampling frequency, analytical methods and methods for calculating compliance with MCLs for the eight VOCs for which MCLs are established in part 4720.0800, subpart 3. The provisions contained in subpart 1 are consistent with those found in 52 Fed. Reg. 25712-25714, § 141.24(g). Subpart 2 contains special reporting and public notification requirements that apply only to the contaminants in subpart 3 of this part. Subpart 2 is consistent with 52 Fed. Reg. 25714, § 141.35. Subpart 3 establishes monitoring requirements for up to 51 volatile organic chemicals (VOCs), however, there are no MCLs established for these 51 VOCs. Water systems will be required to report all results to the MDH and provide notice to its consumers that the test results are available to them. Subpart 3 is consistent with 52 Fed. Reg. 25715, § 141.40.

Part 4720.3510 A new part is being created to specify conditions under which the use of point-of-entry and point-of-use treatment devices, and bottled water are appropriate when addressing water system contamination.

Subpart 1 establishes the criteria that must be met in order to use point-of-entry treatment devices to comply with an MCL violation in a water system.

Point-of-entry devices treat all water entering a home or building and may be used as a permanent solution to an MCL violation if the water system can show that the public health protection afforded by point-of-entry devices is equivalent to treatment of the central water system. Subpart 1 is consistent with the requirements found in 52 Fed. Reg. 25716, § 141.100. Subpart 2 prohibits the use of point-of-use devices or bottled water as a permanent method to achieve compliance with an MCL but does recognize them as appropriate for use on a temporary basis. Subpart 2 is consistent with the language in 52 Fed. Reg. 25716, § 141.101. Subpart 3 specifies under what conditions bottled water and point-of-use devices can be used on a temporary basis to avoid an unreasonable risk to health. Subpart 3 is consistent with the language found in 52 Fed. Reg. 25716-25717, § 142.56 and § 142.62.

Part 4720.3900 Most of the existing part is being replaced with new language reflecting the revised federal rules pertaining to public notification, contained in 52 Fed. Reg. 41546, § 141.32. The most significant changes from the previous public notification requirements are: (1) frequent public notice is reserved for violations of MCLs which may have health significance and for violating variance or exemption agreements; (2) minor monitoring violations, e.g. forgetting to collect a sample, would require less frequent noticing than the present rules

require; and (3) new requirements that specific health effects language be contained in the public notice for the particular contaminant that has been found in the water system at levels exceeding the MCL. Subpart 5 contains the contaminant specific mandatory health effects language to be included in the public notice.

Appendix A

reasonable in the determination of BTGA.

The only significant difference between the variance rule for trihalomethanes (THM) and the variance rule for fluoride is the THM variance rule precluded EPA and the states from requiring systems to install methods not listed in the regulation in §142.60 (a) and (c). (See 40 CFR 142.60(d) and preamble at 48 FR 8406–413 and 47 FR 9796–798.) This prohibition was promulgated because of a concern that states might mandate installation of other treatment methods which the Agency believed should not be required as part of a variance. EPA does not have this concern for other fluoride technologies that are not listed.

Under section 1415 (a)(1)(A)(ii), EPA or the primacy state is to prescribe a schedule for implementation of control measures to reduce contaminants which, under the regulation, includes examination and installation of appropriate technologies. The term "control measures" also includes any other interim steps that may be necessary to prevent unreasonable risks until a treatment technology is installed. Thus, EPA or the primacy state may require the system to implement interim control measures, such as provision of bottled water or use of point-of-use or point-of-entry devices, to reduce exposure to fluoride as a condition and requirement of granting the variance.

e. Effective Date of Variance Regulation

Variances to the Interim Regulation have been available by statute since the Interim Regulation became effective in 1977. Variances do not have a statutory expiration date and therefore continue to be available for the Interim Regulation. Variances from the Revised Regulation are available by statute when the Revised Regulations become effective October 2, 1987.

The variance regulation applies to both the Interim Regulation and the Revised Regulation. The Agency sees no benefit from delaying the variance regulation; if variances are to be issued, they should comply with the requirements of §142.61. This effective date is consistent with the effective date discussed in the proposal (see 50 FR 47164 (November 14, 1985)).

f. EPA Review of State Variances

Under SDWA § 1415(a)(1)(F), EPA is authorized to review variances issued by states. Where the state has abused its discretion in granting variances in a substantial number of cases, the Administrator is authorized to revoke the variances and propose revised schedules or other requirements (SDWA § 1415(a)(1)(C)). Because most, if not all, systems can comply using BTGA, a variance will rarely be appropriate. EPA will review state issued variances.

Existing variances may not comply with the new variance regulations. In this case, states will need to amend their variances so that they are not less stringent than those that would be issued under § 142.61. Such variances should be amended expeditiously.

VIII. List of Subjects

40 CFR Part 141

Chemicals, Intergovernmental relations, Radiation protection, Reporting and recordkeeping requirements, Water supply.

40 CFR Part 142

Administrative practice and procedure, Chemicals, Radiation protection, Recordkeeping requirements, Intergovernmental relations, Water supply.

40 CFR Part 143

Chemicals, Water supply, Reporting and recordkeeping requirements.

Dated: March 15, 1986.

Lee M. Thomas,

Administrator.

For the reasons set out in the preamble, Title 40, Code of Federal Regulations, is amended as set forth below.

PART 141—NATIONAL PRIMARY DRINKING WATER REGULATIONS

1. The authority citation for Part 141 continues to read as follows:

Authority: 42 U.S.C. 300g–1, 300g–3, 300j–4, and 300j–9.

2. Section 141.2 is amended by adding a new paragraph (v) to read as follows:

§ 141.2 Definitions.

* * * * *

(v) "Performance evaluation sample" means a reference sample provided to a laboratory for the purpose of demonstrating that the laboratory can successfully analyze the sample within limits of performance specified by the Agency. The true value of the concentration of the reference material is unknown to the laboratory at the time of the analysis.

3. Section 141.6 is amended by adding a new paragraph (f) to read as follows:

§ 141.6 Effective dates.

* * * * *

(f) The regulations set forth in § 141.11(c) and § 141.23(g) are effective May 2, 1986. Section 141.23(g)(4) is effective October 2, 1987.

4. Section 141.11 is amended by revising paragraph (c) as follows:

§ 141.11 Maximum contaminant levels for inorganic chemicals.

* * * * *

(c) The Maximum Contaminant Level for fluoride is 4.0 mg/l. See 40 CFR 143.3, which establishes a Secondary Maximum Contaminant Level at 2.0 mg/l.

* * * * *

5. Section 141.23 is amended by revising paragraphs (b) and (f)(10), republishing footnotes 1 through 4 and adding footnotes 5 through 7 to (f) and by adding a new paragraph (g) to read as follows:

§ 141.23 Inorganic chemical sampling and analytical requirements.

(b) If the result of an analysis made under paragraph (a) of (g) of this section indicates that the level of any contaminant listed in § 141.11 or § 141.62 exceeds the maximum contaminant level, the supplier of the water shall report to the State within 7 days and initiate three additional analyses at the same sampling point within one month.

* * * * *

(f) * * *

(10) *Fluoride:*

Methodology	Reference (method number)			
	EPA [1]	ASTM [2]	SM [3]	Other
Colorimetric SPADNS with distillation	340.1	D1179-72A	413 A and C	
Potentiometric ion selective electrode	340.2	D1179-72B	413 B	
Automated Alizarin fluoride blue, with distillation (complexone)	340.3		413 E	129-71W [4]
Automated ion selective electrode				380-75WE [5]

[1] "Methods of Chemical Analysis of Water and Wastes," EPA Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268 (EPA-600/4-79-020), March 1979. Available from ORD Publications, CERI, EPA, Cincinnati, Ohio 45268. For approved analytical procedures for metals, the technique applicable to total metals must be used.

[2] "Standard Methods for the Examination of Water and Wastewater," 14th Edition, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 1976.

[3] Techniques of Water-Resources Investigation of the United States Geological Survey, Chapter A-1, "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments," Book 5, 1979, Stock #024-001-03177-9. Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.
[4] Annual Book of ASTM Standards, part 31 Water, American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
[5] "Standard Methods for the Examination of Water and Wastewater," 16th Edition, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 1985.
[6] "Fluoride in Water and Wastewater, Industrial Method #129-71W," Technicon Industrial Systems, Tarrytown, New York, 10591, December 1972.
[7] "Fluoride in Water and Wastewater," Technicon Industrial Systems, Tarrytown New York, 10591, February 1976.

(g) *Fluoride.* In addition to complying with paragraphs (a) through (f) of this section, systems monitoring for fluoride must comply with the requirements of this paragraphs.

(1)(i) Where the system draws water from one source, the system shall take one sample at the entry point to the distribution system.

(ii) Where the system draws water from more than one source, the system must sample each source at the entry points to the distribution system.

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

(2) The state may alter the frequencies for fluoride monitoring as set out in paragraph (a) of this section to increase or decrease such frequency considering the following factors:

(i) Reported concentrations from previously required monitoring,

(ii) The degree of variation in reported concentrations and,

(iii) Other factors which may affect fluoride concentrations such as changes in pumping rates in ground water supplies or significant changes in the system's configuration, operating procedures, source of water, and changes in stream flows.

(3) Monitoring may be decreased from the frequencies specified in paragraph (a) of this section upon application in writing by water systems if the state determines that the system is unlikely to exceed the MCL, considering the factors listed in paragraph (g)(2) of this section. Such determination shall be made in writing and set forth the basis for the determination. A copy of the determination shall be provided to the Administrator. In no case shall monitoring be reduced to less than one sample every 10 years. For systems monitoring once every 10 years, the state shall review the monitoring results every ten years to determine whether more frequent monitoring is necessary.

(4) Analyses for fluoride under this section shall only be used for determining compliance if conducted by laboratories that have analyzed Performance Evaluation samples to within ±10% of the reference value at fluoride concentrations from 1.0 mg/l to 10.0 mg/l, within the last 12 months.

(5) Compliance with the MCL shall be determined based on each sampling point. If any sampling point is determined to be out of compliance, the system is deemed to be out of compliance.

6. § 141.32 is amended by revising the first sentence of paragraph (a) as follows:

§ 141.32 Public notification.

(a) If a community water system fails to comply with an applicable maximum contaminant level established in Subparts B or G, fails to comply with an applicable testing procedure established in Subpart C of this part, is granted a variance or an exemption from an applicable maximum contaminant level, fails to comply with the requirements of any schedule prescribed pursuant to a variance or exemption, or fails to perform any monitoring pursuant to section 1445(a) of the Act, the supplier of water shall notify persons served by the water system of the failure or grant by inclusion of a notice in the first set of water bills of the system issued after the failure or grant and in any event by written notice within three months.

* * *

* * * * *

7. Part 141 is amended by adding a new Subpart G to read as follows:

Subpart G—National Revised Primary Drinking Water Regulations: Maximum Contaminant Levels

Sec.
141.60 Effective dates.
141.61 [Reserved]
141.62 Maximum Contaminant Levels for Inorganic Contaminants.

