ILLINOIS POLLUTION CONTROL BOARD
October 5, 2000

IN THE MATTER OF:	)	
	)	
SDWA UPDATE, USEPA AMENDMENTS	)	R01-7
(January 1, 2000, through June 30, 2000)	)	(Identical-in-Substance Rulemaking -
	)	Public Water Supplies)

Proposed Rule. Proposal for Public Comment.

ORDER OF THE BOARD (by R.C. Flemal):

Under Sections 7.2 and 17.5 of the Environmental Protection Act (Act) (415 ILCS 5/7.2 and 17.5 (1998)), the Board proposes amendments to the Illinois regulations that are "identical in substance" to drinking water regulations that the United States Environmental Protection Agency (USEPA) adopted to implement Sections 1412(b), 1414(c), 1417(a), and 1445(a) of the federal Safe Drinking Water Act (SDWA) (42 U.S.C. §§ 300g-1(a), 300g-3(c), 300g-6(a), and 300j-4(a) (1998)). The nominal timeframe of this docket includes federal SDWA amendments that USEPA adopted in the period January 1, 2000, through June 30, 2000.

Sections 7.2 and 17.5 provide for quick adoption of regulations that are identical in substance to federal regulations that USEPA adopts to implement Sections 1412(b), 1414(c), 1417(a), and 1445(a) of the federal Safe Drinking Water Act (SDWA) (42 U.S.C. §§ 300g-1(a), 300g-3(c), 300g-6(a), and 300j-4(a) (1998)). Section 17.5 also provides that Title VII of the Act and Section 5 of the Administrative Procedure Act (APA) (5 ILCS 100/5-35 and 5-40 (1998)) do not apply to the Board's adoption of identical-in-substance regulations. The federal SDWA regulations are found at 40 C.F.R. 141 through 143.

This proposed order is supported by a proposed opinion that the Board also adopts today. The Board will cause the proposed amendments to be published in the *Illinois Register* and will receive public comments for 45 days after the date of publication.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, do hereby certify that the above order was adopted on the 5th day of October 2000 by a vote of 7-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE F: PUBLIC WATER SUPPLIES
CHAPTER I: POLLUTION CONTROL BOARD

PART 611
PRIMARY DRINKING WATER STANDARDS

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AUTHORITY: Implementing Sections 7.2, 17, and 17.5 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/7.2, 17, 17.5, and 27].

SOURCE: Adopted in R88-26 at 14 Ill. Reg. 16517, effective September 20, 1990; amended in R90-21 at 14 Ill. Reg. 20448, effective December 11, 1990; amended in R90-13 at 15 Ill. Reg. 1562, effective January 22, 1991; amended in R91-3 at 16 Ill. Reg. 19010, effective December 1, 1992; amended in R92-3 at 17 Ill. Reg. 7796, effective May 18, 1993; amended in R93-1 at 17 Ill. Reg. 12650, effective July 23, 1993; amended in R94-4 at 18 Ill. Reg. 12291, effective July 28, 1994; amended in R94-23 at 19 Ill. Reg. 8613, effective June 20, 1995; amended in R95-17 at 20 Ill. Reg. 14493, effective October 22, 1996; amended in R98-2 at 22 Ill. Reg. 5020, effective March 5, 1998; amended in R99-6 at 23 Ill. Reg. 2756, effective February 17, 1999; amended in R99-12 at 23 Ill. Reg. 10348, effective August 11, 1999; amended in R00-8 at 23 Ill. Reg. 14715, effective December 8, 1999; amended in R00-10 at 24 Ill. Reg. 14226 effective September 11, 2000; amended in R01-7 at 25 Ill. Reg. ________ effective ______________________.

SUBPART A: GENERAL

Section 611.126 Prohibition on Use of Lead

a) In general. Prohibition. Any pipe, any pipe or plumbing fitting or fixture, solder or flux, ~~shall~~ must be lead free, as defined by subsection (b) of this Section, if it is used after June 19, 1986 in the installation or repair of:

1) Any PWS, or

2) Any plumbing in a residential or nonresidential facility providing water for human consumption that is connected to a PWS. This subsection (a) does not apply to leaded joints necessary for the repair of cast iron pipes.

b) Definition of lead free. For purposes of this Section, the term "lead free":

1) When used with respect to solders and flux, refers to solders and flux containing not more than 0.2 percent lead;

2) When used with respect to pipes and pipe fittings, refers to pipes and pipe fittings containing not more than 8.0 percent lead; and

3) When used with respect to plumbing fittings and fixtures that are intended by the manufacturer to dispense water for human ingestion, refers to plumbing fittings and fixtures in compliance with NSF Standard 61, section 9, incorporated by reference in Section 611.102.

BOARD NOTE: Derived from 40 CFR 141.43(a) and (d) ~~(1998)~~ (1999), as amended at 65 Fed. Reg. 2003 (Jan. 12, 2000), and 42 USC 300g-6(a)(1) (1998). USEPA has stated that NSF Standard 61 is the standard for plumbing fittings and fixtures developed pursuant to 42 USC 300g-6(e). See 62 Fed. Reg. 44684 (Aug. 22, 1997).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.131 Relief Equivalent to SDWA Section 1415(e) Small System Variance

This Section is intended as a State equivalent of Section 1415(e) of the federal SDWA (42 USC 300g-1).

a) Variances may be obtained from the requirement to comply with an MCL or treatment technique to a PWS serving fewer than 10,000 persons in this Section. The PWS ~~shall~~ must file a variance petition pursuant to 35 Ill. Adm. Code 104, except as modified or supplemented by this Section.

b) The Board will grant a small system variance to a PWS serving fewer than 3,300 persons. The Board will grant a small system variance to a PWS serving more than 3,300 persons but fewer than 10,000 persons with the approval of the USEPA. In determining the number of persons served by the PWS, the Board will include persons served by consecutive systems. A small system variance granted to a PWS also applies to any consecutive system served by it.

c) Availability of a variance.

1) A small system variance is not available under this Section for an NPDWR for a microbial contaminant (including a bacterium, virus, or other organism) or an indicator or treatment technique for a microbial contaminant.

2) A small system variance under this Section is available for compliance with a requirement specifying an MCL or treatment technique for a contaminant with respect to which the following is true:

A) An NPDWR was promulgated on or after January 1, 1986; and

B) The USEPA has published a small system variance technology pursuant to Section 1412(b)(15) of the federal SDWA (42 USC 300g-1(b)(15)).

BOARD NOTE: Small system variances are not available for PWSs above the pre - 1986

MCL even if subsequently revised. If the USEPA revises a pre - 1986 MCL and makes it more stringent, then a variance would be available for that contaminant, but only up to the ~~pre - 1986~~ pre-1986 maximum contaminant level.

d) No small system variance will be in effect until the later of the following:

1) 90 days after the Board proposes to grant the small system variance;

2) If the Board is proposing to grant a small system variance to a PWS serving fewer than 3,300 persons and the USEPA objects to the small system variance, the date on which the Board makes the recommended modifications or responds in writing to each objection; or

3) If the Board is proposing to grant a small system variance to a PWS serving a population of more than 3,300 and fewer than 10,000 persons, the date the USEPA approves the small system variance.

e) As part of the showing of arbitrary or unreasonable hardship, the PWS ~~shall~~ must prove and document the following to the Board:

1) ~~The~~ That the PWS is eligible for a small system variance pursuant to subsection (c) of this Section;

2) ~~The~~ That the PWS cannot afford to comply with the NPDWR for which a small system variance is sought, including by the following:

A) Treatment;

B) Alternative sources of water supply;

C) Restructuring or consolidation changes, including ownership change or physical consolidation with another PWS; or

D) Obtaining financial assistance pursuant to Section 1452 of the federal SDWA or any other federal or State program;

3) ~~The~~ That the PWS meets the source water quality requirements for installing the small system variance technology developed pursuant to guidance published under Section 1412(b)(15) of the federal SDWA (42 USC 300g-1(b)(15));

4) ~~The~~ That the PWS is financially and technically capable of installing, operating, and maintaining the applicable small system variance technology; and

5) ~~The~~ That the terms and conditions of the small system variance ensure adequate protection of human health, considering the following:

A) The quality of the source water for the PWS; and

B) Removal efficiencies and expected useful life of the small system variance technology.

f) Terms and Conditions.

1) The Board will set the terms and conditions of a small system variance issued under this Section and will include, at a minimum, the following requirements:

A) Proper and effective installation, operation, and maintenance of the applicable small system variance technology in accordance with guidance published by the USEPA, taking into consideration any relevant source water characteristics and any other site-specific conditions that may affect proper and effective operation and maintenance of the technology;

B) Monitoring requirements, for the contaminant for which a small system variance is sought; and

C) Any other terms or conditions that are necessary to ensure adequate protection of public health, which may include:

i) Public education requirements; and

ii) Source water protection requirements.

2) The Board will establish a schedule for the PWS to comply with the terms and conditions of the small system variance that will include, at a minimum, the following requirements:

A) Increments of progress, such as milestone dates for the PWS to apply for financial assistance and begin capital improvements;

B) Quarterly reporting to the Agency of the PWSs compliance with the terms and conditions of the small system variance;

C) Schedule for the Board to review the small system variance; and

BOARD NOTE: Corresponding 40 CFR 142.307(d) (1999) provides that the states must review variances no less frequently than every five years. Section 36 of the Act provides that 5 years is the maximum terms of a variance.

D) Compliance with the terms and conditions of the small system variance as soon as practicable, but not later than three years after the date on which the small system variance is granted. The Board may allow up to two additional years if the Board determines that additional time is necessary for the PWS to:

i) Complete necessary capital improvements to comply with the small system variance technology, secure an alternative source of water, or restructure or consolidate; or

ii) Obtain financial assistance provided pursuant to Section 1452 of the SDWA or any other federal or State program.

g) The Board will provide notice and opportunity for a public hearing as provided in 35 Ill. Adm. Code 104, except as modified or supplemented by this Section.

1) At least 30 days before the public hearing to discuss the proposed small system variance, the PWS ~~shall~~ must provide notice to all persons served by the PWS. For billed customers, this notice must include the information listed in subsection (g)(2) of this Section. For other persons regularly served by the PWS, notice must provide sufficient information to alert readers to the proposed variance and direct them to where to receive additional information, and must be as provided in subsection (g)(1)(B) of this Section. Notice must be by the following means:

A) Direct mail or other home delivery to billed customers or other service connections, and

B) Any other method reasonably calculated to notify, in a brief and concise manner, other persons regularly served by the PWS. Such methods may include publication in a local newspaper, posting in public places or delivery to community organizations.

2) The notice in subsection (g)(1)(A) of this Section must include, at a minimum, the following:

A) Identification of the contaminant(s) for which a small system variance is sought;

B) A brief statement of the health effects associated with the contaminant(s) for which a small system variance is sought using language in Appendix ~~H~~I of this Part;

C) The address and telephone number at which interested persons may obtain further information concerning the contaminant and the small system variance;

D) A brief summary, in easily understandable terms, of the terms and conditions of the small system variance;

E) A description of the consumer petition process under subsection (h) of this Section and information on contacting the USEPA Regional Office;

F) A brief statement announcing the public meeting required under subsection (g)(3) of this Section, including a statement of the purpose of the meeting, information regarding the time and location for the meeting, and the address and telephone number at which interested persons may obtain further information concerning the meeting; and

G) In communities with a large proportion of non-English-speaking residents, as determined by the Board, information in the appropriate language regarding the content and importance of the notice.

3) The Board will provide for at least one public hearing on the small system variance. The PWS ~~shall~~ must provide notice in the manner required under subsection (g)(1) of this Section at least 30 days prior to the public hearing.

4) Prior to promulgating the final variance, the Board will respond in writing to all significant public comments received relating to the small system variance. Response to public comment and any other documentation supporting the issuance of a variance will be made available to the public after final promulgation.

h) Any person served by the PWS may petition the USEPA to object to the granting of a small system variance within 30 days after the Board proposes to grant a small system variance for the PWS.

i) The Agency ~~shall~~ must promptly send the USEPA the Opinion and Order of the Board granting the proposed small system variance. The Board will make the recommended modifications, respond in writing to each objection, or withdraw the proposal to grant the small system variance if USEPA notifies the Board of a finding pursuant to Section 1415 of the SDWA (42 USC 300g-4).

j) In addition to the requirements of this Section, the provisions of Section 611.111, 611.112, or 611.130 may apply to relief granted pursuant to this Section.

BOARD NOTE: Derived from 40 CFR 142, Subpart K ~~(1998)~~ (1999).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

SUBPART B: FILTRATION AND DISINFECTION

Section 611.261 Unfiltered PWSs: Reporting and Recordkeeping

A supplier that uses a surface water source and does not provide filtration treatment ~~shall~~ must report monthly to the Agency the information specified in this Section beginning December 31, 1990, unless the Agency has determined that filtration is required, in which case the Agency ~~shall~~ must, by special exception permit, specify alternative reporting requirements, as appropriate, until filtration is in place. A supplier that uses a groundwater source under the direct influence of surface water and does not provide filtration treatment ~~shall~~ must report monthly to the Agency the information specified in this Section beginning December 31, 1990, or ~~6~~ six months after the Agency determines that the groundwater source is under the direct influence of surface water, whichever is later, unless the Agency has determined that filtration is required, in which case the Agency ~~shall~~ must, by special exception permit, specify alternative reporting requirements, as appropriate, until filtration is in place.

a) Source water quality information must be reported to the Agency within ~~10~~ ten days after the end of each month the system serves water to the public. Information that must be reported includes:

1) The cumulative number of months for which results are reported.

2) The number of fecal or total coliform samples, whichever are analyzed during the month (if a system monitors for both, only fecal coliforms must be reported), the dates of sample collection, and the dates when the turbidity level exceeded 1 NTU.

3) The number of samples during the month that had equal to or ~~less~~ fewer than 20/100 ml fecal coliforms or equal to or ~~less~~ fewer than 100/100 ml total coliforms, whichever are analyzed.

4) The cumulative number of fecal or total coliform samples, whichever are analyzed, during the previous six months the system served water to the public.

5) The cumulative number of samples that had equal to or ~~less~~ fewer than 20/100 ml fecal coliforms or equal to or less than 100/100 ml total coliforms, whichever are analyzed, during the previous six months the system served water to the public.

6) The percentage of samples that had equal to or ~~less~~ fewer than 20/100 ml fecal coliforms or equal to or ~~less~~ fewer than 100/100 ml total coliforms, whichever are analyzed, during the previous six months the system served water to the public.

7) The maximum turbidity level measured during the month, the ~~date(s)~~ dates of occurrence for any ~~measurement(s)~~ measurements which exceeded 5 NTU and the ~~date(s)~~ dates the ~~occurrence(s)~~ occurrences was reported to the Agency.

8) For the first 12 months of recordkeeping, the dates and cumulative number of events during which the turbidity exceeded 5 NTU, and after one year of recordkeeping for turbidity measurements, the dates and cumulative number of events during which the

turbidity exceeded 5 NTU in the previous 12 months the system served water to the public.

9) For the first 120 months of recordkeeping, the dates and cumulative number of events during which the turbidity exceeded 5 NTU, and after ~~10~~ ten years of recordkeeping for turbidity measurements, the dates and cumulative number of events during which the turbidity exceeded 5 NTU in the previous 120 months the system served water to the public.

b) Disinfection information specified in Section 611.532 must be reported to the Agency within ~~10~~ ten days after the end of each month the system serves water to the public. Information that must be reported includes:

1) For each day, the lowest measurement of RDC in mg/L in water entering the distribution system.

2) The date and duration of each period when the RDC in water entering the distribution system fell below 0.2 mg/L and when the Agency was notified of the occurrence.

3) The daily ~~RDC(s)~~ RDCs (in mg/L) and disinfectant contact ~~time(s)~~ times (in minutes) used for calculating the CT ~~value(s)~~ values.

4) If chlorine is used, the daily ~~measurement(s)~~ measurements of pH of disinfected water following each point of chlorine disinfection.

5) The daily ~~measurement(s)~~ measurements of water temperature in degrees C following each point of disinfection.

6) The daily CTcalc and Ai values for each disinfectant measurement or sequence and the sum of all Ai values (B) before or at the first customer.

7) The daily determination of whether disinfection achieves adequate Giardia cyst and virus inactivation, i.e., whether Ai is at least 1.0 or, where disinfectants other than chlorine are used, other indicator conditions that the Agency, pursuant to Section 611.241(a)(1), determines are appropriate, are met.

8) The following information on the samples taken in the distribution system in conjunction with total coliform monitoring pursuant to Section 611.240 et seq.:

A) Number of instances where the RDC is measured;

B) Number of instances where the RDC is not measured but HPC is measured;

C) Number of instances where the RDC is measured but not detected and no HPC is measured;

D) Number of instances where no RDC is detected and where HPC is greater than 500/ml;

E) Number of instances where the RDC is not measured and HPC is greater than 500/ml;

F) For the current and previous month the system served water to the public, the value of “V” in the following formula:

V = 100(c + d + e) / (a + b)

where:

a = Value in subsection (b)(8)(A).

b = Value in subsection (b)(8)(B).

c = Value in subsection (b)(8)(C).

d = Value in subsection (b)(8)(D). ~~And,~~

e = Value in subsection (b)(8)(E).

G) The requirements of subsections (b)(8)(A) through (F) do not apply if the Agency determines, pursuant to Section 611.213, that a system has no means for having a sample analyzed for HPC.

9) A system need not report the data listed in subsections (b)(1), and (b)(3) through (6), if all data listed in subsections (b)(1) through (b)(8) remain on file at the system, and the Agency determines, by special exception permit, that:

A) The system has submitted to the Agency all the information required by subsections (b)(1) through (8) for at least 12 months; and

B) The Agency has determined that the system is not required to provide filtration treatment.

c) By October 10 of each year, each system ~~shall~~ <u>must</u> provide to the Agency a report which summarizes its compliance with all watershed control program requirements specified in 611.232(b).

d) By October 10 of each year, each system ~~shall~~ <u>must</u> provide to the Agency a report on the on-site inspection conducted during that year pursuant to Section 611.232(c), unless the on-site inspection was conducted by the Agency. If the inspection was conducted by the Agency, the Agency ~~shall~~ <u>must</u> provide a copy of its report to the supplier.

e) Reporting health threats.

1) Each system, upon discovering that a waterborne disease outbreak potentially attributable to that water system has occurred, ~~shall~~ <u>must</u> report that occurrence to the Agency as soon as possible, but no later than by the end of the next business day.

2) If at any time the turbidity exceeds 5 NTU, the system ~~shall inform~~ <u>must consult with</u> the Agency as soon as ~~possible~~ <u>practical</u>, but no later than ~~the end of the next business day~~ <u>24 hours after the exceedance is known, in accordance with the public notification requirements under Section 611.903(b)(3)</u>.

3) If at any time the RDC falls below 0.2 mg/L in the water entering the distribution system, the system ~~shall~~ <u>must</u> notify the Agency as soon as possible, but no later than by the end of the next business day. The system also ~~shall~~ <u>must</u> notify the Agency by the end of the next business day whether or not the RDC was restored to at least 0.2 mg/L within ~~4~~ <u>four</u> hours.

BOARD NOTE: Derived from 40 CFR 141.75(a) ~~(1989)~~ (1999), as amended at ~~54~~ Fed. Reg. ~~27526, June 29, 1989~~ 26022 (May 4, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.262 Filtered PWSs: Reporting and Recordkeeping

A supplier that uses a surface water source or a groundwater source under the direct influence of surface water and provides filtration treatment ~~shall~~ must report monthly to the Agency the information specified in this Section ~~beginning June 29, 1993, or when filtration is installed, whichever is later~~.

a) Turbidity measurements as required by Section 611.533(a) must be reported within 10 days after the end of each month the ~~system~~ supplier serves water to the public. Information that must be reported includes:

1) The total number of filtered water turbidity measurements taken during the month.

2) The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the turbidity limits specified in Section 611.250 for the filtration technology being used.

3) The date and value of any turbidity measurements taken during the month which exceed 5 NTU.

b) Disinfection information specified in Section 611.533 must be reported to the Agency within 10 days after the end of each month the ~~system~~ supplier serves water to the public. Information that must be reported includes:

1) For each day, the lowest measurement of RDC in mg/L in water entering the distribution system.

2) The date and duration of each period when the RDC in water entering the distribution system fell below 0.2 mg/L and when the Agency was notified of the occurrence.

3) The following information on the samples taken in the distribution system in conjunction with total coliform monitoring pursuant to ~~Section~~ Sections 611.240 ~~et seq.~~ through 611.242:

A) Number of instances where the RDC is measured;

B) Number of instances where the RDC is not measured but HPC is measured;

C) Number of instances where the RDC is measured but not detected and no HPC is measured;

D) Number of instances where no RDC is detected and where HPC is greater than 500/ml;

E) Number of instances where the RDC is not measured and HPC is greater than 500/ml;

F) For the current and previous month the ~~system~~ supplier serves water to the public,the value of "V" in the following formula:

~~V = 100(c + d + e) / (a + b)~~

$$V = \frac{100(c + d + e)}{(a + b)}$$

where:

a = Value in subsection (b)(3)(A) of this Section;~~.~~

b = Value in subsection (b)(3)(B) of this Section;~~.~~

c = Value in subsection (b)(3)(C) of this Section;~~.~~

d = Value in subsection (b)(3)(D) of this Section; and~~. And,~~

e = Value in subsection (b)(3)(E) of this Section.

G) Subsections (b)(3)(A) through (b)(3)(F) of this Section do not apply if the Agency determines, pursuant to Section 611.213, that a ~~system~~ supplier has no means for having a sample analyzed for HPC.

c) Reporting health threats.

1) Each ~~system~~ supplier, upon discovering that a waterborne disease outbreak potentially attributable to that water system has occurred, ~~shall~~ must report that occurrence to the Agency as soon as possible, but no later than by the end of the next business day.

2) If at any time the turbidity exceeds 5 NTU, the ~~system shall inform~~ supplier must consult with the Agency as soon as ~~possible~~ practical, but no later than ~~the end of the next business day~~ 24 hours after the exceedance is known, in accordance with the public notification requirements under Section 611.903(b)(3).

3) If at any time the residual falls below 0.2 mg/L in the water entering the distribution system, the ~~system shall~~ supplier must notify the Agency as soon as possible, but no later than by the end of the next business day. The ~~system~~ supplier also ~~shall~~ must notify the Agency by the end of the next business day whether or not the residual was restored to at least 0.2 mg/L within ~~4~~ four hours.