Subpart G—National Revised Primary Drinking Water Regulations: Maximum Contaminant Levels

§141.60 Effective dates.

(a) [Reserved]

(b) Effective dates for § 141.62

(1) [Reserved]

(2) The effective date for § 141.62(b)(1) is October 2, 1987.

§141.61 [Reserved]

§141.62 Maximum Contaminant Levels for Inorganic Contaminants.

(a) [Reserved]

(b) The following Maximum Contaminant Levels for inorganic contaminants apply to community water systems.

Contaminant	Maximum contaminant level in mg/l
(1) Fluoride	4.0
(2) [Reserved]	

PART 142—NATIONAL PRIMARY DRINKING WATER REGULATIONS IMPLEMENTATION

8. The authority citation for Part 142 continues to read as follows:

Authority: 42 U.S.C. 300g-2, 300i-g3, 300g-4, 300g-5, 300j-4, and 300j-9.

9. §142.61 is added to read as follows:

§142.61 Variances from the maximum contaminant level for fluoride.

(a) The Administrator, pursuant to Section 1415(a)(1)(A) of the Act, hereby identifies the following as the best technology, treatment techniques or other means generally available for achieving compliance with the Maximum Contaminant Level for fluoride.

(1) Activated alumina absorption, centrally applied

(2) Reverse osmosis, centrally applied

(b) The Administrator in a state that does not have primary enforcement responsibility or a state with primary enforcement responsibility (primacy state) that issues variances shall require a community water system to install and/or use any treatment method identified in § 142.61(a) as a condition for granting a variance unless the Administrator or the primacy state determines that such treatment method identified in § 142.61(a) as a condition for granting a variance is not available and effective for fluoride control for the system. A treatment method shall not be considered to be "available and effective" for an individual system if the treatment method would not be technically appropriate and technically feasible for that system. If, upon application by a system for a variance, the Administrator or primacy state that issues variances determines that none of the treatment methods identified in § 142.61(a) are available and effective for the system, that system shall be entitled to a variance under the provisions of Section 1415(a)(1)(A) of the Act. The Administrator's or primacy state's determination as to the availability and effectiveness of such treatment methods shall be based upon

studies by the system and other relevant information. If a system submits information to demonstrate that a treatment method is not available and effective for fluoride control for that system, the Administrator or primacy state shall make a finding whether this information supports a decision that such treatment method is not available and effective for that system before requiring installation and/or use of such treatment method.

(c) Pursuant to § 142.43(c)–(g) or corresponding state regulations, the Administrator or primacy state that issues variances shall issue a schedule of compliance that may require the system being granted the variance to examine the following treatment methods (1) to determine the probability that any of these methods will significantly reduce the level of fluoride for that system, and (2) if such probability exists, to determine whether any of these methods are technically feasible and economically reasonable, and that the fluoride reductions obtained will be commensurate with the costs incurred with the installation and use of such treatment methods for that system:

(1) Modification of lime softening
(2) Alum coagulation
(3) Electrodialysis
(4) Anion exchange resins
(5) Well field management
(6) Alternate source
(7) Regionalization

(d) If the Administrator or primary state that issues variances determines that a treatment method identified in § 142.61(c) or other treatment method is technically feasible, economically reasonable, and will achieve fluoride reductions commensurate with the costs incurred with the installation and/or use of such treatment method for the system, the Administrator or primacy state shall require the system to install and/or use that treatment method in connection with a compliance schedule issued under the provisions of Section 1415(a)(1)(A) of the Act. The Administrator's or primacy state's determination shall be based upon studies by the system and other relevant information.

PART 143—NATIONAL SECONDARY DRINKING WATER REGULATIONS

10. The authority citation for Part 143 is revised to read as follows:

Authority: 42 U.S.C. 300g–1(c), 300j–4, and 300j–9.

11. Part 143, § 143.3 is amended by adding the following entry to the table between the entries corrosivity and foaming agent:

§143.3 Secondary maximum contaminant levels.

* * * * *

Contaminant	Level
* * * * *	
Fluoride	2.0 mg/l.
* * * * *	

12. Part 143 is amended by adding a new § 143.5 to read as follows:

§ 143.5 Compliance with secondary maximum contaminant level and public notification for fluoride.

(a) Community water systems, as defined in 40 CFR § 141.2(e)(i), that exceed the secondary maximum contaminant level for fluoride as determined by the last single sample taken in accordance with the requirements of § 141.223 or any equivalent state law shall send the notice described in (b) to (1) all billing units generally, (2) all new billing units at the time service begins, and (3) the state public health officer.

(b) The notice to be used by systems which exceed the secondary MCL shall contain the following language and no additional language except as necessary to replace the asterisks:

Public Notice

Dear User,

The U.S. 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 [1] 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/l 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/l for many years may result in some cases of crippling skeletal fluorosis, which is a serious bone disorder.

Federal law also requires that we notify you when monitoring indicates that the fluoride in your drinking water exceeds 2.0 mg/l. This is intended to alert families about dental problems that might affect children under nine years of age. The fluoride concentration of your water exceeds this federal guideline.

Fluoride in children's drinking water at levels of approximately 1 mg/l reduces the number of dental cavities. However, some children exposed to levels of fluoride greater than about 2.0 mg/l may develop dental fluorosis. Dental fluorosis, in its moderate and severe forms, is a brown staining and/or pitting of the *permanent* teeth.

Because dental fluorosis occurs only when *developing* teeth (before they erupt from the gums) are exposed to elevated fluoride levels, households without children are not expected to be affected by this level of fluoride. Families with children under the age of nine are encouraged to seek other sources of drinking water for their children to avoid the possibility of staining and pitting.

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 [2] at your water system.

[1] PWS shall insert the compliance result which triggered notification under this Part.

[2] PWS shall insert the name, address, and telephone number of a contact person at the PWS.

(c) The effective date of this section is May 2, 1986.

[FR Doc. 86–6843 Filed 4–1–86; 8:45 am]

BILLING CODE 6560–50–M

Administration's definitions, a "small" water utility is one that serves fewer than 50,000 people. There are about 78,500 such systems. Of these, fewer than 1700 are likely to have contamination levels greater than the MCLs. Therefore, this rule will affect about that 2 percent of the "small" systems, which does not constitute a substantial number of small systems. However, it is possible that today's action will have a substantial impact on a few small systems if regulated VOCs are found at levels higher than the MCL. Therefore, the Agency has attempted to provide alternatives to the requirements whenever possible. Specifically, EPA allows compositing of samples. Small systems may choose to composite their samples and to share the analytical costs. Also, the Agency has allowed bottled water and point-of-use devices as conditions of receiving a variance or exemption, even though decentralized treatment is less than the Agency's long-range goal of centralized treatment (due to untreated taps and possible inhalation effects), to accommodate the needs of the smaller systems with limited resources. The Agency also has given states the discretion to reduce monitoring frequency in accordance with a system's findings of no VOCs and its vulnerability status. Consequently, small systems which do not have VOC contamination in their water supply and are not located in a vulnerable area may have to monitor only infrequently. In addition, very small systems are not required to sample for unregulated contaminants; they are only required to provide a sample or make the opportunity for sampling available to the State.

The information collection requirements in this rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The information collection requirements are not effective until OMB approves them and a technical amendment to that effect is published in the Federal Register.

VI. References and Public Docket

The following references are referred to in this notice and are included in the Public Docket together with other correspondence and information. The Public Docket is available for viewing by appointment in Washington, D.C. by calling the telephone number at the beginning of this notice. All public comments received on the proposal are included in the Docket.

(1) * U.S. Environmental Protection Agency, Criteria and Standards Division, Analytical Methods/ Monitoring the VOCs in Drinking Water. June, 1987.

(2) * U.S. Environmental Protection Agency, Criteria and Standards Division, Techologies and Costs for the Removal of Volatile Organic Chemicals from Potable Water Supplies. May, 1985.

(3)* U.S. Environmental Protection Agency, Office of Program Development and Evaluation, Economic Impact Analysis of Proposed Regulations to Control Volatile Synthetic Organic Chemicals in Drinking Water. October, 1985, as amended 1987.

(4) U.S. Environmental Protection Agency, Criteria and Standards Division, Summary of Comments and EPA Responses on the Proposed MCLs for the VOCs, Reproposed MCLG for para-Dichlorobenzene, and "Requirements for Unregulated Contaminants." (June 1987)

(5) Peters, W., and Clark, S. Memo: Risks Associated With Air Emissions from Aeration of Drinking Water. To Robert G. Kellam, Program Analysis and Technology Section and Arthur H. Perler, Science and Technology Branch, Criteria and Standards Division, Office of Drinking Water. Nov. 13, 1985.

(6)* National Toxicology Program, Toxicology and Carcinogenesis Studies of 1,4-Dichlorobenzene in F344 Rats and B6C3F$_1$ Mice (Gavage Studies), final report, 1987 (Technical Report Series No. 319).

(7) U.S. Environmental Protection Agency Ground Water Supply Survey January 1983.

(8) U.S. Environmental Protection Agency, Criteria and Standards Division. Criteria Document for ortho-Dichlorobenzene, meta-Dichlorobenzene, and parap-Dichlorobenzene. (June 1987)

The starred (*) documents are available for a fee from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161. The toll-free number is 703/487-4650. These documents are also available for review at the Drinking Water Supply Branch Office in EPA's Regional Offices.

List of Subjects in 40 CFR Parts 141 and 142

Chemicals, Reporting and record-keeping requirements, Water supply, Administrative practice and procedure.

Dated: June 19, 1987.

Lee M. Thomas,

Administrator, Environmental Protection Agency.

Therefore, 40 CFR Parts 141 and 142 are amended as follows:

PART 141—[AMENDED]

1. In Part 141:

a. The authority citation for Part 141 continues to read as follows:

Authority: 42 U.S.C. 300g-1, 300g-3, 300j-4, 300g-6, and 300j-9.

b. In § 141.2, the existing paragraph designations are removed, the existing paragraphs are arranged in alphabetical order, and the following new definitions are added:

§ 141.2. Definitions.

* * * * *

"Best available technology" or "BAT" means the best technology, treatment techniques, or other means which the Administrator finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration). For the purposes of setting MCLs for synthetic organic chemicals, any BAT must be at least as effective as granular activated carbon.

* * * * *

"Non-transient non-community water system or "NTNCWS" means a public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year.

* * * * *

"Point-of-entry treatment device" is a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

"Point-of-use treatment device" is a treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.

* * * * *

c. A new paragraph (g) is added to § 141.24 to read as follows:

§ 141.24 Organic chemicals other than total trihalomethanes, sampling and analytical requirements.

* * * * *

(g) Analysis of the contaminants listed in § 141.61(a) for purposes of determining compliance with the maximum contaminant levels shall be conducted as follows:

(1) Ground-water systems shall sample at points of entry to the distribution system representative of each well. Sampling must be conducted at the same location or a more representative location each quarter. Ground-water systems must sample every three months for each entry point to the distribution system except as provided in paragraph (g)(8)(i) of this section.

(2) Surface water systems shall sample at points in the distribution system representative of each source or at entry points to the distribution system after any application of treatment. Surface water systems must sample each source every three months except as provided in paragraph (g)(8)(ii) of this section. Sampling must be conducted at the same location or a more representative location each quarter.

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

(4) All community water systems and non-transient, non-community water systems 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. All community water systems and non-transient non-community water systems serving from 3,300 to 10,000 people shall analyze all distribution or entry-point samples, as required in this paragraph (g), representing source waters no later than January 1, 1989. All other community and non-transient, non-community water systems shall analyze distribution or entry-point samples, as required in this paragraph (g), representing all source waters beginning no later than January 1, 1991.

(5) The State or EPA may require confirmation samples for positive or negative results. If a confirmation sample(s) is required by EPA or the State, then the sample result(s) should be averaged with the first sampling result and used for compliance determination in accordance with (g)(9) of this section. States have discretion to delete results of obvious sampling errors from this calculation.

(6) Analysis for vinyl chloride is required only for ground water systems 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 analysis for vinyl chloride is required at each distribution or entry point at which one or more of the two-carbon organic compounds were found. If the first analysis does not detect vinyl chloride, the State may reduce the frequency of vinyl chloride monitoring to once every three years for that sample location or other sample locations which are more representative of the same source. Surface water systems may be required to analyze for vinyl chloride at the discretion of the State.

(7) A State or individual public water systems may choose to composite up to five samples from one or more public water systems. Compositing of samples is to be done in the laboratory by the procedures listed below. Samples should be analyzed within fourteen days of collection. If any organic contaminant listed in § 141.61(a) VOC is detected in the original composite sample, a sample from each source that made up the composite sample must be reanalyzed individually within fourteen days from sampling. The sample for reanalysis cannot be the original sample but can be a duplicate sample. If duplicates of the original samples are not available, new samples must be taken from each source used in the original composite and analyzed for VOCs. Reanalysis must be accomplished within fourteen days of the second sample. To composite samples, the following procedure must be followed:

(i) Compositing samples prior to GC analysis.

(A) Add 5 ml or equal larger amounts of each sample (up to 5 samples are allowed) to a 25 ml glass syringe. Special precautions must be made to maintain zero headspace in the syringe.

(B) The samples must be cooled at 4° C during this step to minimize volatilization losses.

(C) Mix well and draw out a 5-ml aliquot for analysis.

(D) Follow sample introduction, purging, and desorption steps described in the method.

(E) If less than five samples are used for compositing, a proportionately smaller syringe may be used.

(ii) Compositing samples prior to GC/MS analysis.

(A) Inject 5-ml or equal larger amounts of each aqueous sample (up to 5 samples are allowed) into a 25-ml purging device using the sample introduction technique described in the method.

(B) The total volume of the sample in the purging device must be 25 ml.

(C) Purge and desorb as described in the method.

(8) The State may reduce the monitoring frequency specified in paragraphs (g) (1) and (2) of this section, as explained in this paragraph as follows:

(i) The monitoring frequency for ground-water systems is as follows:

(A) When VOCs are not detected in the first sample (or any subsequent samples that may be taken) and the system is not vulnerable as defined in paragraph (g)(8)(iv) of this section, monitoring must be repeated every 5 years.

(B) When VOCs are not detected in the first sample (or any subsequent sample that may be taken) and the system is vulnerable as defined in paragraph (g)(8)(iv) of this section,

(*1*) Monitoring must be repeated every 3 years for systems >500 connections.

(*2*) Monitoring must be repeated every 5 years for system <500 connections.

(C) If VOCs are detected in the first sample (or any subsequent sample that may be taken), regardless of vulnerability, monitoring must be repeated every 3 months, as required under paragraph (g)(1) of this section.

(ii) The repeat monitoring frequency for surface water systems is as follows:

(A) When VOCs are not detected in the first year of quarterly sampling (or any other subsequent sample that may be taken) and the system is not vulnerable as defined in paragraph g(8)(iv), monitoring is only required at state discretion.

(B) When VOCs are not detected in the first year of quarterly sampling (or any other subsequent sample that may be taken) and the system is vulnerable as defined in paragraph (g)(8)(iv) of this section,

(*1*) Monitoring must be repeated in three years (for systems >500 connections.)

(*2*) Monitoring must be repeated every five years (for systems <500 connections.)

(C) When VOCs are detected in the first year of quarterly sampling (or any other subsequent sample that may be taken), regardless of vulnerability, monitoring must be repeated every 3 months, as required under paragraph (g)(2) of this section.

(iii) States may reduce the frequency of monitoring to once per year for a ground-water system or surface water system detecting VOCs at levels consistently less than the MCL for three consecutive years.

(iv) Vulnerability of each public water system shall be determined by the State based upon an assessment of the following factors:

(A) Previous monitoring results.

(B) Number of persons served by public water system.

(C) Proximity of a smaller system to a larger system.

(D) Proximity to commercial or industrial use, disposal, or storage of Volatile Synthetic Organic Chemicals.

(E) Protection of the water source.

(v) A system is deemed to be vulnerable for a period of three years after any positive measurement of one or more contaminants listed in either

§ 141.61(a) or § 141.40(e) except for trihalomethanes or other demonstrated disinfection by-products.

(9) Compliance with § 141.61(a) shall be determined based on the results of running annual average of quarterly sampling for each sampling location. If one location's average is greater than the MCL, then the system shall be deemed to be out of compliance. If a public water system has a distribution system separable from other parts of the distribution system with no interconnections, only that part of the system that exceeds any MCL as specified in Section 141.61(a) will be deemed out of compliance. States may reduce the public notice requirement to that portion of the system which is out of compliance. If any one sample result would cause the annual average to be exceeded, then the system shall be deemed to be out of compliance immediately. For systems that only take one sample per location because no VOCs were detected, compliance shall be based on that one sample.

(10) Analysis under this paragraph shall be conducted using the following EPA methods or their equivalent as approved by EPA. These methods are contained in "Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water," September 1986, available from Environmental and Support Laboratory (EMSL), EPA, Cincinnati, OH 45268 or the State.

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

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

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

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

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

(11) Analysis under this section shall only be conducted by laboratories that have received conditional approval by EPA or the State according to the following conditions:

(i) To receive conditional approval to conduct analyses for benzene, vinyl chloride, carbon tetrachloride, 1,2-dichloroethane, trichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, and paradichlorobenzene the laboratory must:

(A) analyze Performance Evaluation samples which include these substances provided by EPA Environmental Monitoring and Support Laboratory or equivalent samples provided by the State.

(B) achieve the quantitative acceptance limits under paragraphs (g)(11)(i)(C) and (g)(11)(i)(D) of this section for at least six of the seven subject organic chemicals. States may allow fewer than six of the seven.

(C) achieve quantitative results on the analyses performed under (g)(11)(i)(A) that are within ±20 percent of the actual amount of the substances in the Performance Evaluation sample when the actual amount is greater than or equal to 0.010 mg/l.

(D) achieve quantitative results on the analyses performed under (g)((11)(i)(A) of this section that are within ±40 percent of the actual amount of the substances in the Performance Evaluation sample when the active amount is less than 0.010 mg/l.

(E) achieve a method detection limit of 0.0005 mg/l, according to the procedures in Appendix B of Part 136.

(F) be currently approved by EPA or the State for the analyses of trihalomethanes under § 141.30.

(ii) To receive conditional approval for vinyl chloride, the laboratory must:

(A) Analyze Performance Evaluation samples provided by EPA Envionmental Monitoring and Support Laboratory or equivalent samples provided by the State.

(B) Achieve quantitative results on the analyses performed under (g)(11)(ii)(A) of this section that are within ±40 percent of the actual amount of vinyl chloride in the Performance Evaluation sample.

(C) Achieve a method detection limit of 0.0005 mg/l, according to the procedures in Appendix B of Part 136.

(D) Receive approval or be currently approved by EPA or the State under (g)(11)(i) of this section.

(12) States have the authority to allow the use of monitoring data collected after January 1, 1983, for purposes of monitoring compliance. If the data is consistent with the other requirements in this paragraph, States may use that data to represent the initial monitoring if the system is determined by the State not to be vulnerable under the requirements of this section. In addition, the results of EPA's Ground Water Supply Survey can be used in a similar manner for systems supplied by a single well.

(13) States may increase required monitoring where necessary to detect variations within the system.

(14) The State has the authority to determine compliance or initiate enforcement action based upon analytical results and other information compiled by their sanctioned representatives and agencies.

(15) A public water system supplying fewer than 150 service connections shall be treated as complying with the monitoring requirements if the owner or operator sends a letter to the State specifying that their system is available for sampling. No samples may be sent to the State unless so requested. This letter must be sent to the State no later than January 1, 1991.

(16) States may exempt a public water system that obtains treated water from another public water system serving more than 10,000 persons from conducting compliance monitoring for the organic chemicals under § 141.61(a), provided that the system from which the water is obtained has conducted the analyses required under § 141.61(a).

(17) Public water systems exempted by the State under (g)(16) and which disinfect are required to monitor under § 141.40.

(18) Each approved laboratory must determine the method detection limit (MDL), as defined in Appendix B to Part 136, at which it is capable of detecting VOCs. The acceptable MDL is 0.0005 mg/l. This concentration is the detection level for purposes of paragraphs (g) (5), (6), (7), and (8) of this section.

d. Section 141.32 is amended by revising the first phrase of paragraph (a) to read as follows:

§ 141.32 Public notification.

(a) If a community water system or non-transient non-community water systems fails to comply with an applicable maximum contaminant level established in Subpart B or G, * * *

* * * * * *

e. A new § 141.35 is added to Subpart D to read as follows:

§ 141.35 Reporting and public notification for certain unregulated contaminants.

(a) The requirements of this section only apply to the contaminants listed in § 141.40.

(b) The owner or operator of a community water system or non-transient, non-community water system who is required to monitor under § 141.40 shall send a copy of the results of such monitoring within 30 days of receipt and any public notice under paragraph (d) of this section to the State.

(c) The State, or the community water system or non-transient, non-community water system if the State has not adopted regulations equivalent to § 141.40, shall furnish the following information to the Administrator for each sample analyzed under § 141.40:

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

(2) Name and address of the system that supplied the sample;

(3) Contaminant(s);

(4) Analytical method(s) used;

(5) Date of sample;

(6) Date of analysis.

(d) The owner or operator shall notify persons served by the system of the availability of the results of sampling conducted under § 141.40 by including a notice in the first set of water bills issued by the system after the receipt of the results or written notice within three months. The notice shall identify a person and supply the telephone number to contact for information on the monitoring results.

f. Section 141.40 is revised to read as follows:

§ 141.40 Special monitoring for organic chemicals.

(a) All community and non-transient, non-community water systems shall monitor for the contaminants listed in paragraph (e) in this section by date specified in Table 1:

TABLE 1.—MONITORING COMPLETION DATE BY SYSTEM SIZE

Number of persons served	Monitoring to begin no later than—
Over 10,000	Jan. 1, 1988
3,300 to 10,000	Jan. 1, 1989.
Less than 3,300	Jan. 1, 1991.