BOARD NOTE: Derived from 40 CFR 141.75(b) ~~(1989)~~ (1999), as amended at ~~54~~ 65 Fed. Reg. ~~27526, June 29, 1989~~ 26022 (May 4, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

SUBPART F: MAXIMUM CONTAMINANT LEVELS (MCLs) AND MAXIMUM RESIDUAL DISINFECTANT LEVELS (MRDLs)

Section 611.300 Old MCLs for Inorganic Chemicals

a) The old MCLs listed in subsection (b) ~~below~~ of this Section for inorganic chemicals apply only to CWS suppliers. Compliance with old MCLs for inorganic chemicals is calculated pursuant to Section 611.612, except that analyses for arsenic are to be performed pursuant to Section 611.611.

BOARD NOTE: Derived from 40 CFR 141.11(a) ~~(1995)~~ (1999).

b) The following are the old MCL's for inorganic chemicals:

Contaminant	Level, mg/L	Additional State Requirement (*)
Arsenic	0.05	
Iron	1.0	*
Manganese	0.15	*
Zinc	5.	*

BOARD NOTE: Derived from 40 CFR 141.11(b) & (c) ~~(1995)~~ (1999). This provision, which corresponds with 40 CFR 141.11, was formerly the only listing of MCLs for inorganic parameters. However, USEPA added another listing of inorganic MCLs at 40 CFR 141.62 at 56 Fed. Reg. 3594 (Jan. 30, 1991), which corresponds with Section 611.301.

c) This subsection corresponds with 40 CFR 141.11(c) ~~(1995)~~ (1999), marked as reserved by USEPA. This statement maintains structural parity with the federal rules.

d) Nitrate.

Non-CWSs may exceed the MCL for nitrate under the following circumstances:

~~A~~1) The nitrate level must not exceed 20 mg/L,

~~B~~2) The water must not be available to children under six months of age,

~~C~~3) ~~There will be~~ The NCWS supplier is meeting the public notification requirements under Section 611.909, including continuous posting of the fact that the nitrate level exceeds 10 mg/L together with the ~~public~~ potential health effects ~~information set forth in paragraph (2)~~ of ~~Section 611.Appendix A~~ exposure,

~~D~~4) The supplier will annually notify local public health authorities and Public Health of the nitrate levels that exceed 10 mg/L, and

~~E~~5) No adverse public health effects result.

BOARD NOTE: Derived from 40 CFR 141.11(d) ~~(1995)~~ (1999), as amended at 65 Fed. Reg. 26022 (May 4, 2000). Public Health regulations may impose a nitrate limitation requirement. Those regulations are at 77 Ill. Adm. Code 900.50.

e) The following supplementary condition applies to the MCLs listed in subsection (b) ~~above~~ of this Section for iron and manganese:

1) CWS suppliers that serve a population of 1000 or ~~less~~ fewer, or 300 service connections or ~~less~~ fewer, are exempt from the standards for iron and manganese.

2) The Agency may, by special exception permit, allow iron and manganese in excess of the MCL if sequestration tried on an experimental basis proves to be effective. If sequestration is not effective, positive iron or manganese reduction treatment as applicable must be provided. Experimental use of a sequestering agent may be tried only if approved by special exception permit.

BOARD NOTE: ~~This is~~ The requirements of subsection (e) of this Section are an additional State requirement.

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

SUBPART G: LEAD AND COPPER

Section 611.351 Applicability of Corrosion Control

a) Corrosion control required. Suppliers ~~shall~~ must complete the applicable corrosion control treatment requirements described in Section 611.352 on or before the deadlines set forth in this Section.

1) Large systems. Each large system supplier (one regularly serving more than 50,000 persons) ~~shall~~ must complete the corrosion control treatment steps specified in subsection (d) ~~below~~ of this Section, unless it is deemed to have optimized corrosion control under subsection (b)(2) or (b)(3) ~~below~~ of this Section.

2) Medium-sized and small systems. Each small system supplier (one regularly serving 3300 or fewer persons) and each medium-sized system (one regularly serving more than 3,300 up to 50,000 or fewer persons) ~~shall~~ must complete the corrosion control treatment steps specified in subsection (e) ~~below~~ of this Section, unless it is deemed to have optimized corrosion control under one of subsections (b)(1), (b)(2), or (b)(3) ~~below~~ of this Section.

b) Suppliers deemed to have optimized corrosion control. A supplier is deemed to have optimized corrosion control, and is not required to complete the applicable corrosion control treatment steps identified in this Section, if the supplier satisfies one of the ~~following~~ criteria~~:~~ specified in subsections (b)(1) through (b)(3) of this Section. Any such system deemed to have optimized corrosion control under this subsection, and which has treatment in place, must continue to operate and maintain optimal corrosion control treatment and meet any requirements that the Agency determines are appropriate to ensure optimal corrosion control treatment is maintained.

1) Small or medium-sized system meeting action levels. A small system or medium-sized system supplier is deemed to have optimized corrosion control if the system meets the lead and copper action levels during each of two consecutive six-month monitoring periods with monitoring conducted in accordance with Section 611.356.

2) SEP for equivalent activities to corrosion control. The Agency ~~shall~~ must, by a SEP granted pursuant to Section 611.110, deem any supplier to have optimized corrosion control treatment if it determines that the supplier has conducted activities equivalent to the corrosion control steps applicable under this Section. In making this determination, the Agency ~~shall~~ must specify the water quality control parameters representing optimal corrosion control in accordance with Section 611.352(f). A water supplier that is deemed to have optimized corrosion control under this subsection (b)(2) must operate in

compliance with the Agency-designated optimal water quality control parameters in accordance with Section 611.352(g) and must continue to conduct lead and copper tap and water quality parameter sampling in accordance with Sections 611.356(d)(3) and 611.357(d), respectively. A supplier ~~shall~~ must provide the Agency with the following information in order to support an Agency SEP determination under this subsection:

A) ~~the~~ The results of all test samples collected for each of the water quality parameters in Section 611.352(c)(3);

B) ~~a~~ A report explaining the test methods the supplier used to evaluate the corrosion control treatments listed in Section 611.352(c)(1), the results of all tests conducted, and the basis for the supplier's selection of optimal corrosion control treatment;

C) ~~a~~ A report explaining how the supplier has installed corrosion control and how the supplier maintains it to insure minimal lead and copper concentrations at consumer's taps; and

D) ~~the~~ The results of tap water samples collected in accordance with Section 611.356 at least once every six months for one year after corrosion control has been installed.

3) Results less than practical quantitation level (PQL) for lead. Any supplier is deemed to have optimized corrosion control if it submits results of tap water monitoring conducted in accordance with Section 611.356 and source water monitoring conducted in accordance with Section 611.358 that demonstrate that for two consecutive six-month monitoring periods the difference between the 90th percentile tap water lead level, computed pursuant to Section 611.350(c)(3), and the highest source water lead concentration is less than the practical quantitation level for lead specified in Section 611.359(a)(1)(B)(i).

A) Those systems whose highest source water lead level is below the method detection limit (MDL) may also be deemed to have optimized corrosion control under this subsection (b) if the 90th percentile tap water lead level is less than or equal to the PQL for lead for two consecutive 6-month monitoring periods.

B) Any water system deemed to have optimized corrosion control in accordance with this subsection must continue monitoring for lead and copper at the tap no less frequently than once every three calendar years using the reduced number of sites specified in Section 611.356(c) and collecting the samples at times and locations specified in Section 611.356(d)(4)(D). Any such system that has not conducted a round of monitoring pursuant to Section 611.356(d) since September 30, 1997, must complete a round of monitoring pursuant to this subsection (b) no later than September 30, 2000.

BOARD NOTE: USEPA specified September 30, 2000 at 40 CFR 141.81(b)(3)(ii) (1999), as amended at 65 Fed. Reg. 2004 (Jan. 12, 2000). In order to remain identical-in-substance and to retain state primacy, the Board retained this date despite the fact that this Section became effective after that date.

C) Any water system deemed to have optimized corrosion control pursuant to this subsection must notify the Agency in writing pursuant to Section 611.360(a)(3) of any change in treatment or the addition of a new source. The Agency must require any such system to conduct additional monitoring or to take other action if the Agency determines that the additional monitoring is necessary and appropriate to ensure that the supplier maintains minimal levels of corrosion in its distribution system.

D) As of July 12, 2001, a supplier is not deemed to have optimized corrosion control under this subsection (b), and must implement corrosion control treatment pursuant to subsection (b)(3)(E) of this Section, unless it meets the copper action level.

E) Any supplier triggered into corrosion control because it is no longer deemed to have optimized corrosion control under this subsection must implement corrosion control treatment in accordance with the deadlines in subsection (e) of this Section. Any such large system supplier must adhere to the schedule specified in that subsection for a medium-size system supplier, with the time periods for completing each step being triggered by the date the supplier is no longer deemed to have optimized corrosion control under this subsection (b).

c) Suppliers not required to complete corrosion control steps for having met both action levels.

1) Any small system or medium-sized system supplier, otherwise required to complete the corrosion control steps due to its exceedance of the lead or copper action level, may cease completing the treatment steps after the supplier has fulfilled both of the following conditions:

A) It has met both the copper action level and the lead action level during each of two consecutive six-month monitoring periods conducted pursuant to Section 611.356, and

B) the supplier has submitted the results for those two consecutive six-month monitoring periods to the Agency.

2) A supplier that has ceased completing the corrosion control steps pursuant to subsection (c)(1) ~~above~~ of this Section (or the Agency, if appropriate) ~~shall~~ must resume completion of the applicable treatment steps, beginning with the first treatment step that the supplier previously did not complete in its entirety, if the supplier thereafter exceeds the lead or copper action level during any monitoring period.

3) The Agency may, by SEP, require a supplier to repeat treatment steps previously completed by the supplier where it determines that this is necessary to properly implement the treatment requirements of this Section. Any such SEP ~~shall~~ must explain the basis for this decision.

4) The requirement for any small or medium-sized system supplier to implement corrosion control treatment steps in accordance with subsection (e) ~~below~~ of this Section (including systems deemed to have optimized corrosion control under subsection (b)(1) ~~above~~ of this Section) is triggered whenever any small or medium-sized system supplier exceeds the lead or copper action level.

d) Treatment steps and deadlines for large systems. Except as provided in subsections (b)(2) and (b)(3) ~~above~~ of this Section, large system suppliers ~~shall~~ must complete the following corrosion control treatment steps (described in the referenced portions of Sections 611.352, 611.356, and 611.357) on or before the indicated dates.

1) Step 1: The supplier ~~shall~~ must conduct initial monitoring (Sections 611.356(d)(1) and 611.357(b)) during two consecutive six-month monitoring periods on or before January 1, 1993.

BOARD NOTE: ~~U.S. EPA~~ USEPA specified January 1, 1993 at 40 CFR 141.81(d)(1) (1999). In order to remain identical-in-substance and to retain state primacy, the Board retained this date despite the fact that this Section became effective after that date.

2) Step 2: The supplier ~~shall~~ must complete corrosion control studies (Section 611.352(c)) on or before July 1, 1994.

3) Step 3: The Agency ~~shall~~ must approve optimal corrosion control treatment (Section 611.352(d)) by a SEP issued pursuant to Section 611.110 on or before January 1, 1995.

4) Step 4: The supplier ~~shall~~ must install optimal corrosion control treatment (Section 611.352(e)) by January 1, 1997.

5) Step 5: The supplier ~~shall~~ must complete follow-up sampling (Sections 611.356(d)(2) and 611.357(c)) by January 1, 1998.

6) Step 6: The Agency ~~shall~~ must review installation of treatment and approve optimal water quality control parameters (Section 611.352(f)) by July 1, 1998.

7) Step 7: The supplier ~~shall~~ must operate in compliance with the Agency-specified optimal water quality control parameters (Section 611.352(g)) and continue to conduct tap sampling (Sections 611.356(d)(3) and 611.357(d)).

e) Treatment steps and deadlines for small and medium-sized system suppliers. Except as provided in subsection (b) ~~above~~ of this Section, small and medium-sized system suppliers ~~shall~~ must complete the following corrosion control treatment steps (described in the referenced portions of Sections 611.352, 611.356 and 611.357) by the indicated time periods.

1) Step 1: The supplier ~~shall~~ must conduct initial tap sampling (Sections 611.356(d)(1) and 611.357(b)) until the supplier either exceeds the lead action level or the copper action level or it becomes eligible for reduced monitoring under Section 611.356(d)(4). A supplier exceeding the lead action level or the copper action level ~~shall~~ must recommend optimal corrosion control treatment (Section 611.352(a)) within six months after it exceeds one of the action levels.

2) Step 2: Within 12 months after a supplier exceeds the lead action level or the copper action level, the Agency may require the supplier to perform corrosion control studies (Section 611.352(b)). If the Agency does not require the supplier to perform such studies, the Agency ~~shall~~ must, by a SEP issued pursuant to Section 611.110, specify optimal corrosion control treatment (Section 611.352(d)) within the following timeframes:

A) for medium-sized systems, within 18 months after such supplier exceeds the lead action level or the copper action level,

B) for small systems, within 24 months after such supplier exceeds the lead action level or the copper action level.

3) Step 3: If the Agency requires a supplier to perform corrosion control studies under step 2 (subsection (e)(2) ~~above~~ of this Section), the supplier ~~shall~~ must complete the studies

(Section 611.352(c)) within 18 months after the Agency requires that such studies be conducted.

4) Step 4: If the supplier has performed corrosion control studies under step 2 (subsection (e)(2) ~~above~~ of this Section), the Agency ~~shall~~ must, by a SEP issued pursuant to Section 611.110, approve optimal corrosion control treatment (Section 611.352(d)) within ~~6~~ six months after completion of step 3 (subsection (e)(3) ~~above~~ of this Section).

5) Step 5: The supplier ~~shall~~ must install optimal corrosion control treatment (Section 611.352(e)) within 24 months after the Agency approves such treatment.

6) Step 6: The supplier ~~shall~~ must complete follow-up sampling (Sections 611.356(d)(2) and 611.357(c)) within 36 months after the Agency approves optimal corrosion control treatment.

7) Step 7: The Agency ~~shall~~ must review the supplier's installation of treatment and, by a SEP issued pursuant to Section 611.110, approve optimal water quality control parameters (Section 611.352(f)) within ~~6~~ six months after completion of step 6 (subsection (e)(6) ~~above~~ of this Section).

8) Step 8: The supplier ~~shall~~ must operate in compliance with the Agency-approved optimal water quality control parameters (Section 611.352(g)) and continue to conduct tap sampling (Sections 611.356(d)(3) and 611.357(d)).

BOARD NOTE: Derived from 40 CFR 141.81 ~~(1994)~~ (1999), as amended at 65 Fed. Reg. 2004 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.352 Corrosion Control Treatment

Each supplier ~~shall~~ must complete the corrosion control treatment requirements described below that are applicable to such supplier under Section 611.351.

a) System recommendation regarding corrosion control treatment.

1) Based on the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium-sized system suppliers exceeding the lead action level or the copper action level ~~shall~~ must recommend to the Agency installation of one or more of the corrosion control treatments listed in subsection (c)(1) ~~below~~ of this Section that the supplier believes constitutes optimal corrosion control for its system.

2) The Agency may, by a SEP issued pursuant to Section 611.110, require the supplier to conduct additional water quality parameter monitoring in accordance with Section 611.357(b) to assist it in reviewing the supplier's recommendation.

b) Agency-required studies of corrosion control treatment. The Agency may, by a SEP issued pursuant to Section 611.110, require any small or medium-sized system supplier that exceeds the lead action level or the copper action level to perform corrosion control studies under subsection (c) ~~below~~ of this Section to identify optimal corrosion control treatment for its system.

c) Performance of studies:

1) Any supplier performing corrosion control studies ~~shall~~ must evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments, to identify the optimal corrosion control treatment for its system:

   A) ~~alkalinity~~ Alkalinity and pH adjustment;

   B) ~~calcium~~ Calcium hardness adjustment; and

   C) ~~the~~ The addition of a phosphate- or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.

2) The supplier ~~shall~~ must evaluate each of the corrosion control treatments using either pipe rig/loop tests; metal coupon tests; partial-system tests; or analyses based on documented analogous treatments in other systems of similar size, water chemistry, and distribution system configuration.

3) The supplier ~~shall~~ must measure the following water quality parameters in any tests conducted under this subsection before and after evaluating the corrosion control treatments listed above:

   A) ~~lead~~Lead;

   B) ~~copper~~Copper;

   C) pH;

   D) ~~alkalinity~~Alkalinity;

   E) ~~calcium~~Calcium;

   F) ~~conductivity~~Conductivity;

   G) ~~orthophosphate~~ Orthophosphate (when an inhibitor containing a phosphate compound is used);

   H) ~~silicate~~ Silicate (when an inhibitor containing a silicate compound is used); and

   I) ~~water~~ Water temperature.

4) The supplier ~~shall~~ must identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment, and document such constraints with at least one of the following:

   A) ~~data~~ Data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another supplier with comparable water quality characteristics; or

   B) ~~data~~ Data and documentation demonstrating that the supplier has previously attempted to evaluate a particular corrosion control treatment, finding either that the treatment is ineffective or it adversely affects other water quality treatment processes.

5) The supplier ~~shall~~ must evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes.

6) On the basis of an analysis of the data generated during each evaluation, the supplier ~~shall~~ must recommend to the Agency, in writing, that treatment option the corrosion control studies indicate constitutes optimal corrosion control treatment for its system. The supplier ~~shall~~ must provide a rationale for its recommendation, along with all supporting documentation specified in subsections (c)(1) through (c)(5) ~~above~~ of this Section.

d) Agency approval of treatment:

1) Based on consideration of available information including, where applicable, studies performed under subsection (c) ~~above~~ of this Section and a supplier's recommended treatment alternative, the Agency ~~shall~~ must, by a SEP issued pursuant to Section 611.110, either approve the corrosion control treatment option recommended by the supplier, or deny and require investigation and recommendation of alternative corrosion control ~~treatment(s)~~ treatments from among those listed in subsection (c)(1) ~~above~~ of this Section. When approving optimal treatment, the Agency ~~shall~~ must consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes.

2) The Agency ~~shall~~ must, in any SEP issued under subsection (d)(1) ~~above~~ of this Section, notify the supplier of the basis for this determination.

e) Installation of optimal corrosion control. Each supplier ~~shall~~ must properly install and operate, throughout its distribution system, that optimal corrosion control treatment approved by the Agency pursuant to subsection (d) ~~above~~ of this Section.

f) Agency review of treatment and specification of optimal water quality control parameters. The Agency ~~shall~~ must evaluate the results of all lead and copper tap samples and water quality parameter samples submitted by the supplier and determine whether it has properly installed and operated the optimal corrosion control treatment approved pursuant to subsection (d) ~~above~~ of this Section.

1) Upon reviewing the results of tap water and water quality parameter monitoring by the supplier, both before and after the installation of optimal corrosion control treatment, the Agency ~~shall~~ must, by a SEP issued pursuant to Section 611.110, specify the following:

A) ~~a~~ A minimum value or a range of values for pH measured at each entry point to the distribution system;

B) ~~a~~ A minimum pH value, measured in all tap samples. Such value ~~shall~~ must be equal to or greater than 7.0, unless the Agency determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the supplier to optimize corrosion control;

C) ~~if~~ If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, that the Agency determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system;

D) ~~if~~ If alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples;

E) ~~if~~ If calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium, measured in all tap samples.

2) The values for the applicable water quality control parameters listed in subsection (f)(1) ~~above~~ of this Section ~~shall~~ must be those that the Agency determines reflect optimal corrosion control treatment for the supplier.

3) The Agency may, by a SEP issued pursuant to Section 611.110, approve values for additional water quality control parameters determined by the Agency to reflect optimal corrosion control for the supplier's system.

4) The Agency ~~shall~~ must, in issuing a SEP, explain these determinations to the supplier, along with the basis for its decisions.

g) Continued Operation and Monitoring. All suppliers optimizing corrosion control must continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameter values at or above minimum values or within ranges approved by the Agency under subsection (f) of this Section, in ~~each sample~~ accordance with this subsection for all samples collected under Sections 611.357(d) through (f). Compliance with the requirements of this subsection (g) must be determined every six months, as specified under Section 611.357(d). A water system is out of compliance with the requirements of this subsection for a six-month period if it has excursions for any Agency-specified parameter on more than nine days during the period. An excursion occurs whenever the daily value for one or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the Agency. Daily values are calculated as provided in subsections (g)(1) through (g)(3) of this Section. The Agency must delete results that it determines are obvious sampling errors from this calculation.

1) On days when more than one measurement for the water quality parameter is collected at the sampling location, the daily value must be the average of all results collected during the day regardless of whether the samples are collected through continuous monitoring, grab sampling, or a combination of both.

BOARD NOTE: Corresponding 40 CFR 141.82(g)(1) further provides as follows: If USEPA approves an alternative formula under 40 CFR 142.16 in the State's application for a program revision submitted pursuant to 40 CFR 142.12, the State's formula must be used to aggregate multiple measurements taken at a sampling point for the water quality parameter in lieu of the formula in this subsection.

2) On days when only one measurement for the water quality parameter is collected at the sampling location, the daily value must be the result of that measurement.

3) On days when no measurement is collected for the water quality parameter at the sampling location, the daily value must be the daily value calculated on the most recent day on which the water quality parameter was measured at the sample site.

~~1) All suppliers shall maintain water quality parameter values at or above minimum values or within ranges approved by the Agency under subsection (f) above, in each sample collected under Section 611.357(d).~~

~~2) If the water quality parameter value of any sample is below the minimum value or outside the range approved by the Agency, then the supplier is out of compliance with this subsection.~~

~~3) As specified in Section 611.357(d)(3), the supplier may take a confirmation sample for any water quality parameter value no later than 3 days after the first sample. If a confirmation sample is taken, the result must be averaged with the first sampling result, and the average must be used for any compliance determinations under this subsection. The Agency may delete results of obvious sampling errors from this calculation.~~

h) Modification of Agency treatment decisions.

1) On its own initiative, or in response to a request by a supplier, the Agency may, by a SEP issued pursuant to this subsection and Section 611.110, modify its determination of the optimal corrosion control treatment under subsection (d) ~~above~~ of this Section or of the optimal water quality control parameters under subsection (f) ~~above~~ of this Section.

2) A request for modification must be in writing, explain why the modification is appropriate, and provide supporting documentation.

3) The Agency may modify its determination where it determines that such change is necessary to ensure that the supplier continues to optimize corrosion control treatment. A revised determination must set forth the new treatment requirements, explain the basis for the Agency's decision, and provide an implementation schedule for completing the treatment modifications.