(b) Surface water systems shall sample in the distribution system representative of each water source or at entry points to the distribution system. The minimum number of samples is one year of quarterly samples per water source.

(c) Ground water systems shall sample at points of entry to the distribution system representative of each well. The minimum number of samples is one sample per entry point to the distribution system.

(d) The State may require confirmation samples for positive or negative results.

(e) Community water systems and non-transient, non-community water systems shall monitor for the following contaminants except as provided in paragraph (f) of this section:

(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)
(36) 1,2-Dibromo-3-chloropropane (DBCP)

(f) Community water systems and non-transient non-community water systems must monitor for EDB and DBCP only if the State determines they are vulnerable to contamination by either or both of these substances. For the purpose of this paragraph, a vulnerable system is defined as a system which is potentially contaminated by EDB and DBCP, including surface water systems where these two compounds are applied, manufactured, stored, disposed of, or shipped upstream, and for ground-water systems in areas where the compounds are applied, manufactured, stored, disposed of, or shipped in the ground-water recharge basin, or for ground-water systems that are in proximity to underground storage tanks that contain leaded gasoline.

(g) Analysis under this section shall be conducted using the recommended EPA methods as follows, or their equivalent as determined by EPA: 502.1, "Volatile Halogenated Organic Compounds in Water by Purge and Trap Gas Chromatography," 503.1, "Volatile Aromatic and Unsaturated Organic Compounds in Water by Purge and Trap Gas Chromatography," 524.1, "Volatile Organic Compounds in Water by Purge and Trap Gas Chromatography/Mass Spectrometry," 524.2, "Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography/Mass Spectrometry, or 502.2, "Volatile Organic Compounds in Water by Purge and Trap Gas Chromatography with Photoionization and Electrolytic Conductivity Detectors in Series." These methods are contained in "Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water," September 1986, available from Environmental Monitoring and Support Laboratory (EMSL), EPA, Cincinnati, Ohio 45268. 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," September 1986, available from EMSL, Cincinnati, Ohio 45268 or the State.

(h) Analysis under this section shall only be conducted by laboratories approved under § 141.24(g)(11). In addition to the requirements of § 141.24(g)(11), each laboratory analyzing for EDB and DBCP must achieve a method detection limit for EDB and DBCP of 0.00002 mg/l, according to the procedures in Appendix B of Part 136.

(i) Public water systems may use monitoring data collected any time after January 1, 1983 to meet the requirements for unregulated monitoring, provided that the monitoring program was consistent with the requirements of this section.

(j) Monitoring for the following compounds is required at the discretion of the State:

(1) 1,2,4-Trimethylbenzene
(2) 1,2,4-Trichlorobenzene
(3) 1,2,3-Trichlorobenzene
(4) n-Propylbenzene
(5) n-Butylbenzene
(6) Naphthalene
(7) Hexachlorobutadiene
(8) 1,3,5-Trimethylbenzene
(9) p-Isopropyltoluene
(10) Isopropylbenzene
(11) Tert-butylbenzene
(12) Sec-butylbenzene
(13) Fluorotrichloromethane
(14) Dichlorodifluoromethane
(15) Bromochloromethane

(k) Instead of performing the monitoring required by this section, a community water system or non-transient, non-community water system serving fewer than 150 service connections may send a letter stating that its system is available for sampling.

(l) All community and non-transient, non-community water systems shall repeat the monitoring required in § 141.40 no less frequently than every five years from the dates specified in § 141.40(a).

g. Section 141.50 is amended by revising paragraph (b) to read as follows:

§ 141.50 Maximum contaminant level goals for organic contaminants.

* * * * *

(b) MCLGs for the following contaminants are as indicated:

Contaminant	MCLG in mg/l
(1) 1,1-Dichloroethylene	0.007
(2) 1,1,1-Trichloroethane	0.20
(3) para-Dichlorobenzene	0.075

h. Section 141.60 is revised to read as follows:

§ 141.60 Effective dates.

(a) The effective date for § 141.61 is January 9, 1989.

(b) The effective date for § 141.62(b)(2) is October 2, 1987.

i. Section 141.61 is added as follows:

§ 141.61 Maximum contaminant levels for organic contaminants.

(a) The following maximum contaminant levels for organic contaminants apply to community water systems and non-transient non-community water systems.

CAS No.	Contaminant	Maximum contaminant level in mg/l
71-43-2	Benzene	0.005
75-01-4	Vinyl chloride	0.002
56-23-5	Carbon tetrachloride	0.005
107-06-2	1,2-Dichloroethane	0.005
79-01-6	Trichloroethylene	0.005
75-35-4	1,1-Dichloroethylene	0.007
71-55-6	1,1,1-Trichloroethane	0.20
106-46-7	para-Dichlorobenzene	0.075

(b) The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means generally available for achieving compliance with the maximum contaminant level for synthetic organic chemicals (§ 141.61(a)): Central treatment using packed tower aeration; central treatment using granular activated carbon for all these chemicals except vinyl chloride.

j. Part 141 is amended by adding a new Subpart J, consisting of §141.100 and § 141.101, to read as follows. Subparts H and I are reserved.

Subpart J—Use of Non-Centralized Treatment Devices

Sec.

141.100 Criteria and procedures for public water systems using point-of-entry devices.
141.101 Use of other non-centralized treatment devices.

Subpart J—Use of Non-Centralized Treatment Devices

§ 141.100 Criteria and procedures for public water systems using point-of-entry devices.

(a) Public water systems may use point-of-entry devices to comply with maximum contaminant levels only if they meet the requirements of this section.

(b) It is the responsibility of the public water system to operate and maintain the point-of-entry treatment system.

(c) The public water system must develop and obtain State approval for a monitoring plan before point-of-entry devices are installed for compliance. Under the plan approved by the State, point-of-entry devices must provide health protection equivalent to central water treatment. "Equivalent" means that the water would meet all Primary and Secondary Drinking Water Standards and would be of acceptable quality similar to water distributed by a well-operated central treatment plant. In addition to the VOCs, monitoring must include 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 State and the microbiological safety of the water must be maintained.

(1) The State must require adequate certification of performance, field testing, and, if not included in the certification process, a rigorous engineering design review of the point-of-entry devices.

(2) The design and application of the point-of-entry 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, post-contractor disinfection, and Heterotrophic Plate Count monitoring to ensure that the microbiological safety of the water is not compromised.

(e) All consumers shall be protected. Every building connected to the system must have a point-of-entry device installed, maintained, and adequately monitored. The State must be assured that every building is subject to treatment and monitoring, and that the rights and responsibilities of the public water system customer convey with title upon sale of property.

§ 141.101 Use of other non-centralized treatment devices.

Public water systems shall not use bottled water or point-of-use devices to achieve compliance with an MCL. Bottled water or point-of-use devices may be used on a temporary basis to avoid an unreasonable risk to health.

PART 142—[AMENDED]

2. In Part 142:

a. The authority citation for 40 CFR Part 142 continues to read as follows:

Authority: 42 U.S.C. 300g–2, 300g–3, 300g–4, 300g–5, 300j–4, and 300j–9.

b. A new § 142.56 is added to Subpart F, to read as follows:

§ 142.56 Bottled water and point-of-use devices.

(a) A State may require a public water system to use bottled water or point-of-use devices as a condition for granting an exemption from the requirements of § 141.61(a) of this part.

(b) Public water systems that use bottled water as a condition of obtaining an exemption from the requirements of § 141.61(a) must meet the requirements set out in § 142.62(f) of this part.

(c) Public water systems that use point-of-use devices as a condition for receiving an exemption must meet the requirements set out in § 142.62(g) of this part.

c. A new § 142.62 is added to Subpart G to read as follows:

§ 142.62 Variances from the maximum contaminant levels for synthetic organic chemicals.

(a) The Administrator, pursuant to section 1415(a)(1)(A) of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for synthetic organic chemicals: Removal using packed tower aeration; removal using granular activated carbon (except for vinyl chloride).

(b) A State shall require community water systems and non-transient, non-community water systems to install and/or use any treatment method identified in § 141.62(a) as a condition for granting a variance except as provided in paragraph (c). If, after the system's installation of the treatment method, the system cannot meet the MCL, that system shall be eligible for a variance under the provisions of section 1415(a)(1)(A) of the Act.

(c) If a system can demonstrate through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in § 141.62(a) would only achieve a *de minimis* reduction in contaminants, the State may issue a schedule of compliance that requires the system being granted the variance to examine other treatment methods as a condition of obtaining the variance.

(d) If the State determines that a treatment method identified in paragraph (c) of this section is technically feasible, the Administrator or primacy State may require the system to install and/or use that treatment method in connection with a compliance schedule issued under the provisions of section 1415(a)(1)(A) of the Act. The State's determination shall be based upon studies by the system and other relevant information.

(e) The State may require a public water system to use bottled water or point-of-use devices or other means as a condition of granting a variance from the requirements of § 141.61(a), to avoid an unreasonable risk to health.

(f) Public water systems that use bottled water as a condition for receiving a variance from the requirements of § 141.61(a) must meet the following requirements in either paragraph (f)(1) of (f)(2) of this section in addition to requirements in paragraph (f)(3) of this section:

(1) The Administrator or primacy State must require and approve a monitoring program for bottled water. The public water system must develop and put in place a monitoring program that provides reasonable assurances that the bottled water meets all MCLs. The public water system must monitor a representative sample of the bottled water for all contaminants regulated under § 141.61(a) the first quarter that it supplies the bottled water to the public, and annually thereafter. Results of the monitoring program shall be provided to the State annually.

(2) The public water system must receive a certification from the bottled water company that the bottled water supplied has been taken from an "approved source" as defined in 21 CFR 129.3(a); the bottled water company has conducted monitoring in accordance with 21 CFR 129.80(g) (1) through (3); and the bottled water does not exceed any MCLs or quality limits as set out in 21 CFR 103.35, 110, and 129. The public water system shall provide the certification to the State the first quarter after it supplies bottled water and annually thereafter.

(3) The public water system is fully responsible for the provision of sufficient quantities of bottled water to every person supplied by the public water system, via door-to-door bottled water delivery.

(g) Public water systems that use point-of-use devices as a condition for obtaining a variance from NPDWRs for volatile organic compounds must meet the following requirements:

(1) It is the responsibility of the public water system to operate and maintain the point-of-use treatment system.

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

(3) Effective technology must be properly applied under a plan approved by the State and the microbiological safety of the water must be maintained.

(4) The State must require adequate certification of performance, field testing, and, if not included in the certification process, a rigorous engineering design review of the point-of-use devices.

(5) 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, post-contractor disinfection, and Heterotrophic Plate Count monitoring to ensure that the microbiological safety of the water is not compromised.

(6) All consumers shall be protected. Every building connected to the system must have a point-of-use device installed, maintained, and adequately monitored. The State must be assured that every building is subject to treatment and monitoring, and that the rights and responsibilities of the public water system customer convey with title upon sale of property.

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been delegated primary enforcement authority, or "primacy," under section 1413 of SDWA. EPA agrees with the commenters that the addition of a new requirement effective on the public water systems, without concurrent State adoption of the new provision, would split direct program responsibility between EPA and the State. Further, where States have public notification requirements currently in effect, the addition of the new federal rules would mean that public water systems would follow two sets of rules.

Some commenters suggested that a deadline of 18 months after promulgation would provide adequate time for States to make the necessary regulatory revisions. One commenter indicated that "clustering" of deadlines for adoption of various drinking water rules would be desirable in order to facilitate the interaction of State drinking water programs and their legislatures. In response to the concerns raised above, EPA has revised the effective date for the new requirements under 40 CFR 141.32 to 18 months after promulgation. (The other new sections retain the 30-day effective date as proposed.) The shift to an 18-month effective date for the new § 141.32 is consistent with the effective date required by statute for NPDWRs (section 1412(b)(10)) and will give States ample opportunity to adopt a program revision before the Federal provisions become effective on the public water systems. The current public notification requirements (which are presently in § 141.32) have been moved to § 141.36, and will remain in effect during the next 18 months.

The effective date for the public notice requirements pertaining to lead under 40 CFR 141.34 remains as proposed as 30 days after promulgation. The Agency believes prompt implementation is necessary in order to meet the June 19, 1988, statutory date for enforcement of the public notification requirements for lead.

IV. Executive Order 12291

Executive Order 12291 requires each Federal agency to determine if a regulation is a "major" rule as defined by the Order and, "to the extent permitted by law," to prepare and consider a Regulatory Impact Analysis (RIA) in connection with every major rule. This action is not a "major" regulatory action as defined by the executive order. Therefore, EPA has not prepared an RIA. This regulation has been reviewed by the Office of Management and Budget (OMB) as required by Executive Order 12291.

V. Paperwork Reduction Act

The information collection requirements contained in this rule have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and have been assigned OMB control number 2040–0090.

VI. Regulatory Flexibility Act

The Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, requires EPA to explicitly consider the effect of regulations on small entities. If there is a substantial effect on a substantial number of small systems, the Agency must seek means to minimize the effects. Such action is not required, however, when the head of an Agency certifies that a proposed rule will not have a significant economic impact on a substantial number of small entities.

In the April 6, 1987 proposed rule, EPA explained its assessment that the economic impact on the small public water systems resulting from implementation of the regulation is expected to be negligible. Based on this assessment, I certified that the proposed rule, if promulgated, would not have a significant impact on a substantial number of small entities. EPA sought comment on this certification and the submission of other additional information related to the potential impact of these proposed rules on small entities.

Based on the comments received and consideration of the changes made in the proposed rule, I certify that this final rule will not have a significant impact on a substantial number of small entities.

List of Subjects in 40 CFR Parts 141, 142, and 143

Administrative practice and procedure, Chemicals, Radiation protection, Intergovernmental relations, Reporting and recordkeeping requirements, Water supply.

Dated: October 13, 1987.

Lee M. Thomas,

Administrator.

For the reasons set forth in the preamble, Title 40, Chapter I of the Code of Federal Regulations is amended as follows:

PART 141—[AMENDED]

1. The authority for Part 141 is revised to read as follows:

Authority: 42 U.S.C. 300g–1, 300g–3, 300g–6, 300j–4, and 300j–9.

2. Part 141 is amended by redesignating § 141.32 as § 141.36 and adding an introductory paragraph to read as follows:

§ 141.36 Public notification.

The requirements in this section apply until April 28, 1989. After April 28, 1989 the requirements of § 141.32 will apply.

* * * * *

3. Part 141 is amended by adding a new § 141.32 to read as follows:

§ 141.32 Public notification.

The requirements in this section are effective April 28, 1989. The requirements of § 141.36 apply until April 28, 1989.

(a) *Maximum contaminant level (MCL), treatment technique, and variance and exemption schedule violations.* The owner or operator of a public water system which fails to comply with an applicable MCL or treatment technique established by this part or which fails to comply with the requirements of any schedule prescribed pursuant to a variance or exemption, shall notify persons served by the system as follows:

(1) Except as provided in paragraph (a)(3) of this section, the owner or operator of a public water system must give notice:

(i) By publication in a daily newspaper of general circulation in the area served by the system as soon as possible, but in no case later than 14 days after the violation or failure. If the area served by a public water system is not served by a daily newspaper of general circulation, notice shall instead be given by publication in a weekly newspaper of general circulation serving the area; and

(ii) By mail delivery (by direct mail or with the water bill), or by hand delivery, not later than 45 days after the violation or failure. The State may waive mail or hand delivery if it determines that the owner or operator of the public water system in violation has corrected the violation or failure within the 45-day period. The State must make the waiver in writing and within the 45-day period; and

(iii) For violations of the MCLs of contaminants that may pose an acute risk to human health, by furnishing a copy of the notice to the radio and television stations serving the area served by the public water system as soon as possible but in no case later than 72 hours after the violation. The following violations are acute violations:

(A) Any violations specified by the State as posing an acute risk to human health.

(B) Violation of the MCL for nitrate as defined in § 141.11(b) and determined according to § 141.23(d).

(C) [Reserved].

(2) Except as provided in paragraph (a)(3) of this section, following the initial notice given under paragraph (a)(1) of this section, the owner or operator of the public water system must give notice at least once every three months by mail delivery (by direct mail or with the water bill) or by hand delivery, for as long as the violation or failure exists.

(3) (i) In lieu of the requirements of paragraph (a)(1)(i) of this section, the owner or operator of a community water system in an area that is not served by a daily or weekly newspaper of general circulation must give notice within 14 days after the violation or failure by hand delivery or by continuous posting in conspicuous places within the area served by the system. 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.

(ii) In lieu of the requirements of paragraphs (a) (1) and (2) of this section, the owner or operator of a non-community water system may give notice within 14 days after the violation or failure by hand delivery or by continuous posting in conspicuous places within the area served by the system. 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.

(b) *Other violations, variances, exemptions.* The owner or operator of a public water system which fails to perform monitoring required by section 1445(a) of the Act (including monitoring required by the National Primary Drinking Water Regulations (NPDWRs) of this part), fails to comply with a testing procedure established by this part, is subject to a variance granted under section 1415(a)(1)(A) or 1415(a)(2) of the Act, or is subject to an exemption under section 1416 of the Act, shall notify persons served by the system as follows:

(1) Except as provided in paragraph (b)(3) or (b)(4) of this section, the owner or operator of a public water system must give notice within three months of the violation or granting of a variance or exemption by publication in a daily newspaper of general circulation in the area served by the system. If the area served by a public water system is not served by a daily newspaper of general circulation, notice shall instead be given by publication in a weekly newspaper of general circulation serving the area.

(2) Except as provided in paragraph (b)(3) or (b)(4) of this section, following the initial notice given under paragraph (b)(1) of this section, the owner or operator of the public water system must give notice at least once every three months by mail delivery (by direct mail or with the water bill) or by hand delivery, for as long as the violation exists. Repeat notice of the existence of a variance or exemption must be given every three months for as long as the variance or exemption remains in effect.

(3) (i) In lieu of the requirements of paragraphs (b)(1) and (b)(2) of this section, the owner or operator of a community water system in an area that is not served by a daily or weekly newspaper of general circulation must give notice, within three months of the violation or granting of the variance or exemption, by hand delivery or by continuous posting in conspicuous places with the area served by the system. Posting must continue for as long as the violation exists or a variance or exemption remains in effects. 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.

(ii) In lieu of the requirements of paragraphs (b)(1) and (b)(2) of this section, the owner or operator of a non-community water system may give notice, within three months of the violation or the granting of the variance or exemption, by hand delivery or by continuous posting in conspicuous places within the area served by the system. 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.

(4) In lieu of the requirements of paragraphs (b)(1), (b)(2), and (b)(3) of this section, the owner or operator of a public water system, at the discretion of the State, may provide less frequent notice for minor monitoring violations as defined by the State, if EPA has approved the State's application for a program revision under § 142.16. Notice of such violations must be given no less frequently than annually.

(c) *Notice to new billing units.* The owner or operator of a community water system must give a copy of the most recent public notice for any outstanding violation of any maximum contaminant level, or any treatment technique requirement, or any variance or exemption schedule to all new billing units or new hookups prior to or at the time service begins.

(d) *General content of public notice.* Each notice required by this section must provide a clear and readily understandable explanation of the violation, any potential adverse health effects, the population at risk, the steps that the public water system is taking to correct such violation, the necessity for seeking alternative water supplies, if any, and any preventive measures the consumer should take until the violation is corrected. Each notice shall be conspicuous and shall not contain unduly technical language, unduly small print, or similar problems that frustrate the purpose of the notice. Each notice shall include the telephone number of the owner, operator, or designee of the public water system as a source of additional information concerning the notice. Where appropriate, the notice shall be multi-lingual.

(e) *Mandatory health effects language.* When providing the information on potential adverse health effects required by paragraph (d) of this section in notices of violations of maximum contaminant levels or treatment technique requirements, or notices of the granting or the continued existence of exemptions or variances, or notices of failure to comply with a variance or exemption schedule, the owner or operator of a public water system shall include the language specified below for each contaminant. (If language for a particular contaminant is not specified below at the time notice is required, this paragraph does not apply.)

(1) *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. 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 this risk and should be considered safe.

(2) *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 of time. EPA has set the enforceable drinking water standard for carbon tetrachloride 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 this risk and should be considered safe.

(3) *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. 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 this risk and should be considered safe.

(4) *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. EPA has set the enforceable drinking water standard for vinyl chloride at 0.002 part 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.

(5) *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. 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.

(6) *1.1–Dichloroethylene.* The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that 1.1–dichloroethylene 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 health effects in humans who are exposed at lower levels over long periods of time. 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.

(7) *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. 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.

(8) *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 also may cause adverse health effects in humans who are exposed at lower levels over long periods of time. 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.

(9) *Fluoride.*

[Note.—EPA is not specifying language that must be included in a public notice for a violation of the fluoride maximum contaminant level in this section because § 143.5 of this part includes the necessary information. See paragraph (f) of this section.]

(f) *Public notices for fluoride.* Notice of violations of the maximum contaminant level for fluoride, notices of variances and exemptions from the maximum contaminant level for fluoride, and notices of failure to comply with variance and exemption schedules for the maximum contaminant level for fluoride shall consist of the public notice prescribed in § 143.5(b), plus a description of any steps which the system is taking to come into compliance.

(g) *Public notification by the State.* The State may give notice to the public required by this section on behalf of the owner or operator of the public water system if the State complies with the requirements of this section. However, the owner or operator of the public water system remains legally responsible for ensuring that the requirements of this section are met.

4. Subpart D is amended by adding a new § 141.34 to read as follows:

§ 141.34 Public notice requirements pertaining to lead.

(a) *Applicability of public notice requirement.* (1) Except as provided in paragraph (a)(2) of this section, by June 19, 1988, the owner or operator of each community water system and each non-transient, non-community water system shall issue notice to persons served by the system that may be affected by lead contamination of their drinking water. The State may require subsequent notices. The owner or operator shall provide notice under this section even if there is no violation of the national primary drinking water regulation for lead.