4) Any interested person may submit information to the Agency bearing on whether the Agency should, within its discretion, issue a SEP to modify its determination pursuant to subsection (h)(1) ~~above~~ of this Section. An Agency determination not to act on a submission of such information by an interested person is not an Agency determination for the purposes of Sections 39 and 40 of the Act.

i) Treatment decisions by USEPA. Pursuant to the procedures in 40 CFR 142.19, the USEPA Regional Administrator has reserved the prerogative to review treatment determinations made by the Agency under subsections (d), (f), or (h) ~~above~~ of this Section and issue federal treatment determinations consistent with the requirements of 40 CFR 141.82(d), (e), or (h), where the Regional Administrator finds that the following is true:

1) ~~the~~ The Agency has failed to issue a treatment determination by the applicable deadlines contained in Section 611.351 (40 CFR 141.81),

2) ~~the~~ The Agency has abused its discretion in a substantial number of cases or in cases affecting a substantial population, or

3) ~~the~~ The technical aspects of the Agency's determination would be indefensible in an expected federal enforcement action taken against a supplier.

BOARD NOTE: Derived from 40 CFR 141.82 ~~(1992)~~ (1999), as amended at 65 Fed. Reg. 2004 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.354 Lead Service Line Replacement

a) Suppliers required to replace lead service lines.

1) If the results from tap samples taken pursuant to Section 611.356(d)(2) exceed the lead action level after the supplier has installed corrosion control or source water treatment (whichever sampling occurs later), the supplier ~~shall~~ must recommence replacing lead service lines in accordance with the requirements of subsection (b) ~~below~~ of this Section.

2) If a supplier is in violation of Section 611.351 or Section 611.353 for failure to install source water or corrosion control treatment, the Agency may, by a SEP issued pursuant to Section 611.110, require the supplier to commence lead service line replacement under this Section after the date by which the supplier was required to conduct monitoring under Section 611.356(d)(2) has passed.

b) Annual replacement of lead service lines.

1) A supplier required to commence lead service line replacement pursuant to subsection (a) ~~above~~ of this Section ~~shall~~ must annually replace at least ~~7~~ seven percent of the initial number of lead service lines in its distribution system.

2) The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins.

3) The supplier ~~shall~~ must identify the initial number of lead service lines in its distribution system, including an identification of the portions of the system owned by the supplier, based on a materials evaluation, including the evaluation required under Section 611.356(a) and relevant legal authorities (e.g. contracts, local ordinances) regarding the portion owned by the system.

4) The first year of lead service line replacement ~~shall~~ must begin on the date the supplier exceeded the action level in tap sampling referenced in subsection (a) ~~above~~ of this Section.

c) Service lines not needing replacement. A supplier is not required to replace any individual lead service line for which the lead concentrations in all service line samples taken from that line pursuant to Section 611.356(b)(3) are less than or equal to 0.015 mg/L.

d) A water supplier must replace that portion of the lead service line that it owns. In cases where the supplier does not own the entire lead service line, the supplier must notify the owner of the line, or the owner's authorized agent, that the supplier will replace the portion of the service line that it owns and must offer to replace the owner's portion of the line. A supplier is not required to bear the cost of replacing the privately-owned portion of the line, nor is it required to replace the privately-owned portion where the owner chooses not to pay the cost of replacing the privately-owned portion of the line, or where replacing the privately-owned portion would be precluded by State, local or common law. A water supplier that does not replace the entire length of the service line also must complete the following tasks:

1) Notice Prior to Commencement of Work.

A) At least 45 days prior to commencing the partial replacement of a lead service line, the water supplier must provide notice to the residents of all buildings served by the line explaining that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumers can take to minimize their exposure to lead.

B) The Agency, by issuing an appropriate SEP, may allow the water supplier to provide notice under the previous sentence less than 45 days prior to commencing partial lead service line replacement where it determines that such replacement is in conjunction with emergency repairs.

C) In addition, the water supplier must inform the residents served by the line that the supplier will, at the supplier's expense, collect a sample from each partially-replaced lead service line that is representative of the water in the service line for analysis of lead content, as prescribed by Section 611.356(b)(3), within 72 hours after the completion of the partial replacement of the service line. The supplier must collect the sample and report the results of the analysis to the owner and the residents served by the line within three business days of receiving the results.

D) Mailed notices post-marked within three business days of receiving the results must be considered "on time."

2) The water supplier must provide the information required by subsection (d)(1) of this Section to the residents of individual dwellings by mail or by other methods approved by the Agency by a SEP issued pursuant to Section 611.110. In instances where multi-family dwellings are served by the service line, the water supplier must have the option to post the information at a conspicuous location.

~~d) Replacement of service line.~~

~~1) A supplier required to replace a lead service line pursuant to subsection (a) above shall replace the entire service line (up to the building inlet) unless the Agency determines pursuant to subsection (e) below that the supplier controls less than the entire service line.~~

~~2) Replacement of less than the entire service line.~~

~~A) Where the Agency has determined that the supplier controls less than the entire service line, the supplier shall replace that portion of the line that the Agency determines is under the supplier's control.~~

~~B) The supplier that will replace less than the entire service line shall notify the user served by the line that the supplier will replace that portion of the service line under its control, and the supplier shall offer to replace the remaining portion of the service line that is under the building owner's control.~~

~~C) The supplier required to replace less than the entire service line is not required to bear the cost of replacing any portion of the service line that is under the building owner's control.~~

~~D) Offer to collect samples.~~

~~i) For buildings where only a portion of the lead service line is replaced, the supplier shall inform the resident(s) that the supplier will collect a first draw tap water sample after partial replacement of the service line is completed if the resident(s) so desire.~~

ii) ~~In cases where the resident(s) accept the offer, the supplier shall collect the sample and report the results to the resident(s) within 14 days following partial lead service line replacement.~~

~~e) Control of entire service line.~~

~~1) A supplier is presumed to control the entire lead service line (up to the building inlet) unless the supplier demonstrates to the satisfaction of the Agency, in a letter submitted under Section 611.360(e)(4), that it does not have any of the following forms of control over the entire line (as defined by state statutes, municipal ordinances, public service contracts or other applicable legal authority):~~

~~A) authority to set standards for construction, repair, or maintenance of the line;~~

~~B) authority to replace, repair, or maintain the service line; or~~

~~C) ownership of the service line.~~

~~2) Agency determinations.~~

~~A) The Agency shall review the information provided by the supplier and determine the following:~~

~~i) whether the supplier controls less than the entire service line, and~~

~~ii) where the supplier controls less than the entire service line, the Agency shall determine the extent of the supplier's control.~~

~~B) The Agency shall make its determination of the extent of a supplier's control of a service line as a SEP pursuant to Section 611.110, and the Agency shall explain the basis for its determination.~~

~~BOARD NOTE: See Section 611.360(e)(4) and the Board Note that follows. The court in American Water Works Association v. EPA, 40 F.3d 1266 (D.C. Cir. 1994), vacated U.S. EPA's definition of "control" to the extent it would require the supplier to exert "control" over a privately-owned service connection. The Board does not intend that the Illinois definition give the State regulations more effect than the federal definition gives the U.S. EPA regulations.~~

~~f~~e) Agency determination of shorter replacement schedule.

1) The Agency ~~shall~~ must, by a SEP issued pursuant to Section 611.110, require a supplier to replace lead service lines on a shorter schedule than that otherwise required by this Section if it determines, taking into account the number of lead service lines in the system, that such a shorter replacement schedule is feasible.

2) The Agency ~~shall~~ must notify the supplier of its finding pursuant to subsection ~~(f)(1) above~~ (e)(1) of this Section within ~~6~~ six months after the supplier is triggered into lead service line replacement based on monitoring, as referenced in subsection (a) ~~above~~ of this Section.

~~g~~f) Cessation of service line replacement.

1) Any supplier may cease replacing lead service lines whenever it fulfills both of the following conditions:

A) ~~first~~ First draw tap samples collected pursuant to Section 611.356(b)(2) meet the lead action level during each of two consecutive six-month monitoring periods and

B) ~~the~~ The supplier has submitted those results to the Agency.

2) If any of the supplier's first draw tap samples thereafter exceed the lead action level, the supplier ~~shall~~ must recommence replacing lead service lines pursuant to subsection (b) ~~above~~ of this Section.

~~h~~g) To demonstrate compliance with subsections (a) through (d) ~~above~~ of this Section, a supplier ~~shall~~ must report to the Agency the information specified in Section 611.360(e).

BOARD NOTE Derived from 40 CFR 141.84 ~~(1994)~~ (1999), as amended at 65 Fed. Reg. 2005 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.355 Public Education and Supplemental Monitoring

A supplier that exceeds the lead action level based on tap water samples collected in accordance with Section 611.356 ~~shall~~ must deliver the public education materials required by subsections (a) and (b) ~~below~~ of this Section in accordance with the requirements of subsection (c) ~~below~~ of this Section.

a) Content of written materials.

1) Community water systems. A CWS supplier ~~shall~~ must include the text set forth in ~~Section 611.~~Appendix E of this Part in all of the printed materials it distributes through its lead public education program. A supplier may delete information pertaining to lead service lines, upon approval by the Agency by a SEP issued pursuant to Section 611.110, if no lead service lines exist anywhere in the water system service area. Public education language at paragraphs (4)(B)(5) and (4)(D)(2) of Appendix E of this Part may be modified regarding building permit record availability and consumer access to these records, if approved by the Agency by a SEP issued pursuant to Section 611.110. A supplier may also continue to utilize pre-printed materials that meet the public education language requirements in 40 CFR 141.85 (1991). Any additional information presented by a supplier ~~shall~~ must be consistent with the information in ~~Section 611.~~Appendix E of this Part and be in plain English that can be understood by ~~laypersons~~ lay persons.

BOARD NOTE: At corresponding 40 CFR 141.85(a)(1) (1999), as amended at 65 Fed. Reg. 2005 (Jan. 12, 2000), USEPA allowed the use of pre-printed copies of the public notices whose content met the requirements of the original lead an copper rule adopted on June 7, 1991 (56 Fed. Reg. 26548). Rather than reference a prior version of this Section of the Illinois rules, the Board has retained the federal reference to the prior requirements in this subsection (a)(1).

2) Non-transient non-community water systems. A NTNCWS must either include the text specified in subsection (a)(1) of this Section or must include the text set forth in Appendix F of this Part in all of the printed materials it distributes through its lead public education program. A water supplier may delete information pertaining to lead service lines upon approval by the Agency by a SEP issued pursuant to Section 611.110 if no lead service lines exist anywhere in the water system service area. Any additional information presented by a supplier must be consistent with the information below and be in plain English that can be understood by lay persons.

b) Content of broadcast materials. A supplier ~~shall~~ must include the following information in all public service announcements submitted under its lead public education program to television and radio stations for broadcast:

1) Why should everyone want to know the facts about lead and drinking water? Because unhealthy amounts of lead can enter drinking water through the plumbing in your home. That's why I urge you to do what I did. I had my water tested for [insert free or $ per sample]. You can contact the [insert the name of the city or supplier] for information on testing and on simple ways to reduce your exposure to lead in drinking water.

2) To have your water tested for lead, or to get more information about this public health concern, please call [insert the phone number of the city or supplier].

c) Delivery of a public education program.

1) In communities where a significant proportion of the population speaks a language other than English, public education materials ~~shall~~ must be communicated in the appropriate ~~language(s)~~ languages.

2) A CWS supplier that exceeds the lead action level on the basis of tap water samples collected in accordance with Section 611.356 and which is not already repeating public education tasks pursuant to subsection (c)(3), (c)(7), or (c)(8) of this Section ~~shall~~ must, within 60 days, do each of the following:

A) ~~insert~~ Insert notices in each customer's water utility bill or disseminate to each customer by separately mailing a notice containing the information required by subsection (a)(1) ~~above~~ of this Section, along with the following alert in large print on the water bill itself: "SOME HOMES IN THIS COMMUNITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. PLEASE READ THE ENCLOSED NOTICE FOR FURTHER INFORMATION." A CWS supplier having a billing cycle that does not include a billing within 60 days of exceeding the action level or a CWS supplier that cannot insert information in the water utility bill without making major changes to its billing system may use a separate mailing to deliver the information in subsection (a)(1) of this Section, as long as the information is delivered to each customer within 60 days of exceeding the action level. Such a water supplier must also include the "alert" language specified in this subsection (c)(2)(A);

B) ~~submit~~ Submit the information required by subsection (a)(1) ~~above~~ of this Section to the editorial departments of the major daily and weekly newspapers circulated throughout the community;

C) ~~deliver~~ Deliver pamphlets or brochures that contain the public education materials in ~~subsections~~ paragraphs ~~(a)~~(2) and ~~(a)~~(4) ~~above~~ of Appendix E of this Part to facilities and organizations, including the following:

i) ~~public~~ Public schools or local school boards;

ii) ~~the~~ The city or county health department;

iii) Women, Infants, and Children (WIC) and Head Start ~~program(s)~~ programs, whenever available;

iv) ~~public~~ Public and private hospitals and clinics;

v) ~~pediatricians~~Pediatricians;

vi) ~~family~~ Family planning clinics; and

vii) ~~local~~ Local welfare agencies; and

D) ~~submit~~ Submit the public service announcement in subsection (b) ~~above~~ of this Section to at least five of the radio and television stations with the largest audiences within the community served by the supplier.

3) A CWS supplier ~~shall~~ must repeat the tasks contained in subsections (c)(2)(A) through (c)(2)(D) ~~above~~ of this Section for as long as the supplier exceeds the lead action level, at the following minimum frequency:

A) ~~those~~ Those of subsections (c)(2)(A) through (c)(2)(C) ~~above~~ of this Section: every 12 months, and

B) ~~those~~ Those of subsection (c)(2)(D) ~~above~~ of this Section every ~~6~~ six months.

4) Within 60 days after it exceeds the lead action level (unless it already is repeating public education tasks pursuant to subsection (c)(5) of this Section), a NTNCWS supplier ~~shall~~ must deliver the public education materials contained in ~~Section 611.Appendix E(1), (2), and (4)~~ Appendix E or F of this Part, as follows:

A) ~~post~~ Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the supplier; and

B) ~~distribute~~ Distribute informational pamphlets or brochures on lead in drinking water to each person served by the NTNCWS supplier. The Agency may, by a SEP granted pursuant to Section 611.110, allow the system to utilize electronic transmission in lieu of or combined with printed materials as long as it achieves at least the same coverage.

5) A NTNCWS supplier ~~shall~~ must repeat the tasks contained in subsection (c)(4) ~~above~~ of this Section at least once during each calendar year in which the supplier exceeds the lead action level.

6) A supplier may discontinue delivery of public education materials after it has met the lead action level during the most recent six-month monitoring period conducted pursuant to Section 611.356. Such a supplier ~~shall~~ must begin public education anew in accordance with this Section if it subsequently exceeds the lead action level during any six-month monitoring period.

7) A CWS supplier may apply to the Agency, in writing, to use the text specified in Appendix F of this Part in lieu of the text in Appendix E of this Part and to perform the tasks listed in subsections (c)(4) and (c)(5) of this Section in lieu of the tasks in subsections (c)(2) and (c)(3) of this section if:

A) The supplier is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and

B) The system provides water as part of the cost of services provided, and it does not separately charge for water consumption.

8) Reduced requirements for certain smaller CWS suppliers.

A) A CWS supplier serving 3,300 or fewer people may omit the task contained in subsection (c)(2)(S) of this Section. As long as it distributes notices containing the information contained in Appendix E of this Part to every household served by the system, such a supplier may further limit its public education programs as follows:

i) A supplier serving 500 or fewer people may forego the task contained in subsection (c)(2)(B) of this Section. Such a system may limit the distribution of the public education materials required under subsection (c)(2)(C) of this Section to facilities and organizations served by the supplier that are most likely to be visited regularly by pregnant women and children, unless it is notified by the Agency in writing that it must make a broader distribution.

ii) If approved by the Agency by a SEP issued pursuant to Section 611.110, a system serving 501 to 3,300 people may omit the task in subsection (c)(2)(B) of this Section or limit the distribution of the public education materials required under subsection (c)(2)(C) of this Section to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children.

B) A CWS supplier serving 3,300 or fewer people that delivers public education in accordance with subsection (c)(8)(A) of this Section must repeat the required public education tasks at least once during each calendar year in which the supplier exceeds the lead action level.

d) Supplemental monitoring and notification of results. A supplier that fails to meet the lead action level on the basis of tap samples collected in accordance with Section 611.356 ~~shall~~ must offer to sample the tap water of any customer who requests it. The supplier is not required to pay for collecting or analyzing the sample, nor is the supplier required to collect and analyze the sample itself.

BOARD NOTE: Derived from 40 CFR 141.85 ~~(1992)~~ (1999), as amended at 65 Fed. Reg. 2005 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.356 Tap Water Monitoring for Lead and Copper

a) Sample site location.

1) Selecting a pool of targeted sampling sites.

A) By the applicable date for commencement of monitoring under subsection (d)(1) ~~below~~ of this Section, each supplier ~~shall~~ must complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of this Section.

B) The pool of targeted sampling sites must be sufficiently large to ensure that the supplier can collect the number of lead and copper tap samples required by subsection (c) ~~below~~ of this Section.

C) The supplier ~~shall~~ must select the sites for collection of first draw samples from this pool of targeted sampling sites.

D) The supplier ~~shall~~ must not select as sampling sites any faucets that have point-of-use or point-of-entry treatment devices designed to remove or capable of removing inorganic contaminants.

2) Materials evaluation.

A) A supplier ~~shall~~ must use the information on lead, copper, and galvanized steel collected pursuant to 40 CFR 141.42(d) (special monitoring for corrosivity characteristics) when conducting a materials evaluation.

B) When an evaluation of the information collected pursuant to 40 CFR 141.42(d) is insufficient to locate the requisite number of lead and copper sampling sites that meet the targeting criteria in subsection (a) ~~above~~ of this Section, the supplier ~~shall~~ must review the following sources of information in order to identify a sufficient number of sampling sites:

i) ~~all~~ All plumbing codes, permits, and records in the files of the building ~~department(s)~~ departments that indicate the plumbing materials that are installed within publicly- and privately-owned structures connected to the distribution system;

ii) ~~all~~ All inspections and records of the distribution system that indicate the material composition of the service connections which connect a structure to the distribution system;

iii) ~~all~~ All existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations; and

iv) ~~the~~ The supplier ~~shall~~ must seek to collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities).

3) Tiers of sampling sites. Suppliers ~~shall~~ must categorize the sampling sites within their pool according to the following tiers:

A) CWS Tier 1 sampling sites. "CWS Tier 1 sampling sites" ~~shall~~ must include the following single-family structures:

i) ~~those~~ Those that contain copper pipes with lead solder installed after 1982 or which contain lead pipes; or

ii) ~~those~~ Those that are served by a lead service line.

BOARD NOTE: Subsection (a)(3)(A) was derived from segments of 40 CFR 141.86(a)(3) (1999). This allows the pool of CWS tier 1 sampling sites to consist exclusively of structures served by lead service lines.

B) CWS Tier 2 sampling sites. "CWS Tier 2 sampling sites" ~~shall~~ must include the following buildings, including multiple-family structures:

i) ~~those~~ Those that contain copper pipes with lead solder installed after 1982 or contain lead pipes; or

ii) ~~those~~ Those that are served by a lead service line.

BOARD NOTE: Subsection (a)(3)(B) was derived from segments of 40 CFR 141.86(a)(4) (1999). This allows the pool of CWS tier 2 sampling sites to consist exclusively of structures served by lead service lines.

C) CWS Tier 3 sampling sites. "CWS Tier 3 sampling sites" ~~shall~~ must include the following single-family structures: those that contain copper pipes with lead solder installed before 1983.

BOARD NOTE: Subsection (a)(3)(C) was derived from segments of 40 CFR 141.86(a)(5) (1999).

D) NTNCWS Tier 1 sampling sites. "NTNCWS Tier 1 sampling sites" ~~shall~~ must include the following buildings:

i) ~~those~~ Those that contain copper pipes with lead solder installed after 1982 or which contain lead pipes; or

ii) ~~those~~ Those that are served by a lead service line.

BOARD NOTE: Subsection (a)(3)(D) was derived from segments of 40 CFR 141.86(a)(6) (1999). This allows the pool of NTNCWS tier 1 sampling sites to consist exclusively of buildings served by lead service lines.

E) Alternative NTNCWS sampling sites. "Alternative NTNCWS sampling sites" ~~shall~~ must include the following buildings: those that contain copper pipes with lead solder installed before 1983.

BOARD NOTE: Subsection (a)(3)(E) was derived from segments of 40 CFR 141.86(a)(7) (1999).

4) Selection of sampling sites. Suppliers ~~shall~~ must select sampling sites for their sampling pool as follows:

A) CWS Suppliers. CWS suppliers ~~shall~~ must use CWS tier 1 sampling sites, except that the supplier may include CWS tier 2 or CWS tier 3 sampling sites in its sampling pool as follows:

i) If multiple-family residences comprise at least 20 percent of the structures served by a supplier, the supplier may use CWS tier 2 sampling sites in its sampling pool; or

BOARD NOTE: Subsection (a)(4)(A)(i) was derived from a segment of 40 CFR 141.86(a)(3)(ii) (1999).

ii) If the CWS supplier has an insufficient number of CWS tier 1 sampling sites on its distribution system, the supplier may use CWS tier 2 sampling sites in its sampling pool; or

BOARD NOTE: Subsection (a)(4)(A)(ii) was derived from a segment of 40 CFR 141.86(a)(4) (1999).

iii) If ~~fewer than 20 percent of the structures served by the supplier are multiple-family residences, and~~ the CWS supplier has an insufficient number of CWS tier 1 and CWS tier 2 sampling sites on its distribution system, the supplier may complete its sampling pool with CWS tier 3 sampling sites.

BOARD NOTE: Subsection (a)(4)(A)(iii) was derived from a segment of 40 CFR 141.86(a)(5) (1999).

iv) If the CWS supplier has an insufficient number of CWS tier 1 sampling sites, CWS tier 2 sampling sites, and CWS tier 3 sampling sites, the supplier ~~shall~~ must use those CWS tier 1 sampling sites, CWS tier 2 sampling sites, and CWS tier 3 sampling sites that it has~~,~~ and ~~the supplier shall randomly select an additional~~ complete its sampling pool ~~of~~ with representative sites ~~on~~ throughout its distribution system for the balance of its sampling sites. For the purpose of this subsection (a)(4)(A)(iv), a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

BOARD NOTE: Subsection (a)(4)(A)(iv) was derived from segments of 40 CFR 141.86(a)(5) (1999), as amended at 65 Fed. Reg. 2007 (Jan. 12, 2000).

B) NTNCWS suppliers.

i) An NTNCWS supplier ~~shall~~ must select NTNCWS tier 1 sampling sites for its sampling pool~~, except if~~.

BOARD NOTE: Subsection (a)(4)(B)(i) was derived from segments of 40 CFR 141.86(a)(6) (1999).

ii) If the NTNCWS supplier has an insufficient number of NTNCWS tier 1 sampling sites, the supplier may complete its sampling pool with alternative NTNCWS sampling sites.