(2) Notice under paragraph (a)(1) of this section is not required if the system demonstrates to the State that the water system, including the residential and non-residential portions connected to the water system, are lead free. For the purposes of this paragraph, the term "lead free" when used with respect to solders and flux refers to solders and flux containing not more than 0.2 percent lead, and when used with respect to pipes and pipe fittings refers to pipes and pipe fittings containing not more than 8.0 percent lead.

(b) *Manner of notice.* Notice shall be given to persons served by the system either by (1) three newspaper notices (one for each of three consecutive months and the first no later than June 19, 1988); or (2) once by mail notice with the water bill or in a separate mailing by June 19, 1988; or (3) once by hand delivery by June 19, 1988. For non-transient non-community water systems, notice may be given by continuous posting. If posting is used, the notice shall be posted in a conspicuous place in the area served by the system and start no later than June 19, 1988, and continue for three months.

(c) *General content of notice.* (1) Notices issued under this section shall provide a clear and readily understandable explanation of the potential sources of lead in drinking water, potential adverse health effects, reasonably available methods of mitigating known or potential lead content in drinking water, any steps the water system is taking to mitigate lead content in drinking water, and the necessity for seeking alternative water supplies, if any. Use of the mandatory language in paragraph (d) of this section in the notice will be sufficient to explain potential adverse health effects.

(2) Each notice shall also include specific advice on how to determine if materials containing lead have been used in homes or the water distribution system and how to minimize exposure to water likely to contain high levels of lead. Each notice shall be conspicuous and shall not contain unduly technical language, unduly small print, or similar problems that frustrate the purpose of the notice. Each notice shall contain the telephone number of the owner, operator, or designee of the public water system as a source of additional information regarding the notice. Where appropriate, the notice shall be multilingual.

[Note (Optional Information): Each notice should advise persons served by the system to use only the cold water faucet for drinking and for use in cooking or preparing baby formula, and to run the water until it gets as cold as it is going to get before each use. If there has recenlty been major water use in the household, such as showering or bathing, flushing toilets, or doing laundry with cold water, flushing the pipes should take 5 to 30 seconds; if not, flushing the pipes could take as long as several minutes. Each notice should also advise persons served by the system to check to see if lead pipes, solder, or flux have been used in plumbing that provides tap water and to ensure that new plumbing and plumbing repairs use lead-free materials.

The only way to be sure of the amount of lead in the household water is to have the water tested by a competent laboratory. Testing is especially important to apartment dwellers because flushing may not be effective in high-rise buildings that have lead-soldered central piping. As appropriate, the notice should provide information on testing.]

(d) *Mandatory health effects information.* When providing the information in public notices required under paragraph (c) of this section on the potential adverse health effects of lead in drinking water, the owner or operator of the water system shall include the following specific language in the notice:

"The United States Environmental Protection Agency (EPA) sets drinking water standards and has determined that lead is a health concern at certain levels of exposure. There is currently a standard of 0.050 parts per million (ppm). Based on new health information, EPA is likely to lower this standard significantly.

"Part of the purpose of this notice is to inform you of the potential adverse health effects of lead. This is being done even though your water may not be in violation of the current standard.

"EPA and others are concerned about lead in drinking water. Too much lead in the human body can cause serious damage to the brain, kidneys, nervous system, and red blood cells. The greatest risk, even with short-term exposure, is to young children and pregnant women.

"Lead levels in your drinking water are likely to be highest:

- if your home or water system has lead pipes, or
- if your home has copper pipes with lead solder, and

—if the home is less than five years old, or
—if you have soft or acidic water, or
—if water sits in the pipes for several hours."

(e) *Notice by the State.* The State may give notice to the public required by this section on behalf of the owner or operator of the water system if the State meets the requirements of paragraph (b) and the notice contains all the information specified in paragraphs (c) and (d) of this section. However, the owner or operator of the water system remains legally responsible for ensuring that the requirements of this section are met.

(f) *Enforcement by the State.* All States shall enforce the requirements of

this section by June 19, 1988, as required by section 1417(b)(2) of the Act. If the Administrator determines that a State is not enforcing these requirements, the Administrator may withhold up to five percent of the State program grant fund under section 1443(a) of the Act.

PART 142—[AMENDED]

1. The authority citation for Part 142 is revised to read as follows:

Authority: 42 U.S.C. §§ 330g–2, 300g–3, 300g–4., 300g–5, 300g–6, 300j–4, and 300j–9.

2. Section 142.10 is amended by revising paragraph (b)(6)(v) to read as follows:

§ 142.10 Requirements for a determination of primary enforcement responsibility.

* * * * *

(b) * * *

(6) * * *

(v) Authority to require public water systems to give public notice that are no less stringent than the EPA requirements in §§ 142.32 and 142.16(a).

* * * * *

3. Section 142.16 is revised to read as follows:

§ 142.16 Special primacy requirements.

(a) *State public notification requirements.* If a State exercises the option specified in § 142.32(b)(4) to authorize less frequent notice for minor monitoring violations, it must adopt a program revision enforceable under State authorities which promulgates rules specifying either: (1) which monitoring violations are minor and the frequency of public notification for such violations; or (2) by establishing criteria for determining which monitoring violations are minor and the frequency of public notification.

PART 143—[AMENDED]

1. The authority citation for Part 143 continues to read as follows:

Authority: 42 U.S.C. 330g–1(c), 300j–4, and 300j–9.

2. In § 143.5, paragraph (a) and the introductory text of paragraph (b) are revised to read as follows:

§ 143.5 Compliance with secondary maximum contaminant level and public notification for fluoride.

(a) Community water systems, as defined in 40 CFR 141.2(e)(i) of this title, that exceed the secondary maximum contaminant level for fluoride as determined by the last single sample taken in accordance with the requirements of § 141.23 of this title or any equivalent State law, but do not exceed the maximum contaminant level for fluoride as specified by § 141.62 of this title or any equivalent State law, shall provide the notice prescribed in paragraph (b) of all billing units annually, all new billing units at the time service begins, and the State public health officer.

(b) The notice required by paragraph (a) shall contain the following language including the language necessary to replace the superscripts:

* * * * *

[FR Doc. 87–24331 Filed 10–27–87; 8:45 am]

BILLING CODE [redacted]

STATE OF MINNESOTA

COUNTY OF HENNEPIN

BEFORE THE MINNESOTA

DEPARTMENT OF HEALTH

In the Matter of the Proposed Adoption of Rule Amendments of the Department of Health Relating to Public Water Supplies

AFFIDAVIT OF MAILING THE NOTICE OF INTENT TO ADOPT RULE AMENDMENTS WITHOUT A PUBLIC HEARING AND CERTIFICATE OF MAILING LIST

STATE OF MINNESOTA)
) ss.
COUNTY OF HENNEPIN)

Richard Clark, being duly sworn says:

I hereby certify that the list of persons and associations who have requested, pursuant to Minn. Stat. §§ 14.14, subd. la, and 14.22 or 14.30, that their names be placed on the Department of Health's rulemaking mailing list is accurate, complete, and current as of this 17 day of January, 1989.

That on the 17 day of January, 1989, at the City of Minneapolis, County of Hennepin, State of Minnesota, I mailed the attached Notice of Intent to Adopt Rule Amendments Without a Public Hearing by depositing in the State of Minnesota Central Mail System for United States mailing, a copy thereof, with postage prepaid, to all persons and associations on the aforementioned mailing list.

Richard Clark

Subscribed and sworn to before me this

17 day of January, 1989.

Frederick L. King

FREDERICK L. KING
NOTARY PUBLIC
WASHINGTON COUNTY
My commission expires Feb. 22, 1991

STATE OF MINNESOTA

COUNTY OF HENNEPIN

BEFORE THE MINNESOTA

DEPARTMENT OF HEALTH

In the Matter of the Proposed Adoption of Rule Amendments of the Department of Health Relating to Public Water Supplies

NOTICE OF INTENT TO ADOPT RULE AMENDMENTS WITHOUT A PUBLIC HEARING

Notice is hereby given that the Minnesota Department of Health (hereinafter "Department") intends to adopt the above-entitled rule amendments without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rules without a public hearing in Minn. Stat. §§ 14.22 to 14.28 (1988). The statutory authority to adopt the rule amendments is Minn. Stat. § 144.383 (1988).

All persons have 30 days in which to submit comment in support of or in opposition to the proposed rule amendments or any part or subpart of the rule amendments. Comment is encouraged. Each comment should identify the portion of the proposed rule amendments addressed, the reason for the comment, and any change proposed.

Any person may make a written request for a public hearing on the rule amendments within the 30-day comment period. If 25 or more persons submit a written request for a public hearing within the 30-day comment period, a public hearing will be held unless a sufficient number withdraw their request in writing. Any person requesting a public hearing should state his or her name and address and is encouraged to identify the portion of the proposed rule amendments addressed, the reason for the request, and any change proposed. If a public hearing is required, the Department will proceed pursuant to Minn. Stat. §§ 14.131 to 14.20 (1988).

Comments or written requests for a public hearing must be submitted to:

Richard D. Clark
Division of Environmental Health
Minnesota Department of Health
717 Delaware Street Southeast
PO Box 9441
Minneapolis, Minnesota 55440
Telephone: (612) 623-5227

The proposed rule amendments may be modified if the modifications are supported by data and views submitted to the Department and do not result in a substantial change in the proposed rule amendments as noticed.

The rule amendments proposed for adoption would allow Minnesota to remain primacy for enforcement of the requirements contained in federal safe drinking water rules. The federal law requires that a state which assumes primacy must meet certain minimum requirements prescribed in federal rules in order to be eligible to receive federal grant monies to support its administration of the federal program. Since the United States Environmental Protection Agency ("EPA") granted primacy enforcement responsibility to the state in 1977 the EPA has amended the federal rules and Minnesota must now amend its rules similarly if it wishes to retain primacy. The proposed amendment defines a nontransient, noncommunity water supply as a supply that serves at least 25 of the same persons over six months per year. If the state does not require these systems to monitor for volatile organic chemicals ("VOC"s) the federal rules will require it. The proposed rule amendments also adjust the maximum contaminant level ("MCL") for flouride to reflect the MCL in the federal rule. The term "synthetic" is added to "organic chemicals" to describe pesticides now included in the EPA classification. Eight VOCs are listed for which MCLs are being established consistent with federal rules. Changes are made to reflect the analytical

methods for determining flouride concentrations and revised flouride monitoring requirements are included. A new part is added to establish sampling and analytical requirements for VOCs. Special reporting and public notification requirements are set forth for eight VOCs for which MCLs are established. Monitoring requirements are established for up to 51 VOCs for which no MCLs are established. A new part is created to specify conditions under which the use of point-of-entry and point-of-use treatment devices and bottled water are appropriate methods of addressing water system contamination. Changes are also made to reflect revised federal rules pertaining to public notification. A free copy of the rule amendments is available upon request from Richard D. Clark.

A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule amendments and identifies the data and information relied upon to support the proposed rule amendments has been prepared and is available from Richard D. Clark upon request.