BOARD NOTE: Subsection (a)(4)(B)(ii) was derived from segments of 40 CFR 141.86(a)(7) (1999).

iii) If the NTNCWS supplier has an insufficient number of NTNCWS tier 1 sampling sites and NTNCWS alternative sampling sites, the supplier ~~shall~~ must use ~~those NTNCWS tier 1 sampling sites and NTNCWS alternative sampling sites that it has, and the supplier shall randomly select an additional pool of~~ representative sites throughout its distribution system ~~for the balance of its sampling sites~~. For the purpose of this subsection (a)(4)(B)(ii), a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

BOARD NOTE: Subsection (a)(4)(B)(iii) was derived from segments of 40 CFR 141.86(a)(6) (1999), as amended at 65 Fed. Reg. 2007 (Jan. 12, 2000).

~~C) Agency submission by suppliers with an insufficient number of CWS or NTNCWS tier 1 sampling sites.~~

~~i) Any CWS or NTNCWS supplier whose sampling pool does not include a sufficient number of sites to consist exclusively of CWS tier 1 sampling sites or NTNCWS tier 1 sampling sites, as appropriate, shall submit a letter to the Agency under Section 611.360(a)(2) that demonstrates why a review of the information listed in subsection (a)(2) above was inadequate to locate a sufficient number of CWS tier 1 sampling sites or NTNCWS tier 1 sampling sites.~~

~~ii) Any CWS supplier that wants to include CWS tier 3 sampling sites in its sampling pool shall demonstrate in a letter to the Agency why it was unable to locate a sufficient number of CWS tier 1 sampling sites and CWS tier 2 sampling sites.~~

~~iii) If the Agency determines, based on the information submitted pursuant to subsection (a)(4)(C)(i) or (a)(4)(C)(ii) above, that either the information was inadequate to locate a sufficient number of CWS tier 1 sampling sites or NTNCWS tier 1 sampling sites, or that the supplier was unable to locate a sufficient number of CWS tier 1 sampling sites and CWS tier 2 sampling sites, the Agency shall issue a SEP to the supplier pursuant to Section 611.110 that allows it to use CWS tier 2 sampling sites, NTNCWS tier 2 sampling sites, or CWS tier 3 sampling sites, as appropriate.~~

~~D~~C) Suppliers with lead service lines. Any supplier whose distribution system contains lead service lines ~~shall~~ must draw samples during each six-month monitoring period from sampling sites as follows:

i) 50 percent of the samples from sampling sites that contain lead pipes or from sampling sites that have copper pipes with lead solder, and

ii) 50 percent of those samples from sites served by a lead service line.

iii) A supplier that cannot identify a sufficient number of sampling sites served by a lead service line ~~shall demonstrate in a letter to the Agency under Section 611.360(a)(4) that it was unable to locate a sufficient number of such sites~~ must collect first-draw samples from all of the sites identified as being served by such lines.

~~iv) If the Agency determines, based on the information submitted pursuant to subsection (a)(4)(D)(iii) above, that a supplier that cannot identify a sufficient number of sampling sites served by a lead service line, the Agency shall issue a SEP to the supplier pursuant to Section 611.110~~

~~that allows it to collect first-draw samples from all of the sites on its distribution system identified as being served by such lines.~~

BOARD NOTE: Subsection (a)(4)(C) was derived from segments of 40 CFR 141.86(a)(8) (1999), as renumbered and amended at 65 Fed. Reg. 2007 (Jan. 12, 2000). This allows the pool of sampling sites to consist exclusively of structures or buildings served by lead service lines.

b) Sample collection methods.

1) All tap samples for lead and copper collected in accordance with this Subpart, with the exception of lead service line samples collected under Section 611.354(c) and samples collected under subsection (b)(5) of this Section, ~~shall~~ must be first-draw samples.

2) First-draw tap samples.

A) Each first-draw tap sample for lead and copper ~~shall~~ must be one liter in volume and have stood motionless in the plumbing system of each sampling site for at least six hours.

B) First-draw samples from residential housing ~~shall~~ must be collected from the cold water kitchen tap or bathroom sink tap.

C) First-draw samples from a non-residential building ~~shall~~ must be one liter in volume and must be collected at an interior tap from which water is typically drawn for consumption.

D Non-first-draw samples collected in lieu of first-draw samples pursuant to subsection (b)(5) of this Section must be one liter in volume and must be collected at an interior tap from which water is typically drawn for consumption.

~~D~~E) First-draw samples may be collected by the supplier or the supplier may allow residents to collect first-draw samples after instructing the residents of the sampling procedures specified in this subsection (b).

i) To avoid problems of residents handling nitric acid, acidification of first-draw samples may be done up to 14 days after the sample is collected.

ii) ~~If the first-draw sample is not acidified immediately after collection, then~~ After acidification to resolubilize the metals, the sample must stand in the original container for ~~at least 28 hours after acidification~~ the time specified in the approved USEPA method before the sample can be analyzed.

~~E~~F) If a supplier allows residents to perform sampling under subsection (b)(2)(D) ~~above~~ of this Section, the supplier may not challenge the accuracy of sampling results based on alleged errors in sample collection.

3) Service line samples.

A) Each service line sample ~~shall~~ must be one liter in volume and have stood motionless in the lead service line for at least six hours.

B) Lead service line samples ~~shall~~ must be collected in one of the following three ways:

i) ~~at~~ At the tap after flushing that volume of water calculated as being between the tap and the lead service line based on the interior diameter and length of the pipe between the tap and the lead service line;

ii) ~~tapping~~ Tapping directly into the lead service line; or

iii) ~~if~~ If the sampling site is a single-family structure, allowing the water to run until there is a significant change in temperature that would be indicative of water that has been standing in the lead service line.

4) Follow-up first-draw tap samples.

A) A supplier ~~shall~~ must collect each follow-up first-draw tap sample from the same sampling site from which it collected the previous ~~sample(s)~~ samples.

B) If, for any reason, the supplier cannot gain entry to a sampling site in order to collect a follow-up tap sample, the supplier may collect the follow-up tap sample from another sampling site in its sampling pool, as long as the new site meets the same targeting criteria and is within reasonable proximity of the original site.

5) Substitute non-first-draw samples.

A) A NTNCWS supplier or a CWS supplier that meets the criteria of Sections 611.355(c)(7)(A) and (c)(7)(B), that does not have enough taps that can supply first-draw samples, as defined in Section 611.102, may apply to the Agency in writing to substitute non-first-draw samples by a SEP granted under Section 611.110.

B) A supplier approved to substitute non-first-draw samples must collect as many first-draw samples from appropriate taps as possible and identify sampling times and locations that would likely result in the longest standing time for the remaining sites.

C The Agency may grant a SEP that waives the requirement for prior Agency approval of non-first-draw sample sites selected by the system.

c) Number of samples

1) Suppliers ~~shall~~ must collect at least one sample from the number of sites listed in the first column of ~~Section 611.~~Table D of this Part (labelled "standard monitoring") during each six-month monitoring period specified in subsection (d) ~~below~~ of this Section.

2) A supplier conducting reduced monitoring pursuant to subsection (d)(4) ~~below~~ of this Section may collect one sample from the number of sites specified in the second column of ~~Section 611.~~Table D of this Part (labelled "reduced monitoring") during each reduced monitoring period specified in subsection (d)(4) ~~below~~ of this Section. Such reduced monitoring sites must be representative of the sites required for standard monitoring. The Agency may, by a SEP issued pursuant to Section 611.110, specify sampling locations when a system is conducting reduced monitoring.

d) Timing of monitoring

1) Initial tap sampling. The first six-month monitoring period for small, medium-sized and large system suppliers ~~shall~~ must begin on the dates specified in ~~Section 611.~~Table E of this Part.

A) All large system suppliers ~~shall~~ must monitor during each of two consecutive six-month periods.

B) All small and medium-sized system suppliers ~~shall~~ must monitor during each consecutive six-month monitoring period until the following is true:

i) ~~the~~ The supplier exceeds the lead action level or the copper action level and is therefore required to implement the corrosion control treatment requirements under Section 611.351, in which case the supplier ~~shall~~ must continue monitoring in accordance with subsection (d)(2) ~~below~~ of this Section, or

ii) ~~the~~ The supplier meets the lead action level and the copper action level during each of two consecutive six-month monitoring periods, in which case the supplier may reduce monitoring in accordance with subsection (d)(4) ~~below~~ of this Section.

2) Monitoring after installation of corrosion control and source water treatment.

A) Any large system supplier that installs optimal corrosion control treatment pursuant to Section 611.351(d)(4) ~~shall~~ must monitor during each of two consecutive six-month monitoring periods before the date specified in Section 611.351(d)(5).

B) Any small or medium-sized system supplier that installs optimal corrosion control treatment pursuant to Section 611.351(e)(5) ~~shall~~ must monitor during each of two consecutive six-month monitoring periods before the date specified in Section 611.351(e)(6).

C) Any supplier that installs source water treatment pursuant to Section 611.353(a)(3) ~~shall~~ must monitor during each of two consecutive six-month monitoring periods before the date specified in Section 611.353(a)(4).

3) Monitoring after the Agency specification of water quality parameter values for optimal corrosion control. After the Agency specifies the values for water quality control parameters pursuant to Section 611.352(f), the supplier ~~shall~~ must monitor during each subsequent six-month monitoring period, with the first six-month monitoring period to begin on the date the Agency specifies the optimal values.

4) Reduced monitoring.

A) Reduction to annual for small and medium-sized system suppliers meeting the lead and copper action levels. A small or medium-sized system supplier that meets the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the number of samples in accordance with subsection (c) ~~above~~ of this Section, and reduce the frequency of sampling to once per year.

B) SEP allowing reduction to annual for suppliers maintaining water quality control parameters.

i) ~~The Agency shall, by a SEP granted pursuant to Section 611.110, allow any~~ Any supplier ~~to~~ that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Agency under Section 611.352(f) during each of two consecutive six-month monitoring periods may reduce the frequency of monitoring to ~~annual~~ once per year and the number of lead and copper samples to that specified by subsection (c) above if it ~~determines that a supplier has, during each of two consecutive six-month monitoring periods, maintained the range of values for the water quality control parameters specified pursuant to Section 611.352(f) as reflecting optimal corrosion control treatment~~ receives written approval from the Agency in the form of a SEP granted pursuant to Section 611.110.

ii) ~~Any supplier may request a SEP if it concurrently provides the Agency with the information necessary to support a determination under subsection (d)(4)(B)(i) above~~The Agency must review monitoring, treatment, and other relevant information submitted by the water system in accordance with Section 611.360, and must notify the system in writing by a SEP granted pursuant to Sections 611.110 when it determines the system is eligible to commence reduced monitoring pursuant to this subsection (d)(4).

~~iii) The Agency shall set forth the basis for its determination under subsection (d)(4)(B)(i) above.~~

~~iv~~iii) The Agency ~~shall, by a SEP issued pursuant to Section 611.110,~~ must review, and where appropriate, revise its determination under subsection (d)(4)(B)(i) ~~above~~ of this Section ~~determination~~ when the supplier submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available to the Agency.

C) Reduction to triennial for small and medium-sized system suppliers.

i) Small and medium-sized system suppliers meeting lead and copper action levels. A small or medium-sized system supplier that meets the lead and copper action levels during three consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three years.

ii) SEP for suppliers meeting optimal corrosion control treatment. ~~The Agency shall, by a SEP granted pursuant to Section 611.110, allow a~~ Any supplier ~~to~~ that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Agency under Section 611.352(f) during three consecutive years of monitoring may reduce its monitoring frequency of monitoring from annual to ~~triennial~~ once every three years if it ~~determines that the supplier, during each of three consecutive years of monitoring, has maintained the range of values for the water quality control parameters specified as representing optimal corrosion control~~

~~treatment pursuant to Section 611.352(f)~~ receives written approval from the Agency in the form of a SEP granted pursuant to Section 611.110. ~~Any supplier may request a SEP if it concurrently provides the Agency with the information necessary to support a determination under this subsection. The Agency shall set forth the basis for its determination.~~

iii) The Agency~~, by a SEP issued pursuant to Section 611.110, shall~~ must review, and where appropriate, revise its determination under subsection (d)(4)(C)(ii) of this Section when the supplier submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available to the Agency.

D) Sampling at a reduced frequency. A supplier that reduces the number and frequency of sampling ~~shall~~ must collect these samples from representative sites included in the pool of targeted sampling sites identified in subsection (a)~~ above~~ of this Section, preferentially selecting those sampling sites from the highest tier first. Suppliers sampling annually or less frequently ~~shall~~ must conduct the lead and copper tap sampling during the months of June, July, August, or September unless the Agency has approved a different sampling period in accordance with subsection (d)(4)(D)(i) of this Section.

i) The Agency may grant a SEP pursuant to Section 611.110 that approves a different period for conducting the lead and copper tap sampling for systems collecting a reduced number of samples. Such a period must be no longer than four consecutive months and must represent a time of normal operation where the highest levels of lead are most likely to occur. For a NTNCWS supplier that does not operate during the months of June through September and for which the period of normal operation where the highest levels of lead are most likely to occur is not known, the Agency must designate a period that represents a time of normal operation for the system.

ii) A supplier monitoring annually that has been collecting samples during the months of June through September and which receives Agency approval to alter its sample collection period under subsection (d)(4)(D)(i) of this Section must collect its next round of samples during a time period that ends no later than 21 months after the previous round of sampling. A supplier monitoring once every three years that has been collecting samples during the months of June through September and which receives Agency approval to alter the sampling collection period as provided in subsection (d)(4)(D)(i) of this Section must collect its next round of samples during a time period that ends no later than 45 months after the previous round of sampling. Subsequent rounds of sampling must be collected annually or once every three years, as required by this Section. A small system supplier with a waiver granted pursuant to subsection (g) of this Section that has been collecting samples during the months of June through September and which receives Agency approval to alter its sample collection period under subsection (d)(4)(D)(i) of this Section must collect its next round of samples before the end of the nine-year compliance cycle (as that term is defined in Section 611.101).

E) Any water system that demonstrates for two consecutive six-month monitoring periods that the tap water lead level computed under Section 611.350(c)(3) is less than or equal to 0.005 mg/L and that the tap water copper level computed under Section 611.350(c)(3) is less than or equal to 0.65 mg/L may reduce the number of samples in accordance with subsection (c) of this Section and reduce the frequency of sampling to once every three calendar years.

~~E~~F) Resumption of standard monitoring.

i) Small or medium-sized suppliers exceeding lead or copper action level. A small or medium-sized system supplier subject to reduced monitoring that exceeds the lead action level or the copper action level ~~shall~~ must resume sampling in accordance subsection (d)(3) ~~above~~ of this Section and collect the number of samples specified for standard monitoring under subsection (c) ~~above~~ of this Section. Such a supplier ~~shall~~ must also conduct water quality parameter monitoring in accordance with Section 611.357 (b), (c), or (d) (as appropriate) during the six-month monitoring period in which it exceeded the action level. Any such system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subsection (c) of this Section after it has completed two subsequent consecutive six-month rounds of monitoring that meet the criteria of subsection (d)(4)(A) of this Section or may resume monitoring once every three years for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either subsection (d)(4)(C) or (d)(4)(E) of this Section.

ii) Suppliers failing to operate within water quality control parameters. Any supplier subject to reduced monitoring frequency that fails to operate within the range of values for the water quality control parameters specified pursuant to Section 611.352(f) for more than nine days in any six-month period specified in Section 611.357(d) ~~shall~~ must ~~resume~~ conduct tap water sampling for more than nine days in any six-month period specified in Section 611.357(d) in accordance with subsection (d)(3) ~~above~~ of this Section, ~~and~~ must collect the number of samples specified for standard monitoring under subsection (c) ~~above~~ of this Section, and must resume monitoring for water quality parameters within the distribution system in accordance with Section 611.357(d).

G) Any water supplier subject to a reduced monitoring frequency under subsection (d)(4) of this Section that either adds a new source of water or changes any water treatment must inform the Agency in writing in accordance with Section 611.360(a)(3). The Agency may, by a SEP granted pursuant to Section 611.110, require the system to resume sampling in accordance with subsection (d)(3) of this Section and collect the number of samples specified for standard monitoring under subsection (c) of this Section or take other appropriate steps such as increased water quality parameter monitoring or re-evaluation of its corrosion control treatment given the potentially different water quality considerations.

H) A supplier required under subsection (f)(4)(F) of this Section to resume monitoring in accordance with Section 611.357(d) may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:

i) The supplier may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subsection (c) of this Section after it has completed two subsequent six-month rounds of monitoring that meet the criteria of subsection (d)(4)(B) of this Section and the supplier has received written approval from the Agency by a SEP pursuant to Section 611.110 that it is appropriate to resume reduced monitoring on an annual frequency.

ii) The supplier may resume monitoring for lead and copper once every three years at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either subsection (d)(4)(C) or (d)(4)(E) of this Section and the system has received a SEP under Section 611.110 from the Agency that it is appropriate to resume monitoring once every three years.

iii) The supplier may reduce the number of water quality parameter tap water samples required in accordance with Section 611.357(e)(1) and the frequency with which it collects such samples in accordance with Section 611.357(e)(2). Such a system may not resume monitoring once every three years for water quality parameters at the tap until it demonstrates, in accordance with the requirements of Section 611.357(e)(2), that it has re-qualified for monitoring once every three years.

BOARD NOTE: Subsections (d)(4)(H)(i) through (d)(4)(H)(iii) are derived from 40 C.F.R. 141.86(d)(4)(vi)(B)(*1*) through (d)(4)(vi)(B)(*3*), as added at 65 Fed. Reg. 2009 (January 12, 2000), since Illinois Administrative Code codification requirements allow only four indent levels of subsections.

e) Additional monitoring. The results of any monitoring conducted in addition to the minimum requirements of this section ~~shall~~ must be considered by the supplier and the Agency in making any determinations (i.e., calculating the 90th percentile lead action level or the copper level) under this Subpart G.

f) Invalidation of lead or copper tap water samples. A sample invalidated under this subsection does not count toward determining lead or copper 90th percentile levels under Section 611.350(c)(3) or toward meeting the minimum monitoring requirements of subsection (c) of this Section.

1) The Agency must invalidate a lead or copper tap water sample if it determines that one of the following conditions exists:

A) The laboratory establishes that improper sample analysis caused erroneous results;

B) The sample was taken from a site that did not meet the site selection criteria of this Section;

C) The sample container was damaged in transit; or

D) There is substantial reason to believe that the sample was subject to tampering.

2) The supplier must report the results of all samples to the Agency and all supporting documentation for samples the supplier believes should be invalidated.

3) To invalidate a sample under subsection (f)(1) of this Section, the decision and the

rationale for the decision must be documented in writing. The Agency may not invalidate a sample solely on the grounds that a follow-up sample result is higher or lower than that of the original sample.

4) The water supplier must collect replacement samples for any samples invalidated under this Section if, after the invalidation of one or more samples, the supplier has too few samples to meet the minimum requirements of subsection (c) of this Section. Any such replacement samples must be taken as soon as possible, but no later than 20 days after the date the Agency invalidates the sample or by the end of the applicable monitoring period, whichever occurs later. Replacement samples taken after the end of the applicable monitoring period must not also be used to meet the monitoring requirements of a subsequent monitoring period. The replacement samples must be taken at the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.

g) Monitoring waivers for small system suppliers. Any small system supplier that meets the criteria of this subsection (g) may apply to the Agency to reduce the frequency of monitoring for lead and copper under this Section to once every nine years (i.e., a "full waiver") if it meets all of the materials criteria specified in subsection (g)(1) of this Section and all of the monitoring criteria specified in subsection (g)(2) of this Section. Any small system supplier that meets the criteria in subsections (g)(1) and (g)(2) of this Section only for lead, or only for copper, may apply to the State for a waiver to reduce the frequency of tap water monitoring to once every nine years for that contaminant only (i.e., a "partial waiver").

1) Materials criteria. The supplier must demonstrate that its distribution system and service lines and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing materials or copper-containing materials, as those terms are defined in this subsection (g)(1), as follows:

A) Lead. To qualify for a full waiver, or a waiver of the tap water monitoring requirements for lead (i.e., a "lead waiver"), the water supplier must provide certification and supporting documentation to the Agency that the system is free of all lead-containing materials, as follows:

i) It contains no plastic pipes which contain lead plasticizers, or plastic service lines which contain lead plasticizers; and

ii) It is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fittings and fixtures, unless such fittings and fixtures meet the specifications of NSF Standard 61, section 9, incorporated by reference in Section 611.102.

BOARD NOTE: Corresponding 40 CFR 141.86(g)(1)(i)(B) specifies "any standard established pursuant to 42 U.S.C. 300g-6(e) (SDWA Section 1417(e))." USEPA has stated that the NSF standard is that standard. See 62 Fed. Reg. 44684 (Aug. 22, 1997).

B) Copper. To qualify for a full waiver, or a waiver of the tap water monitoring requirements for copper (i.e., a "copper waiver"), the water supplier must provide certification and supporting documentation to the Agency that the system contains no copper pipes or copper service lines.

2) Monitoring criteria for waiver issuance. The supplier must have completed at least one

six-month round of standard tap water monitoring for lead and copper at sites approved by the Agency and from the number of sites required by subsection (c) of this Section and demonstrate that the 90th percentile levels for any and all rounds of monitoring conducted since the system became free of all lead-containing and/or copper-containing materials, as appropriate, meet the following criteria:

A) Lead levels. To qualify for a full waiver, or a lead waiver, the supplier must demonstrate that the 90th percentile lead level does not exceed 0.005 mg/L.

B) Copper levels. To qualify for a full waiver, or a copper waiver, the supplier must demonstrate that the 90th percentile copper level does not exceed 0.65 mg/L.

3) State approval of waiver application. The Agency must notify the supplier of its waiver determination by a SEP issued pursuant to Section 611.110, in writing, setting forth the basis of its decision and any condition of the waiver. As a condition of the waiver, the Agency may require the supplier to perform specific activities (e.g., limited monitoring, periodic outreach to customers to remind them to avoid installation of materials that might void the waiver) to avoid the risk of lead or copper concentration of concern in tap water. The small system supplier must continue monitoring for lead and copper at the tap as required by subsections (d)(1) through (d)(4) of this Section, as appropriate, until it receives written notification from the Agency that the waiver has been approved.

4) Monitoring frequency for suppliers with waivers.

A) A supplier with a full waiver must conduct tap water monitoring for lead and copper in accordance with subsection (d)(4)(D) of this Section at the reduced number of sampling sites identified in subsection (c) of this Section at least once every nine years and provide the materials certification specified in subsection (g)(1) of this Section for both lead and copper to the Agency along with the monitoring results.