The Department is subject to Minn. Stat. § 14.115 (1986) regarding small business considerations in rulemaking. The Department's evaluation of the applicability of the methods contained in Minn. Stat. § 14.115, subd. 2 (1986) for reducing the impact of the proposed rule amendments are addressed in the statement of need and reasonableness.

The total cost to local governments of the sampling that will be required under the proposed rule amendments may exceed $100,000 in either of the first two years immediately following adoption of the rule. The number of samples to be analyzed is dependent upon a number of factors and the Department's estimate of the range of costs is addressed in the statement of need and reasonableness as set forth in Minn. Stat. § 14.11, subd. 1 (1986). However, as also stated in the statement of need and reasonableness even if the proposed state rules were not adopted the local public

water systems would still be obligated to perform the monitoring under federal rules enforceable by the United States Environmental Protection Agency.

There is no impact on agricultural lands within Minn. Stat. §§ 14.11, subd. 2 and 17.80 to 17.84 (1986) from the proposed rule amendments.

If no hearing is required, upon adoption of the rule amendments, the rule amendments and the required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent the form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General or who wish to receive a copy of the adopted rule amendments must submit the written request to Richard D. Clark.

Date: 1/6, 1989

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Office of the Revisor of Statutes

Administrative Rules

TITLE: Proposed Permanent Rules Relating to Public Water Supplies

AGENCY: Department of Health

MINNESOTA RULES: Chapter 4720

INCORPORATIONS BY REFERENCE:

Part 4720.0100, subpart 4b

Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water, September 1986, issued by the Environmental Monitoring and Support Laboratory of the United States Environmental Protection Agency.

The attached rules are approved for publication in the State Register

Kathleen M. Traxler
Assistant Revisor

Department of Health

Proposed Permanent Rules Relating to Public Water Supplies

Rules as Proposed

4720.0100 DEFINITIONS.

Subpart 1. [Unchanged.]

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.

Subp. 2. [Unchanged.]

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

Subp. 3. [Unchanged.]

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.

Subp. 4. [Unchanged.]

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**

Approved by Revisor

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.

Subp. 5. to 9. [Unchanged.]

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.

Subp. 10. to 13. [Unchanged.]

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.

Subp. 14. and 15. [Unchanged.]

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

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connections or 15 living units, or serving at least 25 persons daily for 60 days of the year. ~~Such~~ 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~~;-and~~.

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.

Subp. 17. to 19. [Unchanged.]

Subp. 20. **Supplier.** "Supplier" means any person who owns, manages, or operates a public water supply, whether or not ~~he~~ the supplier is an operator certified ~~pursuant to~~ 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

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and rivers.

Subp. 21. to 25. [Unchanged.]

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:

A. to D. [Unchanged.]

E. fluoride, ~~2.2~~ 4.0;

F. to J. [Unchanged.]

Subp. 2. **Compliance.** Compliance with maximum contaminant levels for inorganic chemicals shall be calculated in accordance with part 4720.1400, subparts 3 to ~~6~~ 7.

Subp. 3. [Unchanged.]

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;

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

Subp. 2. [Unchanged.]

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.

4720.1400 INORGANIC CHEMICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

Subpart 1. and 2. [Unchanged.]

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.

A. to D. [Unchanged.]

E. Fluoride: EPA Chemical, Method 340.1 or 340.2, or 340.3; or Standard Methods, Method ~~414-A~~ 413-A and 413-C, or ~~414-B~~ 413-B, or ~~414-C, or 603~~ 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.

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F. to I. [Unchanged.]

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 ~~he~~ the supplier receives the results and ~~he~~ 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.

Subp. 5. [Unchanged.]

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 ~~his~~ 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

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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/l to 10.0 mg/l, 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.

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4720.1500 SYNTHETIC ORGANIC CHEMICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

Subpart 1. to 4. [Unchanged.]

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 3,000 to 10,000 people shall analyze all distribution or entry-point samples, as required in this subpart, representing source waters

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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 may be required to 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

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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 at the discretion of the commissioner.

(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):

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(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.

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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

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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

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(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;

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(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

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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

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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.

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

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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

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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

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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.

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

Subpart 1. to 6. [See Repealer.]

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

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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

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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 conspicuous

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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

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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 multi-lingual.

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

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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

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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-dichloroethylene is a health concern at certain levels of exposure. This chemical is

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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

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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/l in drinking water. This is an enforceable standard called a Maximum Contaminant Level (MCL), and it has been

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established to protect the public health. Exposure to drinking water levels above 4.0 mg/l 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.

REPEALER. Minnesota Rules, part 4720.3900, subparts 1, 2, 3, 4, 5, and 6 are repealed.

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Human Services Department

9500.1090; .1095; .1100; .1130 (adopted) 1689
9500.1100 s.21a (repealed) 1689
9500.1206; .1232; .1257; .1262; .1266 (adopted) ... 1688 and 1735
9505.0500; .0510; .0520; .0521; .0522; .0530; .0540 (adopted) 1688
9505.5000; .5005; .5010; .5015; .5035; .5040; .5050; .5055; .5060; .5065; .5070; .5075; .5080; .5090; .5096; .5100; .5105 (adopted) 1688
9505.5095 (repealed) 1688
9575.1500 (adopted) 1688

Proposed Rules

Pursuant to Minn. Stat. §§ 14.22, an agency may propose to adopt, amend, suspend or repeal rules without first holding a public hearing, as long as the agency determines that the rules will be noncontroversial in nature. The agency must first publish a notice of intent to adopt rules without a public hearing, together with the proposed rules, in the *State Register.* The notice must advise the public:

1. **that they have 30 days in which to submit comment on the proposed rules;**
2. **that no public hearing will be held unless 25 or more persons make a written request for a hearing within the 30-day comment period;**
3. **of the manner in which persons shall request a hearing on the proposed rules; and**
4. **that the rule may be modified if the modifications are supported by the data and views submitted.**

If, during the 30-day comment period, 25 or more persons submit to the agency a written request for a hearing of the proposed rules, the agency must proceed under the provisions of §§ 14.14-14.20, which state that if an agency decides to hold a public hearing, it must publish a notice of intent in the *State Register*.

Pursuant to Minn. Stat. §§ 14.29 and 14.30, agencies may propose emergency rules under certain circumstances. Proposed emergency rules are published in the *State Register* and, for at least 25 days thereafter, interested persons may submit data and views in writing to the proposing agency.

Department of Education

Management Effectiveness Division

Notice of Withdrawal of Proposed Rules

NOTICE IS HEREBY GIVEN that the Proposed Rules Relating to School Buses, and Notice of Intent to Adopt Proposed Rules without a Public Hearing published at 11 *State Register* 2374-2402, June 29, 1987 are hereby withdrawn.

Ruth E. Randall
Secretary, State Board of Education

Department of Health

Proposed Permanent Rules Relating to Public Water Supplies

Notice of Intent to Adopt Rule Amendments Without a Public Hearing

NOTICE IS HEREBY GIVEN that the Minnesota Department of Health (hereinafter "Department") intends to adopt the above-entitled rule amendments without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rules without a public hearing in *Minnesota Statutes* §§ 14.22 to 14.28 (1988). The statutory authority to adopt the rule amendments is *Minnesota Statutes* § 144.383 (1988).

All persons have 30 days in which to submit comment in support of or in opposition to the proposed rule amendments or any part or subpart of the rule amendments. Comment is encouraged. Each comment should identify the portion of the proposed rule amendments addressed, the reason for the comment, and any change proposed.

Any person may make a written request for a public hearing on the rule amendments within the 30-day comment period. If 25 or more persons submit a written request for a public hearing within the 30-day comment period, a public hearing will be held unless

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

a sufficient number withdraw their request in writing. Any person requesting a public hearing should state his or her name and address and is encouraged to identify the portion of the proposed rule amendments addressed, the reason for the request, and any change proposed. If a public hearing is required, the Department will proceed pursuant to *Minnesota Statutes* §§ 14.131 to 14.20 (1988).

Comments or written requests for a public hearing must be submitted to:

Richard D. Clark
Division of Environmental Health
Minnesota Department of Health
717 Delaware Street Southeast
PO Box 9441
Minneapolis, Minnesota 55440
Telephone: (612) 623-5227

The proposed rule amendments may be modified if the modifications are supported by data and views submitted to the Department and do not result in a substantial change in the proposed rule amendments as noticed.

The rule amendments proposed for adoption would allow Minnesota to retain primacy for enforcement of the requirements contained in federal safe drinking water rules. The federal law requires that a state which assumes primacy must meet certain minimum requirements prescribed in federal rules in order to be eligible to receive federal grant monies to support its administration of the federal program. Since the United States Environmental Protection Agency ("EPA") granted primacy enforcement responsibility to the state in 1977 the EPA has amended the federal rules and Minnesota must now amend its rules similarly if it wishes to retain primacy. The proposed amendment defines a nontransient, noncommunity water supply as a supply that serves at least 25 of the same persons over six months per year. If the state does not require these systems to monitor for volatile organic chemicals ("VOC"s) the federal rules will require it. The proposed rule amendments also adjust the maximum contaminant level ("MCL") for fluoride to reflect the MCL in the federal rule. The term "synthetic" is added to "organic chemicals" to describe pesticides now included in the EPC classification. Eight VOCs are listed for which MCLs are being established consistent with federal rules. Changes are made to reflect the analytical methods for determining fluoride concentrations and revised fluoride monitoring requirements are included. A new part is added to establish sampling and analytical requirements for VOCs. Special reporting and public notification requirements are set forth for eight VOCs for which MCLs are established. Monitoring requirements are established for up to 51 VOCs for which no MCLs are estalished. A new part is created to specify conditions under which the use of point-of-entry and point-of-use treatment devices and bottled water are appropriate methods of addressing water system contamination. Changes are also made to reflect revised federal rules pertaining to public notification. A free copy of the rule amendments is available upon request from Richard D. Clark.

A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule amendments and identifies the data and information relied upon to support the proposed rule amendments has been prepared and is available from Richard D. Clark upon request.

The Department is subject to *Minnesota Statutes* § 14.115 (1986) regarding small business considerations in rulemaking. The Department's evaluation of the applicability of the methods contained in *Minnesota Statutes* § 14.115, subd. 2 (1986) for reducing the impact of the proposed rule amendments are addressed in the statement of need and reasonableness.

The total cost to local governments of the sampling that will be required under the proposed rule amendments may exceed $100,000 in either of the first two years immediately following adoption of the rule. The number of samples to be analyzed is dependent upon a number of factors and the Department's estimate of the range of costs is addressed in the statement of need and reasonableness as set forth in *Minnesota Statutes* § 14.11, subd. 1 (1986). However, as also stated in the statement of need and reasonableness even if the proposed state rules were not adopted the local public water systems would still be obligated to perform the monitoring under federal rules enforceable by the United States Environmental Protection Agency.

There is no impact on agricultural lands within *Minnesota Statutes* §§ 14.11, subd. 2 and 17.80 to 17.84 (1986) from the proposed rule amendments.

If no hearing is required, upon adoption of the rule amendments, the rule amendments and the required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent the form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General or who wish to receive a copy of the adopted rule amendments must submit the written request to Richard D. Clark.