B) A supplier with a partial waiver must conduct tap water monitoring for the waived contaminant in accordance with subsection (d)(4)(D) of this Section at the reduced number of sampling sites specified in subsection (c) of this Section at least once every nine years and provide the materials certification specified in subsection (g)(1) of this Section pertaining to the waived contaminant along with the monitoring results. Such a supplier also must continue to monitor for the non-waived contaminant in accordance with requirements of subsection (d)(1) through (d)(4) of this Section, as appropriate.

C) If a supplier with a full or partial waiver adds a new source of water or changes any water treatment, the supplier must notify the Agency in writing in accordance with Section 611.360(a)(3). The Agency has the authority to require the supplier to add or modify waiver conditions (e.g., require recertification that the supplier's system is free of lead- containing or copper-containing materials, require additional rounds of monitoring), if it deems such modifications are necessary to address treatment or source water changes at the system.

D) If a supplier with a full or partial waiver becomes aware that it is no longer free of lead-containing or copper-containing materials, as appropriate, (e.g., as a result of new construction or repairs), the supplier must notify the Agency in writing no later than 60 days after becoming aware of such a change.

5) Continued eligibility. If the supplier continues to satisfy the requirements of subsection

(g)(4) of this Section, the waiver will be renewed automatically, unless any of the conditions listed in subsection (g)(5)(A) through (g)(5)(C) of this Section occurs. A supplier whose waiver has been revoked may re-apply for a waiver at such time as it again meets the appropriate materials and monitoring criteria of subsections (g)(1) and (g)(2) of this Section.

A) A supplier with a full waiver or a lead waiver no longer satisfies the materials criteria of subsection (g)(1)(A) of this Section or has a 90th percentile lead level greater than 0.005 mg/L.

B) A supplier with a full waiver or a copper waiver no longer satisfies the materials criteria of subsection (g)(1)(B) of this Section or has a 90th percentile copper level greater than 0.65 mg/L.

C) The State notifies the supplier, in writing, that the waiver has been revoked, setting forth the basis of its decision.

6) Requirements following waiver revocation. A supplier whose full or partial waiver has been revoked by the Agency is subject to the corrosion control treatment and lead and copper tap water monitoring requirements, as follows:

A) If the supplier exceeds the lead or copper action level, the supplier must implement corrosion control treatment in accordance with the deadlines specified in Section 611.351(e), and any other applicable requirements of this Subpart G of this Part.

B) If the supplier meets both the lead and the copper action level, the supplier must monitor for lead and copper at the tap no less frequently than once every three years using the reduced number of sample sites specified in subsection (c) of this Section.

7) Pre-existing waivers. Small system supplier waivers approved by the Agency in writing prior to April 11, 2000 must remain in effect under the following conditions:

BOARD NOTE: Corresponding 40 CFR 141.86(g)(7) sets forth the April 11, 2000 date. The Board has retained that date to maintain consistency with the federal requirements, despite the fact that this subsection (g)(7) became effective after that date.

A) If the supplier has demonstrated that it is both free of lead- containing and copper-containing materials, as required by subsection (g)(1) of this Section and that its 90th percentile lead levels and 90th percentile copper levels meet the criteria of subsection (g)(2) of this Section, the waiver remains in effect so long as the supplier continues to meet the waiver eligibility criteria of subsection (g)(5) of this Section. The first round of tap water monitoring conducted pursuant to subsection (g)(4) of this Section must be completed no later than nine years after the last time the supplier has monitored for lead and copper at the tap.

B) If the supplier has met the materials criteria of subsection (g)(1) of this Section but has not met the monitoring criteria of subsection (g)(2) of this Section, the supplier must conduct a round of monitoring for lead and copper at the tap demonstrating that it meets the criteria of subsection (g)(2) of this Section no later than September 30, 2000. Thereafter, the waiver must remain in effect as long as the supplier meets the continued eligibility criteria of subsection (g)(5) of this Section. The first round of tap water monitoring conducted pursuant to subsection (g)(4) of this Section must be completed no later than nine years after the round of monitoring conducted pursuant to subsection (g)(2) of this Section.

BOARD NOTE: Corresponding 40 CFR 141.86(g)(7)(ii) sets forth the September 30, 2000 date. The Board has retained that date to maintain consistency with the federal requirements, despite the fact that this subsection (g)(7)(B) became effective after that date.

BOARD NOTE: Derived from 40 CFR 141.86 ~~(1993)~~ (1999), as amended at 65 Fed. Reg. 2007 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.357 Monitoring for Water Quality Parameters

All large system suppliers, and all small and medium-sized system suppliers that exceed the lead action level or the copper action level, ~~shall~~ must monitor water quality parameters in addition to lead and copper in accordance with this Section. The requirements of this Section are summarized in ~~Section 611.~~Table G of this Part.

a) General Requirements

1) Sample collection methods

A) Use of tap samples. The totality of all tap samples collected by a supplier ~~shall~~ must be representative of water quality throughout the distribution system taking into account the number of persons served, the different sources of water, the different treatment methods employed by the supplier, and seasonal variability. Although a supplier may conveniently conduct tap sampling for water quality parameters at sites used for coliform sampling performed pursuant to Subpart L of this Part, it is not required to do so, and a supplier is not required to perform tap sampling pursuant to this Section at taps targeted for lead and copper sampling under Section 611.356(a).

B) Use of entry point samples. Each supplier ~~shall~~ must collect samples at entry ~~point(s)~~ points to the distribution system from locations representative of each source after treatment. If a supplier draws water from more than one source and the sources are combined before distribution, the supplier must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).

2) Number of samples

A) Tap samples. Each supplier ~~shall~~ must collect two tap samples for applicable water quality parameters during each six-month monitoring period specified under subsections (b) through (e) ~~below~~ of this Section from the number of sites indicated in the first column of ~~Section 611.~~Table E of this Part.

B) Entry point samples.

i) Initial monitoring. Except as provided in subsection (c)(3) of this Section, each ~~Each~~ supplier ~~shall~~ must collect two samples for each applicable water quality parameter at each entry point to the distribution system during each six-month monitoring period specified in subsection (b) ~~below~~ of this Section.

ii) Subsequent monitoring. Each supplier ~~shall~~ must collect one sample for each applicable water quality parameter at each entry point to the distribution system during each six-month monitoring period specified in subsections (c) through (e) ~~below~~ of this Section.

b) Initial Sampling.

1) Large systems. Each large system supplier ~~shall~~ must measure the applicable water quality parameters specified in subsection (b)(3) ~~below~~ of this Section at taps and at each entry point to the distribution system during each six-month monitoring period specified in Section 611.356(d)(1).

2) Small and medium-sized systems. Each small and medium-sized system supplier ~~shall~~ must measure the applicable water quality parameters specified in subsection (b)(3) ~~below~~ of this Section at the locations specified in this subsection during each six-month monitoring period specified in Section 611.356(d)(1) during which the supplier exceeds the lead action level or the copper action level.

3) Water quality parameters:

A) pH;

B) ~~alkalinity~~Alkalinity;

C) ~~orthophosphate~~Orthophosphate, when an inhibitor containing a phosphate compound is used;

D) ~~silica~~Silica, when an inhibitor containing a silicate compound is used;

E) ~~calcium~~Calcium;

F) ~~conductivity~~Conductivity; and

G) ~~water~~ Water temperature.

c) Monitoring after installation of corrosion control.

1) Large systems. Each large system supplier that installs optimal corrosion control treatment pursuant to Section 611.351(d)(4) ~~shall~~ must measure the water quality parameters at the locations and frequencies specified in subsections ~~(c)(3)~~ (c)(4) and ~~(c)(4)~~ (c)(5) ~~below~~ of this Section during each six-month monitoring period specified in Section 611.356(d)(2)(A).

2) Small and medium-sized systems. Except as provided in subsection (c)(3) of this Section, each ~~Each~~ small or medium-sized system that installs optimal corrosion control treatment pursuant to Section 611.351(e)(5) ~~shall~~ must measure the water quality parameters at the locations and frequencies specified in subsections ~~(c)(3)~~ (c)(4) and ~~(c)(4)~~ (c)(5) ~~below~~ of this Section during each six-month monitoring period specified in Section 611.356(d)(2)(B) in which the supplier exceeds the lead action level or the copper action level.

3) Any ground water system can limit entry point sampling described in subsection (c)(2) of this Section to those entry points that are representative of water quality and treatment conditions throughout the system. If water from untreated ground water sources mixes with water from treated ground water sources, the system must monitor for water quality parameters both at representative entry points receiving treatment and representative

entry points receiving no treatment. Prior to the start of any monitoring under this subsection, the system must provide to the Agency written information identifying the selected entry points and documentation, including information on seasonal variability, sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

~~3~~4) Tap water samples, two samples at each tap for each of the following water quality parameters:

A) pH;

B) ~~alkalinity~~Alkalinity;

C) ~~orthophosphate~~Orthophosphate, when an inhibitor containing a phosphate compound is used;

D) ~~silica~~Silica, when an inhibitor containing a silicate compound is used; and

E) ~~calcium~~Calcium, when calcium carbonate stabilization is used as part of corrosion control.

~~4~~5) Entry point samples, one sample at each entry point to the distribution system every two weeks (bi-weekly) for each of the following water quality parameters:

A) pH;

B) ~~when~~ When alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and

C) ~~when~~ When a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate or silica (whichever is applicable).

d) Monitoring after the Agency specifies water quality parameter values for optimal corrosion control.

1) Large systems. After the Agency has specified the values for applicable water quality control parameters reflecting optimal corrosion control treatment pursuant to Section 611.352(f), each large system supplier ~~shall~~ must measure the applicable water quality parameters in accordance with subsection (c) ~~above~~ of this Section ~~during each six-month monitoring period specified in Section 611.356(d)(3)~~ and determine compliance with the requirements of Section 611.352(g) every six months with the first six- month period to begin on the date the State specifies the optimal values under Section 611.352(f).

2) Small and medium-sized systems. Each small or medium-sized system supplier ~~shall~~ must conduct such monitoring during each six-month monitoring period specified in ~~Section 611.356(d)(3)~~ this subsection (d) in which the supplier exceeds the lead action level or the copper action level. For any such small and medium-size system that is subject to a reduced monitoring frequency pursuant to Section 611.356(d)(4) at the time of the action level exceedance, the end of the applicable six-month period under this subsection must coincide with the end of the applicable monitoring period under Section 611.356(d)(4).

3) Compliance with Agency-designated optimal water quality parameter values must be determined as specified under Section 611.352(g)

~~3) Confirmation sampling.~~

~~A) A supplier may take a confirmation sample for any water quality parameter value no later than 3 days after it took the original sample it seeks to confirm.~~

~~B) If a supplier takes a confirmation sample, it must average the result obtained from the confirmation sample with the result obtained from the original sample it seeks to confirm, and the supplier shall use the average of these two results for any compliance determinations under Section 611.352(g).~~

~~C) The Agency shall delete the results that it determines are due to obvious sampling errors from this calculation.~~

e) Reduced monitoring.

1) Reduction in tap monitoring. A supplier that has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of two consecutive six-month monitoring periods under subsection (d) ~~above~~ of this Section ~~shall~~ must continue monitoring at the entry ~~point(s)~~ points to the distribution system as specified in subsection (c)(4) ~~above~~ of this Section. Such a supplier may collect two samples from each tap for applicable water quality parameters from the reduced number of sites indicated in the second column of ~~Section 611.~~Table E of this Part during each subsequent six-month monitoring period.

2) Reduction in monitoring frequency.

A) ~~Stages of reductions.~~Staged reductions in monitoring frequency.

i) Annual monitoring. A supplier that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified pursuant to Section 611.352(f) during three consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subsection (e)(1) ~~above~~ of this Section from every six months to annually.

ii) Triennial monitoring. A supplier that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified pursuant to Section 611.352(f) during three consecutive years of annual monitoring under subsection (e)(2)(A)(i) ~~above~~ of this Section may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subsection (e)(1) ~~above~~ of this Section from annually to once every three years.

B) A water supplier may reduce the frequency with which it collects tap samples for applicable water quality parameters specified in subsection (e)(1) of this Section to every three years if it demonstrates the following during two consecutive monitoring periods:

i) That its tap water lead level at the 90th percentile is less than or equal to the PQL for lead specified in Section 611.359 (a)(1)(B),

ii) That its tap water copper level at the 90th percentile is less than or equal to 0.65 mg/L for copper in Section 611.350(c)(2), and

iii) That it also has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the Agency under Section 611.352(f).

~~B) A supplier that conducts sampling annually or every three years shall collect these samples evenly throughout the calendar year so as to reflect seasonal variability.~~

3) A supplier that conducts sampling annually or every three years must collect these samples evenly throughout the calendar year so as to reflect seasonal variability.

~~C) Any supplier subject to a reduced monitoring frequency pursuant to this subsection that fails to operate within the range of values for the water quality parameters specified pursuant to Section 611.352(f) shall resume tap water sampling in accordance with the number and frequency requirements of subsection (d) above.~~

4) Any supplier subject to a reduced monitoring frequency pursuant to this subsection that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified pursuant to Section 611.352(f) for more than nine days in any six-month period specified in Section 611.352(g) must resume tap water sampling in accordance with the number and frequency requirements of subsection (d) of this Section. Such a system may resume annual monitoring for water quality parameters at the tap at the reduced number of sites specified in subsection (e)(1) of this Section after it has completed two subsequent consecutive six-month rounds of monitoring that meet the criteria of that subsection or may resume monitoring once every three years for water quality parameters at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either subsection (e)(2)(A) or (e)(2)(B) of this Section.

f) Additional monitoring by systems. The results of any monitoring conducted in addition to the minimum requirements of this section ~~shall~~ must be considered by the supplier and the Agency in making any determinations (i.e., determining concentrations of water quality parameters) under this Section or Section 611.352.

BOARD NOTE: Derived from 40 CFR 141.87 ~~(1995)~~ (1999), as amended at 65 Fed. Reg. 2010 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.358 Monitoring for Lead and Copper in Source Water

a) Sample location, collection methods, and number of samples

1) A supplier that fails to meet the lead action level or the copper action level on the basis of tap samples collected in accordance with Section 611.356 ~~shall~~ must collect lead and copper source water samples in accordance with the ~~sample location, number of samples, and collection method~~ following requirements ~~of Section 611.601(a) and (b) (as specified for inorganic chemical contaminants). The timing of sampling for lead and copper shall be in accordance with subsections (b) and (c) below, and not with the dates specified in Section 611.601(a)(1).~~ regarding sample location, number of samples, and collection methods:

A) A groundwater supplier must take a minimum of one sample at every entry point to the distribution system that is representative of each well after treatment (hereafter called a sampling point). The supplier must take one sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

B) A surface water supplier must take a minimum of one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point that is representative of each source after treatment (hereafter called a sampling point). The system must take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

BOARD NOTE: For the purposes of this subsection (a)(1)(B), surface water systems include systems with a combination of surface and ground sources.

C) If a supplier draws water from more than one source and the sources are combined before distribution, the supplier must sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).

D) The Agency may, by a SEP issued pursuant to Section 611.110, reduce the total number of samples which must be analyzed by allowing the use of compositing. Compositing of samples must be done by certified laboratory personnel. Composite samples from a maximum of five samples are allowed, provided that if the lead concentration in the composite sample is greater than or equal to 0.001 mg/L or the copper concentration is greater than or equal to 0.160 mg/ L, then the supplier must do either of the following:

i) The supplier must take and analyze a follow-up sample within 14 days at each sampling point included in the composite; or

ii) If duplicates of or sufficient quantities from the original samples from each sampling point used in the composite are available, the supplier may use these instead of resampling.

2) SEP requiring an additional sample

A) When the Agency determines that the results of sampling indicate an exceedance of the lead or copper MPC established under Section 611.353(b)(4), it ~~shall~~ must, by a SEP issued pursuant to Section 611.110, require the supplier to collect one additional sample as soon as possible after the initial sample at the same sampling point, but no later than two weeks after the supplier took the initial sample.

B) If a supplier takes an Agency-required confirmation sample for lead or copper, the supplier ~~shall~~ must average the results obtained from the initial sample with the results obtained from the confirmation sample in determining compliance with the Agency-specified lead and copper MPCs.

i) Any analytical result below the MDL ~~shall~~ must be considered as zero for the purposes of averaging.

ii) Any value above the MDL but below the PQL ~~shall~~ must either be considered as the measured value or be considered one-half the PQL.

b) Monitoring frequency after system exceeds tap water action level. A supplier that exceeds the lead action level or the copper action level in tap sampling ~~shall~~ must collect one source water sample from each entry point to the distribution system within six months after the exceedance.

c) Monitoring frequency after installation of source water treatment. A supplier that installs source water treatment pursuant to Section 611.353(a)(3) ~~shall~~ must collect an additional source water sample from each entry point to the distribution system during each of two consecutive six-month monitoring periods on or before the deadline specified in Section 611.353(a)(4).

d) Monitoring frequency after the Agency has specified the lead and copper MPCs or has determined that source water treatment is not needed.

1) A supplier ~~shall~~ must monitor at the frequency specified by subsection (d)(1)(A) or (d)(1)(B) ~~below~~ of this Section where the Agency has specified the MPCs pursuant to Section 611.353(b)(4) or has determined that the supplier is not required to install source water treatment pursuant to Section 611.353(b)(2).

A) GWS suppliers.

i) A GWS supplier required to sample by subsection (d)(1) ~~above~~ of this Section ~~shall~~ must collect samples once during the three-year compliance period (as that term is defined in Section 611.101) during which the Agency makes its determination pursuant to Section 611.353(b)(4) or 611.353(b)(2).

ii) A GWS supplier required to sample by subsection (d)(1) ~~above~~ of this Section ~~shall~~ must collect samples once during each subsequent compliance period.

B) A SWS or mixed system supplier ~~shall~~ must collect samples annually, the first annual monitoring period to begin on the date on which the Agency makes its determination pursuant to Section 611.353(b)(4) or 611.353(b)(2).

2) A supplier is not required to conduct source water sampling for lead or copper if the supplier meets the action level for the specific contaminant in all tap water samples collected during the entire source water sampling period applicable under subsection (d)(1)(A) or (d)(1)(B) ~~above~~ of this Section.

e) Reduced monitoring frequency.

1) A GWS supplier ~~that demonstrates that finished drinking water entering the distribution system has been maintained below the lead or copper MPC specified by the Agency pursuant to Section 611.353(b)(4) during at least three consecutive compliance periods under subsection (d)(1) above~~ may reduce the monitoring frequency for lead ~~or~~ and copper~~, as appropriate,~~ in source water to once during each nine-year compliance cycle (as that term is defined in Section 611.101)~~.~~ if the supplier meets one of the following criteria:

A) The supplier demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the State in Section 611.353(b)(4) during at least three consecutive compliance periods under subsection (d)(1) of this Section; or

B) The Agency has determined, by a SEP issued pursuant to Section 611.110, that source water treatment is not needed and the system demonstrates that, during at least three consecutive compliance periods in which sampling was conducted under subsection (d)(1) of this Section, the concentration of lead in source water was less than or equal to 0.005 mg/L and the concentration of copper in source water was less than or equal to 0.65 mg/L.

2) A SWS or mixed system supplier ~~that demonstrates that finished drinking water entering the distribution system has been maintained below the lead and copper MPCs specified by the Agency pursuant to Section 611.353(b)(4) for at least three consecutive years under subsection (d)(1) above~~ may reduce the monitoring frequency in subsection (d)(1) of this Section to once during each nine-year compliance cycle (as that term is defined in Section 611.101)~~.~~ if the supplier meets one of the following criteria:

A) The supplier demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the Agency under Section 611.353(b)(4) for at least three consecutive years; or

B) The Agency has determined, by a SEP issued pursuant to Section 611.110, that source water treatment is not needed and the supplier demonstrates that, during at least three consecutive years, the concentration of lead in source water was less than or equal to 0.005 mg/L and the concentration of copper in source water was less than or equal to 0.65 mg/L.

3) A supplier that uses a new source of water is not eligible for reduced monitoring for lead or copper until it demonstrates by samples collected from the new source during three consecutive monitoring periods, of the appropriate duration provided by subsection (d)(1) ~~above~~ of this Section, that lead or copper concentrations are below the MPC as specified by the Agency pursuant to Section 611.353(a)(4).

BOARD NOTE: Derived from 40 CFR 141.88 ~~(1992)~~ (1999), as amended at 65 Fed. Reg. 2012 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ____________________)

Section 611.359 Analytical Methods

Analyses for lead, copper, pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature ~~shall~~ must be conducted using the methods set forth in Section 611.611(a).

a) Analyses for lead and copper performed for the purposes of compliance with this Subpart ~~shall~~ must only be conducted by laboratories that have been certified by USEPA or the Agency. To obtain certification to conduct analyses for lead and copper, laboratories must do the following:

1) Analyze performance evaluation samples that include lead and copper provided by USEPA Environmental Monitoring and Support Laboratory or equivalent samples provided by the Agency; and

2) Achieve quantitative acceptance limits as follows:

A) For lead: ±30 percent of the actual amount in the performance evaluation sample when the actual amount is greater than or equal to 0.005 mg/L (the PQL for lead is 0.005 mg/L);

B) For copper: ±10 percent of the actual amount in the performance evaluation sample when the actual amount is greater than or equal to 0.050 mg/L (the PQL for copper is 0.050 mg/L);

C) Achieve the method detection ~~limits (MDLs)~~ limit (MDL) for lead (0.001 mg/L, as defined in Section 611.350(a)) according to the procedures in 35 Ill. Adm. Code 183 and 40 CFR 136, Appendix B: "Definition and Procedure for the Determination of the Method Detection Limit--Revision 1.11" (1999). This need only be accomplished if the laboratory will be processing source water composite samples under Section 611.358(a)(1)(C); and

D) Be currently certified by USEPA or the Agency to perform analyses to the specifications described in subsection (a)(2) of this Section.

b) The Agency ~~shall~~ must, by a SEP issued pursuant to Section 611.110, allow a supplier to use previously collected monitoring data for the purposes of monitoring under this Subpart if the data were collected and analyzed in accordance with the requirements of this Subpart.

c) Reporting lead and copper levels.

1) All lead and copper levels greater than or equal to the lead and copper PQL (Pb ≥ 0.005 mg/L and Cu ≥ 0.050 mg/L) must be reported as measured.

2) All lead and copper levels measured less than the PQL and greater than the MDL (0.005 mg/L > Pb > MDL and 0.050 mg/L > Cu > MDL) must be either reported as measured or as one-half the PQL set forth in subsection (a) of this Section (i.e., reported as 0.0025 mg/L for lead or 0.025 mg/L for copper).

3) All lead and copper levels below the lead and copper MDL (MDL > Pb) must be reported as zero.

BOARD NOTE: Derived from 40 CFR 141.89 (1999), as amended at 65 Fed. Reg. 2012 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.360 Reporting

A supplier ~~shall~~ must report all of the following information to the Agency in accordance with this Section.

a) Reporting for tap, lead, and copper, and water quality parameter monitoring.

1) ~~A~~ Except as provided in subsection (a)(1)(viii) of this section, a supplier ~~shall~~ must report the following information for all samples specified in Section 611.356 and for all water quality parameter samples specified in Section 611.357 within ~~10~~ ten days of the end of each applicable sampling period specified in Sections 611.356 ~~through 611.358~~ and 611.357 (i.e., every six-months, annually, every ~~3~~ three years, or every nine years).

A) ~~the~~ The results of all tap samples for lead and copper, including the location of each site and the criteria under Section 611.356(a)(3) through (7) under which the site was selected for the supplier's sampling pool;

~~B) a certification that each first draw sample collected by the supplier was one liter in volume and, to the best of the supplier's knowledge, had stood motionless in the service line, or in the interior plumbing of a sampling site, for at least six hours;~~

B) Documentation for each tap water lead or copper sample for which the water supplier requests invalidation pursuant to Section 611.356(f)(2);

C) ~~where residents collected samples, a certification that each tap sample collected by the residents was taken after the supplier informed them of the proper sampling procedures specified in Section 611.356(b)(2)~~

C) This subsection (a)(1)(C) corresponds with 40 CFR 141.89(a)(1)(iii), a provision that USEPA removed and marked "reserved" at 65 Fed. Reg. 2012 (Jan. 12, 2000). This statement preserves structural parity with the federal rules;

D) ~~the~~ The 90th percentile lead and copper concentrations measured from among all lead and copper tap samples collected during each sampling period (calculated in accordance with Section 611.350(c)(3)), unless the Agency calculates the system's 90th percentile lead and copper levels under subsection (h) of this Section;

E) ~~with~~ With the exception of initial tap sampling conducted pursuant to Section 611.356(d)(1), the supplier ~~shall~~ must designate any site that was not sampled during previous sampling periods, and include an explanation of why sampling sites have changed;

F) ~~the~~ The results of all tap samples for pH, and where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected pursuant to Section 611.357(b) through (e);

G) ~~the~~ The results of all samples collected at entry ~~point(s)~~ points for applicable water quality parameters pursuant to Section 611.357(b) through (e).

H) A water supplier must report the results of all water quality parameter samples collected under Section 611.357(c) through (f) during each six-month monitoring period specified in Section 611.357(d) within the first 10 days following the end of the monitoring period, unless the Agency has specified, by a SEP granted pursuant to Section 611.110, a more frequent reporting requirement.

~~2) By the applicable date in Section 611.356(d)(1) for commencement of monitoring, each CWS supplier that does not complete its targeted sampling pool with CWS tier 1 sampling sites meeting the requirements of Section 611.356(a)(4)(A) shall send a letter to the Agency justifying its selection of CWS tier 2 sampling sites or CWS tier 3 sampling sites pursuant to Section 611.356 (a)(4)(A)(ii), (a)(4)(A)(iii), or (a)(4)(A)(iv).~~

2) For a NTNCWS supplier, or a CWS supplier meeting the criteria of Sections 611.355(c)(7)(A) and (B), that does not have enough taps which can provide first-draw samples, the supplier must do either of the following:

A) Provide written documentation to the Agency that identifies standing times and locations for enough non-first-draw samples to make up its sampling pool under Section 611.356(b)(5) by the start of the first applicable monitoring period under Section 611.356(d) that commences after April 11, 2000, unless the Agency has waived prior Agency approval of non-first-draw sample sites selected by the supplier pursuant to Section 611.356(b)(5); or

BOARD NOTE: Corresponding 40 CFR 141.90(a)(2)(i) sets forth the April 11, 2000 date. The Board has retained that date to maintain structural consistency with the federal requirements, despite the fact that this subsection (a)(2)(A) became effective after that date.

B) If the Agency has waived prior approval of non-first-draw sample sites selected by the supplier, identify, in writing, each site that did not meet the six-hour minimum standing time and the length of standing time for that particular substitute sample collected pursuant to Section 611.356(b)(5) and include this information with the lead and copper tap sample results required to be submitted pursuant to subsection (a)(1)(A) of this Section.

~~3) By the applicable date in Section 611.356(d)(1) for commencement of monitoring, each NTNCWS supplier that does not complete its sampling pool with NTNCWS tier 1 sampling sites meeting the requirements of Section 611.356(a)(4)(B) shall send a letter to the Agency justifying its selection of alternative NTNCWS sampling sites pursuant to that Section.~~

3) No later than 60 days after the addition of a new source or any change in water treatment, unless the Agency requires earlier notification, a water supplier deemed to have optimized corrosion control under Section 611.351(b)(3), a water supplier subject to reduced monitoring pursuant to Section 611.356(d)(4), or a water supplier subject to a monitoring waiver pursuant to Section 611.356(g), must send written documentation to the Agency describing the change. In those instances where prior Agency approval of the treatment change or new source is not required, USEPA has stated that it encourages water systems to provide the notification to the Agency beforehand to minimize the risk the treatment change or new source will adversely affect optimal corrosion control.

~~4) By the applicable date in Section 611.356(d)(1) for commencement of monitoring, each supplier with lead service lines that is not able to locate the number of sites served by such lines required by Section 611.356(a)(4)(D) shall send a letter to the Agency demonstrating why it was unable to locate a sufficient number of such sites based upon the information listed in Section 611.356(a)(2).~~

4) Any small system supplier applying for a monitoring waiver under Section 611.356(g), or subject to a waiver granted pursuant to Section 611.356(g)(3), must provide the following information to the Agency in writing by the specified deadline:

A) By the start of the first applicable monitoring period in Section 611.356(d), any small water system supplier applying for a monitoring waiver must provide the documentation required to demonstrate that it meets the waiver criteria of Sections 611.356(g)(1) and (g)(2).

B) No later than nine years after the monitoring previously conducted pursuant to Section 611.356(g)(2) or Section 611.356(g)(4)(A), each small system supplier desiring to maintain its monitoring waiver must provide the information required by Sections 611.356(g)(4)(A) and (g)(ii).

C) No later than 60 days after it becomes aware that it is no longer free of lead-containing or copper-containing material, as appropriate, each small system supplier with a monitoring waiver must provide written notification to the Agency, setting forth the circumstances resulting in the lead-containing or copper-containing materials being introduced into the system and what corrective action, if any, the supplier plans to remove these materials.

D) By October 10, 2000, any small system supplier with a waiver granted prior to April 11, 2000 and that has not previously met the requirements of Section 611.356(g)(2) must provide the information required by that subsection.

BOARD NOTE: Corresponding 40 CFR 141.90(a)(2)(iv) sets forth the April 11, 2000 and October 10, 2000 dates. The Board has retained those dates to maintain structural consistency with the federal requirements, despite the fact that this subsection (a)(2)(D) became effective after that date.

~~5) Each supplier that requests that the Agency grant a SEP that reduces the number and frequency of sampling shall provide the information required by Section 611.356(d)(4).~~

5) Each GWS supplier that limits water quality parameter monitoring to a subset of entry points under Section 611.357(c)(3) must provide, by the commencement of such monitoring, written correspondence to the Agency that identifies the selected entry points and includes information sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

b) Reporting for source water monitoring.

1) A supplier ~~shall~~ must report the sampling results for all source water samples collected in accordance with Section 611.358 within ~~10~~ ten days of the end of each source water sampling period (i.e., annually, per compliance period, per compliance cycle) specified in Section 611.358.

2) With the exception of the first round of source water sampling conducted pursuant to Section 611.358(b), a supplier ~~shall~~ must specify any site that was not sampled during previous sampling periods, and include an explanation of why the sampling point has changed.

c) Reporting for corrosion control treatment. By the applicable dates under Section 611.351, a supplier ~~shall~~ must report the following information:

1) ~~for~~ For a supplier demonstrating that it has already optimized corrosion control, the information required by Section 611.352(b)(2) or (b)(3).

2) ~~for~~ For a supplier required to optimize corrosion control, its recommendation regarding optimal corrosion control treatment pursuant to Section 611.352(a).

3) ~~for~~ For a supplier required to evaluate the effectiveness of corrosion control treatments pursuant to Section 611.352(c), the information required by Section 611.352(c).

4) ~~for~~ For a supplier required to install optimal corrosion control approved by the Agency pursuant to Section 611.352(d), a copy of the Agency permit letter, which acts as certification that the supplier has completed installing the permitted treatment.

d) Reporting for source water treatment. On or before the applicable dates in Section 611.353, a supplier ~~shall~~ must provide the following information to the Agency:

1) ~~if~~ If required by Section 611.353(b)(1), its recommendation regarding source water treatment; or

2) ~~for~~ For suppliers required to install source water treatment pursuant to Section 611.353(b)(2), a copy of the Agency permit letter, which acts as certification that the supplier has completed installing the treatment approved by the Agency within 24 months after the Agency approved the treatment.

e) Reporting for lead service line replacement. A supplier ~~shall~~ must report the following information to the Agency to demonstrate compliance with the requirements of Section 611.354:

1) Within 12 months after a supplier exceeds the lead action level in sampling referred to in Section 611.354(a), the supplier ~~shall~~ must report each of the following to the Agency in writing:

A) ~~a~~ A demonstration that it has conducted a materials evaluation, including the evaluation required by Section 611.356(a),

B) ~~identify~~ Identify the initial number of lead service lines in its distribution system, and

C) ~~provide~~ Provide the Agency with the supplier's schedule for annually replacing at least ~~7~~ seven percent of the initial number of lead service lines in its distribution system.

2) Within 12 months after a supplier exceeds the lead action level in sampling referred to in Section 611.354(a), and every 12 months thereafter, the supplier ~~shall~~ must demonstrate to the Agency in writing that the supplier has done either of the following:

A) ~~replaced~~ Replaced in the previous 12 months at least ~~7~~ seven percent of the initial number of lead service lines in its distribution system (or any greater number of lines specified by the Agency pursuant to Section ~~611.354(f)~~ 611.354(e)), or

B) ~~conducted~~ Conducted sampling that demonstrates that the lead concentration in all service line samples from an individual ~~line(s)~~ lines, taken pursuant to Section 611.356(b)(3), is less than or equal to 0.015 mg/L.

C) Where the supplier makes a demonstration under subsection (e)(2)(B) ~~above~~ of this Section, the total number of lines that the supplier has replaced, combined with the total number that meet the criteria of Section 611.354(b), ~~shall~~ must equal at least ~~7~~ seven percent of the initial number of lead lines identified pursuant to subsection (a) ~~above~~ of this Section (or the percentage specified by the Agency pursuant to Section ~~611.354(f)~~ 611.354(e)).

3) The annual letter submitted to the Agency pursuant to subsection (e)(2) ~~above~~ of this Section ~~shall~~ must contain the following information:

A) ~~the~~ The number of lead service lines originally scheduled to be replaced during the previous year of the supplier's replacement schedule;

B) ~~the~~ The number and location of each lead service line actually replaced during the previous year of the supplier's replacement schedule; and

C) ~~if~~ If measured, the water lead concentration from each lead service line sampled pursuant to Section 611.356(b)(3) and the location of each lead service line sampled, the sampling method used, and the date of sampling.

~~4) As soon as practicable, but no later than three months after a supplier exceeds the lead action level in the sampling referred to in Section 611.354(a), any supplier seeking to rebut the presumption that it has control over the entire lead service line pursuant to Section 611.354(d) shall submit a letter to the Agency describing the following:~~

~~A) the legal authority (e.g., state statutes, municipal ordinances, public service contracts or other applicable legal authority) that limits the supplier's control over the service lines; and~~

~~B) the extent of the supplier's control over the service lines.~~

~~BOARD NOTE: This communication is vital to a supplier seeking to replace less than entire service lines. Under Section 611.354(e)(1), a supplier is presumed to control the entire service line unless it makes an affirmative showing. Under Section 611.354(d)(2)(A), a supplier is affirmatively required to replace all of each service line except as to any particular service line for which the Agency has made an affirmative determination that the supplier does not control in its entirety. Under Sections 611.354(b)(1) and (b)(4), the supplier must have completed replacing seven percent of the lead service lines within a year of the day of the event that triggered the requirement. Section 39(a) of the Act allows the Agency 90 days to render its decision on any permit request. Therefore, any supplier that desires an Agency determination pursuant to Section 611.354(e)(2) must submit the required information within the three month time frame of this subsection.~~

4) Any supplier that collects lead service line samples following partial lead service line replacement required by Section 611.354 must report the results to the Agency within the first ten days of the month following the month in which the supplier receives the laboratory results, or as specified by the Agency. The Agency may, by a SEP granted pursuant to Section 611.110, eliminate this requirement to report these monitoring results. A supplier must also report any additional information as specified by the Agency, and in a time and manner prescribed by the Agency, to verify that all partial lead service line replacement activities have taken place.

f) Reporting for public education program.

~~1) By December 31st of each calendar year, any supplier that is subject to the public education requirements of Section 611.355 shall submit a letter to the Agency demonstrating that the supplier has delivered the public education materials which meet the following requirements:~~

~~A) the content requirements of Section 611.355(a) and (b), and~~

~~B) the delivery requirements of Section 611.355(c).~~

~~2) The information submitted pursuant to this subsection shall include a list of all the newspapers, radio stations, television stations, facilities and organizations to which the supplier delivered public education materials during the previous year.~~

~~3) The supplier shall submit the letter required by this subsection annually for as long as it continues to exceed the lead action level.~~

1) Any water supplier that is subject to the public education requirements in Section 611.355 must, within ten days after the end of each period in which the supplier is required to perform public education tasks in accordance with Section 611.355(c), send written documentation to the Agency that contains:

A) A demonstration that the supplier has delivered the public education materials that meet the content requirements in Section 611.355(a) and (b) and the delivery requirements in Section 611.355(c); and

B) A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the supplier delivered public education materials during the period in which the supplier was required to perform public education tasks.

2) Unless required by the Agency, by a SEP issued pursuant to Section 611.110, a supplier that previously has submitted the information required by subsection (f)(1)(B) of this Section need not resubmit the information required by subsection (f)(1)(B) of this Section, as long as there have been no changes in the distribution list and the supplier certifies that the public education materials were distributed to the same list submitted previously.

g) Reporting of additional monitoring data. Any supplier that collects sampling data in addition to that required by this Subpart ~~shall~~ must report the results of that sampling to the Agency within the first ten days following the end of the applicable sampling ~~period(s)~~ periods specified by Sections 611.356 through 611.358 during which the samples are collected.

h) Reporting of 90th percentile lead and copper concentrations where the Agency calculates a system's 90th percentile concentrations. A water supplier is not required to report the 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period, as required by subsection (a)(1)(D) of this Section if:

1) The Agency has previously notified the water supplier that it will calculate the water system's 90th percentile lead and copper concentrations, based on the lead and copper tap results submitted pursuant to subsection (h)(2)(A) of this Section, and has specified a date before the end of the applicable monitoring period by which the supplier must provide the results of lead and copper tap water samples;

2) The supplier has provided the following information to the Agency by the date specified in subsection (h)(1) of this Section:

A) The results of all tap samples for lead and copper including the location of each site and the criteria under Section 611.356(a)(3), (a)(4), (a)(5), (a)(6), or (a)(7) under which the site was selected for the system's sampling pool, pursuant to subsection (a)(1)(A) of this Section; and

B) An identification of sampling sites utilized during the current monitoring period that were not sampled during previous monitoring periods, and an explanation why sampling sites have changed; and

3) The Agency has provided the results of the 90th percentile lead and copper calculations, in writing, to the water supplier before the end of the monitoring period.

BOARD NOTE: Derived from 40 CFR 141.90 ~~(1994)~~ (1999), as amended at 65 Fed. Reg. 2012 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

SUBPART N: INORGANIC MONITORING AND ANALYTICAL REQUIREMENTS

Section 611.606 Confirmation Samples

a) Where the results of sampling for antimony, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, or thallium indicate a level in excess of the MCL, the supplier ~~shall~~ must collect one additional sample as soon as possible after the supplier receives notification of the analytical result (but no later than two weeks after the initial sample was taken) at the same sampling point.

b) Where nitrate or nitrite sampling results indicate a level in excess of the MCL, the supplier ~~shall~~ must take a confirmation sample within 24 hours after the supplier's receipt of notification of the analytical results of the first sample.

1) Suppliers unable to comply with the 24-hour sampling requirement must, based on the initial sample, notify the persons served in accordance with Section ~~611.851~~ 611.902 and meet other Tier 1 public notification requirements under Subpart Q of this Part.

2) Suppliers exercising this option must take and analyze a confirmation sample within two weeks of notification of the analytical results of the first sample.

c) Averaging rules are specified in Section 611.609. The Agency ~~shall~~ must delete the original or confirmation sample if it determines that a sampling error occurred, in which case the confirmation sample will replace the original sample.

BOARD NOTE: Derived from 40 CFR 141.23(f) ~~(1995)~~ (1999), as amended at 65 Fed. Reg. 26022 (May 4, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

SUBPART O: ORGANIC MONITORING AND ANALYTICAL REQUIREMENTS

Section 611.648 Phase II, Phase IIB, and Phase V Synthetic Organic Contaminants

Analysis of the Phase II, Phase IIB, and Phase V SOCs for the purposes of determining compliance with the MCL must be conducted as follows:

a) Definitions. As used in this Section, the following terms will have the following meanings:

"Detect or detection" means that the contaminant of interest is present at a level greater than or equal to the "detection limit".

"Detection limit" means the level of the contaminant of interest that is specified in subsection (r) ~~below~~ of this Section.

BOARD NOTE: This is a "trigger level" for Phase II, Phase IIB, and Phase V SOCs inasmuch as it prompts further action. The use of the term "detect" or "detection" in this section is not intended to include any analytical capability of quantifying lower levels of any contaminant, or the "method detection limit".

b) Required sampling. Each supplier ~~shall~~ must take a minimum of one sample at each sampling point at the times required in subsection (q) ~~below~~ of this Section.

BOARD NOTE: USEPA stayed the effective date of the MCLs for aldicarb, aldicarb sulfone, and aldicarb sulfoxide at 57 Fed. Reg. 22178 (May 27, 1991). Section 611.311(c) includes this stay. However, despite the stay of the effectiveness of the MCLs for these three SOCs, suppliers must monitor for them.

c) Sampling points.

1) Sampling points for GWSs. Unless otherwise provided by SEP, a GWS supplier ~~shall~~ must take at least one sample from each of the following points: each entry point that is representative of each well after treatment.

2) Sampling points for SWSs and mixed systems. Unless otherwise provided by SEP, a SWS or mixed system supplier ~~shall~~ must sample from each of the following points:

A) Each entry point after treatment; or

B) Points in the distribution system that are representative of each source.

3) The supplier ~~shall~~ must take each sample at the same sampling point unless the Agency has granted a SEP that designates another location as more representative of each source, treatment plant, or within the distribution system.

4) If a system draws water from more than one source, and the sources are combined before distribution, the supplier ~~shall~~ must sample at an entry point during periods of normal operating conditions when water is representative of all sources being used.

BOARD NOTE: Subsections (b) and (c) ~~above~~ of this Section derived from 40 CFR 141.24(h)(1) through (h)(3) ~~(1995)~~ (1999).

d) Monitoring frequency~~:~~.

1) Each CWS and NTNCWS supplier ~~shall~~ must take four consecutive quarterly samples for each of the Phase II, Phase IIB, and Phase V SOCs during each compliance period, beginning in the three-year compliance period starting in the initial compliance period.

2) Suppliers serving more than 3,300 persons that do not detect a contaminant in the initial compliance period, ~~shall~~ must take a minimum of two quarterly samples in one year of each subsequent three-year compliance period.

3) Suppliers serving ~~less~~ fewer than or equal to 3,300 persons that do not detect a contaminant in the initial compliance period, ~~shall~~ must take a minimum of one sample during each subsequent three-year compliance period.

e) Reduction to annual monitoring frequency. A CWS or NTNCWS supplier may apply to the Agency for a SEP that releases it from the requirements of subsection (d) ~~above~~ of this Section. A SEP from the requirement of subsection (d) ~~above~~ of this Section ~~shall~~ must last for only a single three-year compliance period.

f) Vulnerability Assessment. The Agency ~~shall~~ must grant a SEP from the requirements of subsection (d) ~~above~~ of this Section based on consideration of the factors set forth at Section 611.110(e).

g) If one of the Phase II, Phase IIB, or Phase V SOCs is detected in any sample, then the following must occur:

1) The supplier ~~shall~~ must monitor quarterly for the contaminant at each sampling point that resulted in a detection.

2) Annual monitoring.

A) A supplier may request that the Agency grant a SEP pursuant to Section 610.110 that reduces the monitoring frequency to annual.

B) A request for a SEP must include the following minimal information:

i) For a GWS, two quarterly samples.

ii) For a SWS or mixed system, four quarterly samples.

C) The Agency ~~shall~~ must grant a SEP that allows annual monitoring at a sampling point if it determines that the sampling point is reliably and consistently below the MCL.

D) In issuing the SEP, the Agency ~~shall~~ must specify the level of the contaminant upon which the "reliably and consistently" determination was based. All SEPs that allow less frequent monitoring based on an Agency "reliably and consistently" determination ~~shall~~ must include a condition requiring the supplier to resume quarterly monitoring pursuant to subsection (g)(1) ~~above~~ of this Section if it detects any Phase II SOC.

3) Suppliers that monitor annually ~~shall~~ must monitor during the ~~quarter(s)~~ quarters that previously yielded the highest analytical result.

4) Suppliers that have three consecutive annual samples with no detection of a contaminant at a sampling point may apply to the Agency for a SEP with respect to that point, as specified in subsections (e) and (f) ~~above~~ of this Section.

5) Monitoring for related contaminants.

A) If monitoring results in detection of one or more of the related contaminants listed in subsection (g)(5)(B) ~~below~~ of this Section, subsequent monitoring ~~shall~~ must analyze for all the related compounds in the respective group.

B) Related contaminants:

i) ~~first~~ First group:

aldicarb
aldicarb sulfone
aldicarb sulfoxide

ii) ~~second~~ Second group:

heptachlor
heptachlor epoxide.

h) Quarterly monitoring following MCL violations.

1) Suppliers that violate an MCL for one of the Phase II, Phase IIB, or Phase V SOCs, as determined by subsection (k)~~ below~~ of this Section, ~~shall~~ must monitor quarterly for that contaminant at the sampling point where the violation occurred, beginning the next quarter after the violation.

2) Annual monitoring.

A) A supplier may request that the Agency grant a SEP pursuant to Section 611.110 that reduces the monitoring frequency to annual.