Dated: 6 January 1989

Sister Mary Madonna Ashton
Commissioner of Health

Rules as Proposed

4720.0100 DEFINITIONS.

Subpart 1. [Unchanged.]

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.

Subp. 2. [Unchanged.]

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

Subp. 3. [Unchanged.]

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.

Subp. 4. [Unchanged.]

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.

Subp. 5. to 9. [Unchanged.]

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.

Subp. 10. to 13. [Unchanged.]

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.

Subp. 14. and 15. [Unchanged.]

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. ~~Such~~ 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~~; and~~.

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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.

Subp. 17. to 19. [Unchanged.]

Subp. 20. **Supplier.** "Supplier" means any person who owns, manages, or operates a public water supply, whether or not ~~he~~ the supplier is an operator certified ~~pursuant to~~ 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.

Subp. 21. to 25. [Unchanged.]

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:

A. to D. [Unchanged.]

E. fluoride, ~~2.2~~ 4.0;

F. to J. [Unchanged.]

Subp. 2. **Compliance.** Compliance with maximum contaminant levels for inorganic chemicals shall be calculated in accordance with part 4720.1400, subparts 3 to ~~6~~ 7.

Subp. 3. [Unchanged.]

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.

Subp. 2. [Unchanged.]

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.

4720.1400 INORGANIC CHEMICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

Subpart 1. and 2. [Unchanged.]

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.

A. to D. [Unchanged.]

E. Fluoride: EPA Chemical, Method 340.1 or 340.2, or 340.3; or Standard Methods, Method ~~414-A~~ 413-A and 413-C, or ~~414-B~~ 413-B, or ~~414-C, or 603~~ 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.

F. to I. [Unchanged.]

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 ~~he~~ the supplier receives the results and ~~he~~ 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.

Subp. 5. [Unchanged.]

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 ~~his~~ 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

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(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/l to 10.0 mg/l, 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.

4720.1500 SYNTHETIC ORGANIC CHEMICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS.

Subpart 1. to 4. [Unchanged.]

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 3,000 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 may be required to 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 at the discretion of the commissioner.

(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.

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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.

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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.

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.

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

Subpart 1. to 6. [See Repealer.]

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;

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(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 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 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 multi-lingual.

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

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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-dichloroethylene 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/1).

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.

REPEALER. Minnesota Rules, part 4720.3900, subparts 1, 2, 3, 4, 5, and 6 are repealed.

Adopted Rules

The adoption of a rule becomes effective after the requirements of Minn. Stat. § 14.14-14.28 have been met and five working days after the rule is published in *State Register*, unless a later date is required by statutes or specified in the rule.

If an adopted rule is identical to its proposed form as previously published, a notice of adoption and a citation to its previous *State Register* publication will be printed.

If an adopted rule differs from its proposed form, language which has been deleted will be printed with strikeouts and new language will be underlined. The rule's previous *State Register* publication will be cited.

An emergency rule becomes effective five working days after the approval of the Attorney General as specified in Minn. Stat. § 14.33 and upon the approval of the Revisor of Statutes as specified in § 14.36. Notice of approval by the Attorney General will be published as soon as practicable, and the adopted emergency rule will be published in the manner provided for adopted rules under § 14.18.

Pollution Control Agency

Adopted Permanent Rules Relating to Hazardous Waste and Generator Fees

Rules as Adopted

The rules proposed and published at *State Register*, Volume 13, Number 15, pages 925-930, October 10, 1988 (13 S.R. 925) are adopted with the following modifications:

7046.0031 NONMETROPOLITAN AREA GENERATOR FEES.

Subp. 3. **Retroactive fee collection.** Retroactive fees must be paid by the generator for each year in which hazardous waste was generated but not disclosed, for each waste stream for a maximum retroactive period of two calendar years prior to the most current calendar year subject to fees. The retroactive fee is calculated by multiplying the statewide program fee and the current annual fee or flat annual fee, whichever applies, times the number of years, up to a maximum of two years, the generator had generated the waste. If a newly disclosed waste stream subjects a generator to a retroactive fee, the retroactive fee must be assessed as described above on the appropriate volume fee ~~and base fee~~ associated with the newly disclosed waste stream. If the newly disclosed waste stream subjects the generator to a higher base fee in the most recent calendar year, then the retroactive fee must be assessed as described above on the difference between the higher base fee and the lower base fee. Retroactive fees for waste produced for less than two years prior to the most current calendar year shall be calculated according to the closest number of years of production.

Subp. 4. **Annual fees**. An annual fee is the sum of the waste generation volume fees and the base fee. Nonmetropolitan area generators shall submit annual fees as follows:

A. A waste generation volume fee must be paid by all nonmetropolitan generators based on the amount of unsewered hazardous waste generated and method of waste management or disposal used in the calendar year. The ~~base~~ volume fee is assessed on a per gallon basis for liquid waste streams or a per pound basis for nonliquid waste streams. The ~~base~~ volume fee is $0.09 per gallon and $0.009 per pound for each gallon and pound produced under 2,640 gallons or 26,400 pounds. The ~~base~~ volume fee for each gallon and pound equal to or exceeding 2,640 gallons or 26,400 pounds is $0.04 per gallon ad $0.004 per pound. The ~~base~~ volume fee shall be multiplied by the following factors for waste streams managed by the following methods:

Management Method	Factor
Recyle, feedstock, or by-product on-site	0
Recyle, feedstock, or by-product off-site	0.67

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STATE OF MINNESOTA

COUNTY OF HENNEPIN

BEFORE THE MINNESOTA

DEPARTMENT OF HEALTH

In the Matter of the
Proposed Adoption of
Rule Amendments of the
Department of Health
Relating to Public Water
Supplies

FINDINGS OF FACT,
CONCLUSIONS AND ORDER
ADOPTING RULE AMENDMENTS
WITHOUT A PUBLIC HEARING

Notice of the intent of the Department of Health (hereinafter "Department") to adopt the above-captioned rule amendments was published in the State Register on January 23, 1989, and was sent by United States mail to all persons on the list maintained by the Department pursuant to Minn. Stat. §§ 14.14, subd. 1a and 14.22 on January 17, 1989. The statement of need and reasonableness was prepared before the notice of intent to adopt rule amendments without a public hearing was mailed to all persons on the Department's rulemaking mailing list and published in the State Register and was available to the public.

All persons were given the opportunity to submit comment and requests for hearing on the rule amendments for 30 days after notice of proposed rulemaking. The Department received no requests for a public hearing, no submissions or comments on the amendments, and no requests for notice of submission to the Attorney General.

Based on the evidence in the record before the Department, including the statement of need and reasonableness which is incorporated herein as the Department's findings, the Department concludes that the above-captioned rule amendments are both needed and reasonable.

NOW, THEREFORE, IT IS HEREBY ORDERED that the rule amendments identified as Permanent Rules Relating to Public Water Supplies are adopted this tenth day of April, 1989, pursuant to authority vested in the Department by Minn. Stat. § 144.383.

Sr. Mary Madonna Ashton

SISTER MARY MADONNA ASHTON
Commissioner of Health

STATE OF MINNESOTA

COUNTY OF HENNEPIN

BEFORE THE MINNESOTA

DEPARTMENT OF HEALTH

In the Matter of the Proposed Adoption of Rule Amendments of the Department of Health Relating to Public Water Supplies

SUPPLEMENTAL FINDINGS OF FACT, CONCLUSIONS AND ORDER ADOPTING RULE AMENDMENTS WITHOUT A PUBLIC HEARING

Upon review by the Attorney General of the rule amendments identified as Permanent Rules Relating to Public Water Supplies adopted by Order of the Commissioner of Public Health dated April 10, 1989, (the "rules as adopted") the Attorney General has determined that the rules as adopted must be amended in two respects to remove excess discretion.

Said amendments may be made without making substantial changes from the rule as adopted and without raising significant new legal issues.

Accordingly:

Page 9, lines 24 through 26 of the rules as adopted are amended as follows:

Surface water suppliers ~~may be required to~~ must analyze for vinyl chloride, when the commissioner determines the supply may be vulnerable to vinyl chloride contamination.

(Minn. Rule 4720.1510, subp. 1.F)

Page 10, lines 25 through 31 of the rules as adopted are amended as follows:

(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 discretion of~~ the commissioner determines that monitoring is necessary to protect public health.

(Minn. Rule 4720.1510, subp. 1.H.(2)(a).)

Dated: April 26, 1989

Sr. Mary Madonna Ashton

SISTER MARY MADONNA ASHTON
Commissioner of Health

STATE OF MINNESOTA

COUNTY OF HENNEPIN

BEFORE THE MINNESOTA

DEPARTMENT OF HEALTH

In the Matter of the Proposed Adoption of Rule Amendments of the Department of Health Relating to Public Water Supplies

SUPPLEMENTAL FINDINGS OF FACT, CONCLUSIONS AND ORDER ADOPTING RULE AMENDMENTS WITHOUT A PUBLIC HEARING

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Dated: April 26, 1989

Sr. Mary Madonna Ashton

SISTER MARY MADONNA ASHTON
Commissioner of Health

STATE OF MINNESOTA

COUNTY OF HENNEPIN

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DEPARTMENT OF HEALTH

In the Matter of the
Proposed Adoption of
Rule Amendments of the
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Relating to Public Water
Supplies

DECLARATION OF COUNSEL

I, Catherine E. Avina, Special Assistant Attorney General, do hereby declare that I have examined the above-captioned rule amendments and the supporting rulemaking record and that, based on my examination, the Administrative Procedure Act and Minn. Rules ch. 2010 have been followed. Any exceptions are listed below. For Attorney General billing purposes, the four-digit docket client code is 1210.

Dated: April 11, 1989

Catherine E. Avina

CATHERINE E. AVINA
Special Assistant
Attorney General

SF-00006-05 (4/86)

STATE OF MINNESOTA

Office Memorandum

DEPARTMENT : ATTORNEY GENERAL - Health

DATE : April 11, 1989

Rec'd 4/12/89 JK

TO : Christie Eller
Assistant Attorney General

FROM : Catherine E. Avina
Special Assistant
Attorney General

PHONE : 341-7272

SUBJECT : In the Matter of the Proposed Adoption of Rule Amendments of the Department of Health Relating to Public Water Supplies

Enclosed for your review, pursuant to Minn. Stat. § 14.26 (1988) and Minn. Rules pt. 2010.0300 (1987), are the following documents to support the above-referenced rule [amendment]:

1. Notice of Solicitation of Outside Information;

2. Rule as proposed with a certificate of approval as to form by the Revisor of Statutes attached;

3. Notice of Intent to Adopt Rule Amendments Without a Public Hearing (as mailed);

4. Statement of Need and Reasonableness;

5. Affidavit of Mailing the Notice of Intent to Adopt Rule Amendments Without a Public Hearing;

6. Notice of Intent to Adopt Rule Amendments Without a Public Hearing (as published in the State Register);

7. Rule as adopted (original and three copies);

8. Findings of Fact, Conclusions, and Order Adopting Rule Amendments Without a Public Hearing;

9. Declaration of Counsel.

CEA:dsc

Enclosures