B) A request for a SEP must include, at a minimum, the results from four quarterly samples.

C) The Agency ~~shall~~ must grant a SEP that allows annual monitoring at a sampling point if it determines that the sampling point is reliably and consistently below the MCL.

D) In issuing the SEP, the Agency ~~shall~~ must specify the level of the contaminant upon which the "reliably and consistently" determination was based. All SEPs that allow less frequent monitoring based on an Agency "reliably and consistently" determination ~~shall~~ must include a condition requiring the supplier to resume quarterly monitoring pursuant to subsection (h)(1)~~ above~~ of this Section if it detects any Phase II SOC.

E) The supplier ~~shall~~ must monitor during the ~~quarter(s)~~ quarters that previously yielded the highest analytical result.

i) Confirmation samples.

1) If any of the Phase II, Phase IIB, or Phase V SOCs are detected in a sample, the supplier ~~shall~~ must take a confirmation sample as soon as possible, but no later than 14 days after the supplier receives notice of the detection.

2) Averaging is as specified in subsection (k)~~ below~~ of this Section.

3) The Agency ~~shall~~ must delete the original or confirmation sample if it determines that a sampling error occurred, in which case the confirmation sample will replace the original or confirmation sample.

j) This subsection corresponds with 40 CFR 141.24(h)(10), an optional USEPA provision relating to compositing of samples that USEPA does not require for state programs. This statement maintains structural consistency with USEPA rules.

~~k) Compliance with the MCLs for the Phase II, Phase IIB, and Phase V SOCs shall be determined based on the analytical results obtained at each sampling point.~~

~~1) For suppliers that are conducting monitoring at a frequency greater than annual, compliance is determined by a running annual average of all samples taken at each sampling point.~~

~~A) If the annual average of any sampling point is greater than the MCL, then the supplier is out of compliance.~~

~~B) If the initial sample or a subsequent sample would cause the annual average to be exceeded, then the supplier is out of compliance immediately.~~

~~C) Any samples below the detection limit must be calculated as zero for purposes of determining the annual average.~~

~~2) If monitoring is conducted annually or less frequently, the supplier is out of compliance if the level of a contaminant at any sampling point is greater than the MCL. If a confirmation sample is taken, the determination of compliance is based on the average of two samples.~~

~~3) When the portion of the distribution system that is out of compliance is separable from other parts of the distribution system and has no interconnections, the supplier may issue the public notice required by Subpart T of this Part only to persons served by that portion of the distribution system that is not in compliance.~~

k) This subsection (k) corresponds with 40 CFR 141.24(h)(11) (1999), which USEPA removed at 65 Fed. Reg. 26022 (May 4, 2000). This statement maintains structural consistency with the federal regulations.

~~BOARD NOTE: Derived from 40 CFR 141.24(h)(11) (1995).~~

l) This ~~provision~~ subsection (l) corresponds with 40 CFR 141.24(h)(12) ~~(1995)~~ (1999), which USEPA removed and reserved at 59 Fed. Reg. 62468 (Dec. 5, 1994). This statement maintains structural consistency with the federal regulations.

m) Analysis for PCBs must be conducted as follows using the methods in Section 611.645:

1) Each supplier that monitors for PCBs ~~shall~~ must analyze each sample using either USEPA Organic Methods, Method 505 or Method 508.

2) If PCBs are detected in any sample analyzed using USEPA Organic Methods, Methods 505 or 508, the supplier ~~shall~~ must reanalyze the sample using Method 508A to quantitate the individual Aroclors (as decachlorobiphenyl).

3) Compliance with the PCB MCL must be determined based upon the quantitative results of analyses using USEPA Organic Methods, Method 508A.

n) Use of existing data.

1) The Agency ~~shall~~ must allow the use of data collected after January 1, 1990 but prior to the effective date of this Section, pursuant to Agency sample request letters, if it determines that the data are generally consistent with the requirements of this Section.

2) The Agency ~~shall~~ must grant a SEP pursuant to Section 611.110 that allows a supplier to monitor annually beginning in the initial compliance period if it determines that the supplier did not detect any Phase I VOC or Phase II VOC using existing data allowed pursuant to subsection (n)(1) ~~above~~ of this Section.

o) The Agency ~~shall~~ must issue a SEP that increases the number of sampling points or the frequency of monitoring if it determines that this is necessary to detect variations within the PWS due to such factors as fluctuations in contaminant concentration due to seasonal use or changes in the water source.

BOARD NOTE: At 40 CFR 141.24(h)(15), USEPA uses the stated factors as non-limiting examples of circumstances that make additional monitoring necessary.

p) This subsection corresponds with 40 CFR 141.24(h)(16), a USEPA provision that the Board has not adopted because it reserves enforcement authority to the state and would serve no useful function as part of the state's rules. This statement maintains structural consistency with USEPA rules.

q) Each supplier ~~shall~~ must monitor, within each compliance period, at the time designated by the Agency by SEP pursuant to Section 611.110.

r) "Detection" means greater than or equal to the following concentrations for each contaminant:

1) for PCBs (Aroclors):

Aroclor	Detection Limit (mg/L)
1016	0.00008
1221	0.02
1232	0.0005
1242	0.0003
1248	0.0001
1254	0.0001
1260	0.0002

2) for other Phase II, Phase IIB, and Phase V SOCs:

Contaminant	Detection Limit (mg/L)
Alachlor	0.0002
Aldicarb	0.0005
Aldicarb sulfoxide	0.0005
Aldicarb sulfone	0.0008
Atrazine	0.0001
Benzo(a)pyrene	0.00002
Carbofuran	0.0009
Chlordane	0.0002
2,4-D	0.0001
Dalapon	0.001
1,2-Dibromo-3-chloropropane (DBCP)	0.00002
Di(2-ethylhexyl)adipate	0.0006
Di(2-ethylhexyl)phthalate	0.0006
Dinoseb	0.0002
Diquat	0.0004
Endothall	0.009
Endrin	0.00001
Ethylene dibromide (EDB)	0.00001
Glyphosate	0.006
Heptachlor	0.00004
Heptachlor epoxide	0.00002

Hexachlorobenzene	0.0001
Hexachlorocyclopentadiene	0.0001
Lindane	0.00002
Methoxychlor	0.0001
Oxamyl	0.002
Picloram	0.0001
Polychlorinated biphenyls (PCBs) (as decachloro-biphenyl)	0.0001
Pentachlorophenol	0.00004
Simazine	0.00007
Toxaphene	0.001
2,3,7,8-TCDD (dioxin)	0.000000005
2,4,5-TP (Silvex)	0.0002

s) Laboratory Certification.

1) Analyses under this Section must only be conducted by laboratories that have received approval by USEPA or the Agency according to the following conditions.

2) To receive certification to conduct analyses for the Phase II, Phase IIB, and Phase V SOCs the laboratory must do the following:

A) Analyze performance evaluation samples provided by the Agency pursuant to 35 Ill. Adm. Code 183.125(c) that include these substances; and

B) Achieve quantitative results on the analyses performed under subsection (s)(2)(A) ~~above~~ of this Section that are within the acceptance limits set forth in subsection (s)(2)(C) ~~below~~ of this Section.

C) Acceptance limits:

SOC	Acceptance Limits
Alachlor	± 45%
Aldicarb	2 standard deviations
Aldicarb sulfone	2 standard deviations
Aldicarb sulfoxide	2 standard deviations
Atrazine	± 45%
Benzo(a)pyrene	2 standard deviations
Carbofuran	± 45%
Chlordane	± 45%
Dalapon	2 standard deviations
Di(2-ethylhexyl)adipate	2 standard deviations
Di(2-ethylhexyl)phthalate	2 standard deviations
Dinoseb	2 standard deviations
Diquat	2 standard deviations
Endothall	2 standard deviations
Endrin	± 30%
Glyphosate	2 standard deviations
Dibromochloropropane (DBCP)	± 40%
Ethylene dibromide (EDB)	± 40%
Heptachlor	± 45%
Heptachlor epoxide	± 45%
Hexachlorobenzene	2 standard deviations

Hexachlorocyclopentadiene	2 standard deviations
Lindane	± 45%
Methoxychlor	± 45%
Oxamyl	2 standard deviations
PCBs (as Decachlorobiphenyl)	0-200%
Pentachlorophenol	± 50%
Picloram	2 standard deviations
Simazine	2 standard deviations
Toxaphene	± 45%
2,4-D	± 50%
2,3,7,8-TCDD (dioxin)	2 standard deviations
2,4,5-TP (Silvex)	± 50%

BOARD NOTE: Derived from 40 CFR 141.24(h) ~~(1995)~~ (1999), as amended at 65 Fed. Reg. 26022 (May 4, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

SUBPART R: ENHANCED FILTRATION AND DISINFECTION

Section 611.745 Reporting and Recordkeeping Requirements

In addition to the reporting and recordkeeping requirements in Sections 611.261 and 611.262, a public water system subject to the requirements of this Subpart that provides conventional filtration treatment or direct filtration ~~shall~~ must report monthly to the Agency the information specified in subsections (a) and (b) of this Section beginning January 1, 2002. In addition to the reporting and recordkeeping requirements in Sections 611.261 and 611.262, a public water system subject to the requirements of this Subpart that provides filtration approved under Section 611.743(b) ~~shall~~ must report monthly to the Agency the information specified in subsection (a) of this Section beginning January 1, 2002. The reporting in subsection (a) of this Section is in lieu of the reporting specified in Section 611.262(a).

a) Turbidity measurements, as required by Section 611.743, must be reported within ten days after the end of each month the system serves water to the public. Information that must be reported is the following:

1) The total number of filtered water turbidity measurements taken during the month.

2) The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the turbidity limits specified in Section 611.743 (a) or (b).

3) The date and value of any turbidity measurements taken during the month that exceed 1 NTU for systems using conventional filtration treatment or direct filtration, or that exceed the maximum level under Section 611.743(b).

b) Systems ~~shall~~ must maintain the results of individual filter monitoring taken under Section 611.744 for at least three years. Systems ~~shall~~ must report that they have conducted individual filter turbidity monitoring under Section 611.744 within ten days after the end of each month the system serves water to the public. Systems ~~shall~~ must report individual filter turbidity measurement results taken under Section 611.744 within ten days after the end of each month the system serves water to the public only if measurements demonstrate one or more of the conditions in subsections (b)(1) through (4) of this Section. Systems that use lime softening may apply to the Agency for alternative exceedence levels for the levels specified in subsections (b)(1) through (4) of this Section if they can demonstrate that higher turbidity levels in individual filters are due to lime carryover only and not due to degraded filter performance.

1) For any individual filter that has a measured turbidity level of greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart, the system ~~shall~~ must report the filter number, the turbidity measurement, and the ~~date(s)~~ dates on which the exceedence occurred. In addition, the system ~~shall~~ must either produce a filter profile for the filter within seven days of the exceedence (if the system is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedence.

2) For any individual filter that has a measured turbidity level of greater than 0.5 NTU in two consecutive measurements taken 15 minutes apart at the end of the first four hours of continuous filter operation after the filter has been backwashed or otherwise taken offline, the system ~~shall~~ must report the filter number, the turbidity, and the ~~date(s)~~ dates on which the exceedence occurred. In addition, the system ~~shall~~ must either produce a filter profile for the filter within seven days after the exceedence (if the system is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedence.

3) For any individual filter that has a measured turbidity level of greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of three consecutive months, the system ~~shall~~ must report the filter number, the turbidity measurement, and the ~~date(s)~~ dates on which the exceedence occurred. In addition, the system ~~shall~~ must conduct a self-assessment of the filter within 14 days of the exceedence and report that the self-assessment was conducted. The self assessment must consist of at least the following components: assessment of filter performance; development of a filter profile; identification and prioritization of factors limiting filter performance; assessment of the applicability of corrections; and preparation of a filter self-assessment report.

4) For any individual filter that has a measured turbidity level of greater than 2.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of two consecutive months, the system ~~shall~~ must report the filter number, the turbidity measurement, and the ~~date(s)~~ dates on which the exceedence occurred. In addition, the system ~~shall~~ must arrange for the conduct of a comprehensive performance evaluation by the Agency or a third party approved by the Agency no later than 30 days following the exceedence and have the evaluation completed and submitted to the Agency no later than 90 days following the exceedence.

c) Additional reporting requirements.

1) If at any time the turbidity exceeds 1 NTU in representative samples of filtered water in a system using conventional filtration treatment or direct filtration, the supplier must consult with the Agency as soon as practical, but no later than 24 hours after the exceedance is known, in accordance with the public notification requirements under Section 611.903(b)(3).

2) If at any time the turbidity in representative samples of filtered water exceed the maximum level set by the Agency under Section 611.743(b) for filtration technologies other than conventional filtration treatment, direct filtration, slow sand filtration, or diatomaceous earth filtration, the supplier must consult with the Agency as soon as practical, but no later than 24 hours

after the exceedance is known, in accordance with the public notification requirements under Section 611.903(b)(3).

BOARD NOTE: Derived from 40 CFR 141.175 (1999), as amended at 65 Fed. Reg. 26035 (May 4, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

SUBPART T: REPORTING~~, PUBLIC NOTIFICATION~~ AND RECORDKEEPING

Section 611.832 Notice by Agency (Repealed)

~~The Agency may give the public notices required in this Part on behalf of the CWS supplier. However, the supplier remains responsible for ensuring that the requirements of this Part are met.~~

~~BOARD NOTE: Drawn from 40 CFR 141.32(g) (1989).~~

(Source: Repealed at 25 Ill. Reg. ________ effective ______________________)

Section 611.840 Reporting

a) Except where a shorter period is specified in this Part, a supplier ~~shall~~ must report to the Agency the results of any test measurement or analysis required by this Part within the following times, whichever is shortest:

1) The first ten days following the month in which the result is received; or

2) The first ten days following the end of the required monitoring period, as specified by special exception permit.

b) Except where a different reporting period is specified in this Part, the supplier ~~shall~~ must report to the Agency within 48 hours any failure to comply with any provision (including failure to comply with monitoring requirements) of this Part.

c) The supplier is not required to report analytical results to the Agency in cases where an Agency laboratory performs the analysis.

d) The supplier, within ten days of ~~completion of each~~ completing the public notification ~~required pursuant to Section 611.851 et seq., shall~~ requirements under Subpart Q of this part for the initial public notice and any repeat notices, must submit to the Agency a certification that it has fully complied with the public notification regulations. The PWS must include with this certification a representative copy of each type of notice distributed, published, posted or made available to the persons served by the supplier or to the media.

e) The supplier ~~shall~~ must submit to the Agency within the time stated in the request copies of any records required to be maintained under Section 611.860 or copies of any documents then in existence which the Agency is entitled to inspect pursuant to the authority of Section 4 of the Act.

BOARD NOTE: Derived from 40 CFR 141.31 ~~(1989)~~ (1999), as amended at ~~54~~ 65 Fed. Reg. ~~27562, June 29, 1989~~ 26022 (May 4, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.851 Reporting MCL, MRDL, and other Violations (Repealed)

~~A PWS that 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 adjusted standard shall notify persons served by the PWS as follows:~~

~~a) Except as provided in subsection (c), the supplier shall give notice:~~

~~1) By publication in a daily newspaper of general circulation in the area served by the PWS as soon as possible, but in no case later than 14 days after the violation or failure. If the area served by a PWS is not served by a daily newspaper of general circulation, notice must instead be given by publication in a weekly newspaper of general circulation serving the area; and~~

~~2) 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. This is not required if the Agency determines by SEP that the supplier in violation has corrected the violation or failure within the 45-day period; and~~

~~3) For violations of the MCLs of contaminants or MRDLs of disinfectants that 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 PWS as soon as possible but in no case later than 72 hours after the violation. The following violations are acute violations:~~

~~A) Any violations posing an acute risk to human health, as specified in this Part or as determined by the Agency on a case-by-case basis.~~

~~B) Violation of the MCL for nitrate or nitrite in Section 611.301.~~

~~C) Violation of the MCL for total coliforms, when fecal coliforms or E. coli are present in the water distribution system, as specified in Section 611.325(b).~~

~~D) Occurrence of a waterborne disease outbreak.~~

~~E) Violation of the MRDL for chlorine dioxide as defined in Section 611.313 and determined according to Section 611.383(c)(2).~~

~~b) Except as provided in subsection (c), following the initial notice given under subsection (a), the supplier shall 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.~~

~~c) Alternative methods of notice.~~

~~1) In lieu of the requirements of subsections (a) and (b), a CWS supplier in an area that is not served by a daily or weekly newspaper of general circulation shall give notice by hand delivery or by continuous posting in conspicuous places within the area served by the CWS. Notice by hand delivery or posting must begin as soon as possible, but no later than 72 hours after the violation or failure for acute violations (as defined in subsection (a)(3)) or 14 days after the violation or failure (for any other violation). 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.~~

~~2) In lieu of the requirements of subsections (a) and (b), a non-CWS supplier may give notice by hand delivery or by continuous posting in conspicuous places within the area served~~

~~by the non-CWS. Notice by hand delivery or posting must begin as soon as possible, but no later than 72 hours after the violation or failure for acute violations (as defined in subsection (a)(3)), or 14 days after the violation or failure (for any other violation). 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.~~

~~3) Where allowed, pursuant to Section 611.609(d), 611.646(o)(3), or 611.648(k)(3) because it has a separable system, a supplier may issue public notice only to persons on that portion of its system that is out of compliance.~~

~~BOARD NOTE: Generally derived from 40 CFR 141.32(a) (1998). Subsection (c)(3) derived from 40 CFR 141.23(i)(4) & 141.24(f)(15)(iii), (g)(9) & (h)(11)(iii) (1993).~~

(Source: Repealed at 25 Ill. Reg. ________ effective ______________________)

Section 611.852 Reporting other Violations (Repealed)

~~A supplier that fails to perform monitoring required by this Part, which fails to comply with a testing procedure established by this Part, or which is subject to a variance or adjusted standard under Section 611.111, 611.112 or 611.113 shall notify persons served by the PWS as follows:~~

~~a) Except as provided in subsection (c) or (d), the supplier shall give notice, within three months of the violation or granting of a variance or adjusted standard, by publication in a daily newspaper of general circulation in the area served by the PWS. If the area served by a PWS is not served by a daily newspaper of general circulation, notice must instead be given by publication in a weekly newspaper of general circulation serving the area.~~

~~b) Except as provided in subsection (c) or (d), following the initial notice given under subsection (a), the supplier shall 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 adjusted standard (Section 611.111 through 611.113) must be given every three months for as long as the variance or adjusted standard remains in effect.~~

~~c) Alternative methods of notice.~~

~~1) In lieu of the requirements of subsections (a) and (b), a CWS supplier in an area that is not served by a daily or weekly newspaper of general circulation shall give notice, within three months of the violation or granting of the variance or adjusted standard, by hand delivery or by continuous posting in conspicuous places within the area served by the CWS. Posting must continue for as long as the violation exists or a variance or adjusted standard remains in effect. The CWS supplier shall repeat the notice by hand delivery every three months for as long as the variance or adjusted standard remains in effect.~~

~~2) In lieu of the requirements of subsections (a) and (b), a non-CWS supplier may give notice, within three months of the violation or the granting of the variance or adjusted standard, by hand delivery or by continuous posting in conspicuous places within the area served by the non-CWS. Posting must continue for as long as the violation exists, or a variance or adjusted standard 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 adjusted standard remains in effect.~~

~~BOARD NOTE: Derived from 40 CFR 141.32(b) (1995).~~

(Source: Repealed at 25 Ill. Reg. ________ effective ______________________)

Section 611.853 Notice to New Billing Units (Repealed)

~~A CWS supplier shall give a copy of the most recent public notice for any outstanding violation of any MCL, treatment technique requirement or variance or adjusted standard schedule to all new billing units or new hookups prior to or at the time service begins.~~

~~BOARD NOTE: Derived from 40 CFR 141.32(c) (1989).~~

(Source: Repealed at 25 Ill. Reg. ________ effective ______________________)

Section 611.854 General Content of Public Notice (Repealed)

~~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 supplier 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 must be conspicuous and must not contain unduly technical language, unduly small print or similar problems that frustrate the purpose of the notice. Each notice must include the telephone number of the supplier or a designee as a source of additional information concerning the notice. Where appropriate, the notice must be multi-lingual.~~

~~BOARD NOTE: Derived from 40 CFR 141.32(d) (1989).~~

(Source: Repealed at 25 Ill. Reg. ________ effective ______________________)

Section 611.855 Mandatory Health Effects Language (Repealed)

~~When providing the information on potential adverse health effects required by Section 611.854 in notices of violations of MCLs or treatment technique requirements, or notices of the granting or the continued existence of adjusted standards or variances, or notices of failure to comply with a variance or adjusted standard schedule, the supplier shall include the language specified in Section 611.Appendix A for each contaminant. (If language for a particular contaminant is not specified at the time notice is required, this Section does not apply).~~

~~BOARD NOTE: Derived from 40 CFR 141.32(e) (1991).~~

(Source: Repealed at 25 Ill. Reg. ________ effective ______________________)

Section 611.856 Fluoride Notice (Repealed)

~~Notice of violations of the MCL for fluoride, notices of variances and adjusted standards from the MCL for fluoride and notices of failure to comply with variance and adjusted standard schedules for the MCL for fluoride must consist of the public notice prescribed in Appendix A plus a description of any steps which the supplier is taking to come into compliance.~~

~~BOARD NOTE: Derived from 40 CFR 141.32(f) and (g) (1993).~~

(Source: Repealed at 25 Ill. Reg. ________ effective ______________________)

Section 611.858 Fluoride Secondary Standard (Repealed)

~~If a CWS exceeds the secondary standard for fluoride of 2.0 mg/L, as determined by the last single sample taken in accordance with Section 611.603, but does not exceed the MCL in Section 611.301(b), the supplier shall provide the fluoride notice in Section 611.Appendix A (9) to:~~

~~a) All billing units annually;~~

~~b) All billing units at the time service begins; and~~

~~c) The local public health department.~~

~~BOARD NOTE: Derived from 40 CFR 143.3 and 143.5 (1994).~~

(Source: Repealed at 25 Ill. Reg. ________ effective ______________________)

Section 611.860 Record Maintenance

A supplier ~~shall~~ must retain on its premises or at a convenient location near its premises the following records:

a) Records of bacteriological analyses made pursuant to this Part must be kept for not less than ~~5~~ five years. Records of chemical analyses made pursuant to this Part must be kept for not less than ~~10~~ ten years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the following information is included:

1) The date, place and time of sampling, and the name of the person who collected the sample;

2) Identification of the sample as to whether it was a routine distribution system sample, check sample, raw or process water sample or other special purpose sample;

3) Date of analysis;

4) Laboratory and person responsible for performing analysis;

5) The analytical technique or method used; and

6) The results of the analysis.

b) Records of action taken by the supplier to correct violations of this Part must be kept for a period not less than ~~3~~ three years after the last action taken with respect to the particular violation involved.

c) Copies of any written reports, summaries or communications relating to sanitary surveys of the system conducted by the supplier itself, by a private consultant, by ~~U.S. EPA~~ USEPA, the Agency or a unit of local government delegated pursuant to Section 611.108, must be kept for a period not less than ~~10~~ ten years after completion of the sanitary survey involved.

d) Records concerning a variance or adjusted standard granted to the supplier must be kept for a period ending not less than ~~5~~ five years following the expiration of such variance or adjusted standard.

e) Copies of public notices issued pursuant to Subpart V of this Part and certifications made to the Agency pursuant to Section 611.840 must be kept for three years after issuance.

BOARD NOTE: Derived from 40 CFR 141.33 ~~(1994)~~ (1999), as amended at 65 Fed. Reg. 26022 (May 4, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

SUBPART U: CONSUMER CONFIDENCE REPORTS

Section 611.881 Purpose and Applicability of this Subpart

a) This Subpart establishes the minimum requirements for the content of annual reports that community water systems (CWSs) must deliver to their customers. These reports must contain information on the quality of the water delivered by the systems and characterize the risks (if any) from exposure to contaminants detected in the drinking water in an accurate and understandable manner.

b) Notwithstanding the provisions of Section 611.100(d), this Subpart only applies to CWSs.

c) For the purpose of this Subpart, "customers" are defined as billing units or service connections to which water is delivered by a CWS.

d) For the purpose of this Subpart, "detected" means the following: at or above the detection limit levels prescribed by Section 611.600(d) for inorganic contaminants, at or above the levels prescribed by Section 611.646 for Phase I, II, and V VOCs, at or above the levels prescribed by Section 611.648(r) for Phase II, IIB, and V SOCs, and at or above the levels prescribed by Section 611.720(c)(3) for radioactive contaminants.

BOARD NOTE: Derived from 40 CFR 141.151 (1999).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.883 Content of the Reports

a) Each CWS ~~shall~~ must provide to its customers an annual report that contains the information specified in this Section and Section 611.884.

b) Information on the source of the water delivered~~:~~.

1) Each report must identify the ~~source(s)~~ sources of the water delivered by the CWS by providing information on the following:

A) The type of the water~~: -~~ (e.g., surface water, groundwater); and

B) The commonly used name (if any) and location of the body (or bodies) of water.

2) If a source water assessment has been completed, the report must notify consumers of the availability of this information and the means to obtain it. In addition, systems are encouraged to highlight in the report significant sources of contamination in the source water area if they have readily available information. Where a system has received a source water assessment from the Agency, the report must include a brief summary of the system's susceptibility to potential sources of contamination, using language provided by the Agency or written by the PWS.

c) Definitions.

1) Each report must include the following definitions:

A) Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

BOARD NOTE: Although an MCLG is not an NPDWR that the Board must include in the Illinois SDWA regulations, the use of this definition is mandatory where the term "MCLG" is defined.

B) Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

2) A report for a CWS operating under relief from an NPDWR issued under Sections 611.111, 611.112, 611.130, or 611.131 must include the following definition: "Variances, Adjusted Standards, and Site-specific Rules: State permission not to meet an MCL or a treatment technique under certain conditions."

3) A report that contains data on ~~a contaminant for which~~ contaminants that USEPA ~~has set a treatment technique or an action level must include one or both of the following definitions as applicable~~ regulates using any of the following terms must include the applicable definitions:

A) Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

B) Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.

C) Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

BOARD NOTE: Although an MRDLG is not an NPDWR that the Board must include in the Illinois SDWA regulations, the use of this definition is mandatory where the term "MRDLG" is defined.

D) Maximum residual disinfectant level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

d) Information on detected contaminants.

1) This subsection (d) specifies the requirements for information to be included in each report for contaminants subject to mandatory monitoring (except Cryptosporidium). It applies to the following:

A) Contaminants subject to an MCL, action level, MRDL, or treatment technique (regulated contaminants);

B) Contaminants for which monitoring is required by Section 611.510 (unregulated contaminants); and

C) Disinfection byproducts or microbial contaminants for which monitoring is required by Section 611.382 and Subpart L, except as provided under subsection (e)(1) of this Section, and which are detected in the finished water.

2) The data relating to these contaminants must be displayed in one table or in several adjacent tables. Any additional monitoring results that a CWS chooses to include in its report must be displayed separately.

3) The data must be derived from data collected to comply with monitoring and analytical requirements during calendar year 1998 for the first report and subsequent calendar years thereafter, except that the following requirements also apply:

A) Where a system is allowed to monitor for regulated contaminants less often than once a year, the ~~table(s)~~ tables must include the date and results of the most recent sampling, and the report must include a brief statement indicating that the data presented in the report is from the most recent testing done in accordance with the regulations. No data older than five years need be included.

B) Results of monitoring in compliance with Section 611.382 and Subpart L need only be included for five years from the date of last sample or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first.

4) For detected regulated contaminants (listed in Appendix ~~F~~A of this Part), the ~~table(s)~~ tables must contain the following:

A) The MCL for that contaminant expressed as a number equal to or greater than 1.0 (as provided Appendix ~~F~~A of this Part);

B) The Maximum Contaminant Level Goal (MCLG) for that contaminant expressed in the same units as the MCL

C) If there is no MCL for a detected contaminant, the table must indicate that there is a treatment technique, or specify the action level, applicable to that contaminant, and the report must include the definitions for treatment technique or action level, as appropriate, specified in subsection (c)(3) of this Section;

D) For contaminants subject to an MCL, except turbidity and total coliforms, the highest contaminant level used to determine compliance with an NPDWR, and the range of detected levels, as follows:

i) When compliance with the MCL is determined annually or less frequently: ~~The~~ the highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL.

ii) When compliance with the MCL is determined by calculating a running annual average of all samples taken at a sampling point: the highest average of any of the sampling points and the range of all sampling points expressed in the same units as the MCL.

iii) When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all sampling points: the average and range of detection expressed in the same units as the MCL;

BOARD NOTE to subsection (d)(4)(D): When rounding of results to determine compliance with the MCL is allowed by the regulations, rounding should be done prior to multiplying the results by the factor listed in Appendix ~~F~~A; derived from 40 CFR 153 ~~(1998)~~ (1999).

E) For turbidity the following:

i) When it is reported pursuant to Section 611.560: ~~The~~ the highest average monthly value.

ii) When it is reported pursuant to the requirements of Section 611.211(b): The highest monthly value. ~~The~~ the report must include an explanation of the reasons for measuring turbidity.

iii) When it is reported pursuant to Section 611.250 or 611.743: ~~The~~ the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in Section 611.250 or 611.743 for the filtration technology being used. ~~The~~ the report must include an explanation of the reasons for measuring turbidity;

F) For lead and copper the following: the 90th percentile value of the most recent round of sampling and the number of sampling sites exceeding the action level;

G) For total coliform the following:

i) The highest monthly number of positive samples for systems collecting fewer than 40 samples per month; or

ii) The highest monthly percentage of positive samples for systems collecting at least 40 samples per month;

H) For fecal coliform the following: the total number of positive samples; and

I) The likely ~~source(s)~~ sources of detected contaminants to the best of the supplier's knowledge. Specific information regarding contaminants may be available in sanitary surveys and source water assessments, and must be used when available to the supplier. If the supplier lacks specific information on the likely source, the report must include one or more of the typical sources for that contaminant listed in Appendix G of this Part which are most applicable to the CWS.

5) If a CWS distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources, the table must contain a separate column for each service area and the report must identify each separate distribution system. Alternatively, a CWS may produce separate reports tailored to include data for each service area.

6) The ~~table(s)~~ tables must clearly identify any data indicating violations of MCLs, MRDLs, or treatment techniques, and the report must contain a clear and readily understandable

explanation of the violation including the following: the length of the violation, the potential adverse health effects, and actions taken by the CWS to address the violation. To describe the potential health effects, the CWS ~~shall~~ must use the relevant language of Appendix ~~H~~A of this Part.

7) For detected unregulated contaminants for which monitoring is required (except Cryptosporidium), the ~~table(s)~~ tables must contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.

e) Information on Cryptosporidium, radon, and other contaminants:

1) If the CWS has performed any monitoring for Cryptosporidium, including monitoring performed to satisfy the requirements of Subpart L of this Part, that indicates that Cryptosporidium may be present in the source water or the finished water, the report must include the following:

A) A summary of the results of the monitoring; and

B) An explanation of the significance of the results.

2) If the CWS has performed any monitoring for radon which indicates that radon may be present in the finished water, the report must include the following:

A) The results of the monitoring; and

B) An explanation of the significance of the results.

3) If the CWS has performed additional monitoring that indicates the presence of other contaminants in the finished water, the report must include the following:

A) The results of the monitoring; and

B) An explanation of the significance of the results noting the existence of any health advisory or proposed regulation.

f) Compliance with an NPDWR. In addition to the requirements of subsection (d)(6) of this Section, the report must note any violation that occurred during the year covered by the report of a requirement listed below, and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the CWS has taken to correct the violation.

1) Monitoring and reporting of compliance data;

2) Filtration and disinfection prescribed by Subpart B of this Part. For CWSs that have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes which constitutes a violation, the report must include the following language as part of the explanation of potential adverse health effects: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

3) Lead and copper control requirements prescribed by Subpart G of this Part. For systems that fail to take one or more actions prescribed by Sections 611.350(d), 611.351, 611.352,

611.353, or 611.354, the report must include the applicable language of Appendix ~~H~~A of this Part for lead, copper, or both.

4) Treatment techniques for acrylamide and epichlorohydrin prescribed by Section 611.296. For systems that violate the requirements of Section 611.296, the report must include the relevant language from ~~611.~~Appendix ~~H~~A of this Part.

5) Recordkeeping of compliance data.

6) Special monitoring requirements prescribed by Sections 611.510 and 611.630; and

7) Violation of the terms of a variance, adjusted standard, site-specific rule, or administrative or judicial order.

g) Variances, adjusted standards, and site-specific rules. If a system is operating under the terms of a variance, adjusted standard, or site-specific rule issued under Sections 611.111, 611.112, or 611.131, the report must contain the following:

1) An explanation of the reasons for the variance, adjusted standard, or site-specific rule;

2) The date on which the variance, adjusted standard, or site-specific rule was issued;

3) A brief status report on the steps the CWS is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance, adjusted standard, or site-specific rule; and

4) A notice of any opportunity for public input in the review, or renewal, of the variance, adjusted standard, or site-specific rule.

h) Additional information~~:~~.

1) The report must contain a brief explanation regarding contaminants that may reasonably be expected to be found in drinking water, including bottled water. This explanation may include the language of subsections (h)(1)(A) through (h)(1)(C) of this Section or CWSs may use their own comparable language. The report also must include the language of subsection (h)(1)(D) of this Section.

A) The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

B) Contaminants that may be present in source water include the following:

i) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

ii) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

iii) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

iv) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and

v) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

C) In order to ensure that tap water is safe to drink, USEPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. United States Food and Drug Administration (USFDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

D) Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline (800-426-4791).

2) The report must include the telephone number of the owner, operator, or designee of the CWS as a source of additional information concerning the report.

3) In communities with a large proportion of non-English speaking residents, as determined by the Agency, the report must contain information in the appropriate ~~language(s)~~ <u>languages</u> regarding the importance of the report or contain a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language.

4) The report must include information about opportunities for public participation in decisions that may affect the quality of the water.

5) The CWS may include such additional information as it deems necessary for public education consistent with, and not detracting from, the purpose of the report.

<u>BOARD NOTE: Derived from 40 CFR 141.153 (1999), as amended at 65 Fed. Reg. 26022 (May 4, 2000).</u>

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.884 Required Additional Health Information

a) All reports must prominently display the following language: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA or Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA Safe Drinking Water Hotline (800-426-4791).

b) A CWS that detects arsenic at levels above 25 μg/L, but below the MCL must do the following:

1) ~~Shall~~ The CWS must include in its report a short informational statement about arsenic, using the following language: USEPA is reviewing the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally-occurring mineral known to cause cancer in humans at high concentrations; or

2) ~~May~~ The CWS may write its own educational statement, but only in consultation with the Agency.

c) A CWS that detects nitrate at levels above 5 mg/L, but below the MCL must do the following:

1) ~~Shall~~ The CWS must include a short informational statement about the impacts of nitrate on children, using the following language: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider; or

2) ~~May~~ The CWS may write its own educational statement, but only in consultation with the Agency.

d) A CWS that detects lead above the action level in more than ~~5%~~ five percent, and up to and including ~~10%~~ ten percent, of homes sampled must do the following:

1) ~~Shall~~ The CWS must include a short informational statement about the special impact of lead on children, using the following language: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to ~~2~~ two minutes before using tap water. Additional information is available from the USEPA Safe Drinking Water Hotline (800-426-4791); or

2) ~~May~~ The CWS may write its own educational statement, but only in consultation with the Agency.

e) A CWS that detects TTHM above 0.080 mg/L, but below the MCL in Section 611.312, as an annual average, monitored and calculated under the provisions of Section 611.680, ~~shall~~ must include the health effects language prescribed by Appendix ~~H(73)~~A of this Part.

BOARD NOTE: Derived from 40 CFR 141.154 (1999), as amended at 65 Fed. Reg. 26022 (May 4, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.885 Report Delivery and Recordkeeping

a) Except as provided in subsection (g) of this Section, each CWS ~~shall~~ must mail or otherwise directly deliver one copy of the report to each customer.

b) The CWS ~~shall~~ must make a good faith effort to reach consumers who do not get water bills, using means recommended by the Agency. A good faith effort to reach consumers includes, but is not limited to, methods such as the following: posting the reports on the Internet, advertising the availability of the report in the news media, publication in a local newspaper, or delivery to community organizations.

c) No later than the date the CWS is required to distribute the report to its customers, each CWS ~~shall~~ must mail a copy of the report to the Agency, followed within three months by a certification that the report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the Agency.

d) No later than the date the CWS is required to distribute the report to its customers, each CWS ~~shall~~ must deliver the report to any other agency or clearinghouse identified by the Agency.

e) Each CWS ~~shall~~ must make its reports available to the public upon request.

f) Each CWS serving 100,000 or more persons ~~shall~~ must post its current year's report to a publicly-accessible site on the Internet.

g) The Governor or his designee may waive the requirement of subsection (a) of this Section for a CWS serving fewer than 10,000 persons.

1) Such a CWS ~~shall~~ must do the following:

A) ~~Publish~~ The CWS must publish the report in one or more local newspapers serving the county in which the CWS is located;

B) ~~Inform~~ The CWS must inform the customers that the report will not be mailed, either in the newspapers in which the report is published or by other means approved by the Agency; and

C) ~~Make~~ The CWS must make the report available to the public upon request.

2) Systems serving fewer than 500 persons may forgo the requirements of subsections (g)(1)(A) and (B) of this Section if they provide notice at least once per year to their customers by mail, door-to-door delivery or by posting in a location approved by the Agency that the report is available upon request.

h) Any system subject to this Subpart ~~shall~~ must retain copies of its consumer confidence report for no less than five years.

BOARD NOTE: Derived from 40 CFR 141.155 (1999).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

SUBPART V: PUBLIC NOTIFICATION OF DRINKING WATER VIOLATIONS

Section 611.901 General Public Notification Requirements

The requirements of this Subpart V replace former notice requirements.

a) Who must give public notice. Each owner or operator of a public water system (a CWS, a NTNCWSs, or a transient non-CWS) must give notice for all violations of a NPDWR and for other situations, as listed in this subsection (a). The term

“NPDWR violation” is used in this Subpart V to include violations of an MCL, an MRDL, a treatment technique, monitoring requirements, or a testing procedure set forth in this Part. Appendix G to this Part identifies the tier assignment for each specific violation or situation requiring a public notice.

1) NPDWR violations:

A) A failure to comply with an applicable MCL or MRDL.

B) A failure to comply with a prescribed treatment technique.

C) A failure to perform water quality monitoring, as required by this Part.

D) A failure to comply with testing procedures as prescribed by this Part.

2) Relief equivalent to a variance and exemptions under sections 1415 and 1416 of SDWA:

A) Operation under relief equivalent to a SDWA Section 1415 variance, under Section 611.111, or a SDWA Section 1416 exemption, under Section 611.112.

B) A failure to comply with the requirements of any schedule that has been set under relief equivalent to a SDWA Section 1415 variance, under Section 611.111, or a SDWA Section 1415 exemption, under Section 611.112.

3) Special public notices:

A) The occurrence of a waterborne disease outbreak or other waterborne emergency.

B) An exceedance of the nitrate MCL by a non-CWS, where granted permission by the Agency under Section 611.300(d).

C) An exceedance of the secondary fluoride standard of Section 611.858.

D) The availability of unregulated contaminant monitoring data.

E) Other violations and situations determined by the Agency by a SEP issued pursuant to Section 611.110 to require a public notice under this Subpart, not already listed in Appendix G.

b) The type of public notice required for each violation or situation. The public notice requirements of this Subpart V are divided into three tiers, to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in subsection section (a) of this Section are determined by the tier to which it is assigned. This subsection (b) provides the definition of each tier. Appendix G of this Part identifies the tier assignment for each specific violation or situation.

1) Tier 1 public notice: required for NPDWR violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.

2) Tier 2 public notice: required for all other NPDWR violations and situations with potential to have serious adverse effects on human health.

3) Tier 3 public notice: required for all other NPDWR violations and situations not included in Tier 1 and Tier 2.

c) Who must receive notice.

1) Each PWS supplier must provide public notice to persons served by the water supplier, in accordance with this Subpart V. A PWS supplier that sells or otherwise provides drinking water to another PWS supplier (i.e., to a consecutive system) is required to give public notice to the owner or operator of the consecutive system; the consecutive system supplier is responsible for providing public notice to the persons it serves.

2) If a PWS supplier has a violation in a portion of the distribution system that is physically or hydraulically isolated from other parts of the distribution system, the Agency may allow the system to limit distribution of the public notice to only persons served by that portion of the system which is out of compliance. Permission by the Agency for limiting distribution of the notice must be granted in writing, by a SEP granted pursuant to Section 611.110.

3) A copy of the notice must also be sent to the Agency, in accordance with the requirements under Section 611.840(d).

BOARD NOTE: Derived from 40 CFR 141.201, as added at 65 Fed. Reg. 26035 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.902 Tier 1 Public Notice--Form, Manner, and Frequency of Notice

a) Which violations or situations require a Tier 1 public notice. This subsection (a) lists the violation categories and other situations requiring a Tier 1 public notice.

Appendix G of this Part identifies the tier assignment for each specific violation or situation.

1) Violation of the MCL for total coliforms when fecal coliform or E. coli are present in the water distribution system (as specified in Section 611.325(b)), or when the water supplier fails to test for fecal coliforms or E. coli when any repeat sample tests positive for coliform (as specified in Section 611.525);

2) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as defined in Section 611.301, or when the water supplier fails to take a confirmation sample within 24 hours of the supplier's receipt of the first sample showing an exceedance of the nitrate or nitrite MCL, as specified in Section 611.606(b);

3) Exceedance of the nitrate MCL by a non-CWS supplier, where permitted to exceed the MCL by the Agency under Section 611.300(d), as required under Section 611.909;

4) Violation of the MRDL for chlorine dioxide, as defined in Section 611.313(a), when one or more samples taken in the distribution system the day following an exceedance of the MRDL at the entrance of the distribution system exceed the MRDL, or when the water supplier does not take the required samples in the distribution system, as specified in Section 611.383(c)(2)(A);

5) Violation of the turbidity MCL under Section 141.13(b), where the Agency determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the supplier learns of the violation;

6) Violation of the Surface Water Treatment Rule (SWTR) or Interim Enhanced Surface Water Treatment rule (IESWTR) treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit (as identified in Appendix G), where the primacy agency determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the supplier learns of the violation;

7) Occurrence of a waterborne disease outbreak, as defined in Section 611.101, or other waterborne emergency (such as a failure or significant interruption in key water treatment processes, a natural disaster that disrupts the water supply or distribution system, or a chemical spill or unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination);

8) Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the Agency by a SEP issued pursuant to Section 611.110.

b) When the Tier 1 public notice is to be provided. Additional steps required. A PWS supplier must:

1) Provide a public notice as soon as practical but no later than 24 hours after the supplier learns of the violation;

2) Initiate consultation with the Agency as soon as practical, but no later than 24 hours after the PWS supplier learns of the violation or situation, to determine additional public notice requirements; and

3) Comply with any additional public notification requirements (including any repeat notices or direction on the duration of the posted notices) that are established as a result of the consultation with the Agency. Such requirements may include the timing, form, manner, frequency, and content of repeat notices (if any) and other actions designed to reach all persons served.

c) The form and manner of the public notice. A PWS supllier must provide the notice within 24 hours in a form and manner reasonably calculated to reach all persons served. The form and manner used by the PWS supplier are to fit the specific situation, but must be designed to reach residential, transient, and non-transient users of the water system. In order to reach all persons served, a water supplier is to use, at a minimum, one or more of the following forms of delivery:

1) Appropriate broadcast media (such as radio and television);

2) Posting of the notice in conspicuous locations throughout the area served by the water supplier;

3) Hand delivery of the notice to persons served by the water supplier; or

4) Another delivery method approved in writing by the Agency by a SEP issued pursuant to Section 611.110.

BOARD NOTE: Derived from 40 CFR 141.202, as added at 65 Fed. Reg. 26036 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.903 Tier 2 Public Notice--Form, Manner, and Frequency of Notice

a) Which violations or situations require a Tier 2 public notice. This subsection lists the violation categories and other situations requiring a Tier 2 public notice. Appendix G to this Part identifies the tier assignment for each specific violation or situation.

1) All violations of the MCL, MRDL, and treatment technique requirements, except where a Tier 1 notice is required under Section 611.902(a) or where the Agency determines by a SEP issued pursuant to Section 611.110 that a Tier 1 notice is required;

2) Violations of the monitoring and testing procedure requirements, where the Agency determines by a SEP issued pursuant to Section 611.110 that a Tier 2 rather than a Tier 3 public notice is required, taking into account potential health impacts and persistence of the violation; and

3) Failure to comply with the terms and conditions of any relief equivalent to a SDWA Section 1415 variance or a SDWA Section 1416 exemption in place.

b) When Tier 2 public notice is to be provided.

1) A PWS supplier must provide the public notice as soon as practical, but no later than 30 days after the supplier learns of the violation. If the public notice is posted, the notice must remain in place for as long as the violation or situation persists, but in no case for less than seven days, even if the violation or situation is resolved. The Agency may, in appropriate circumstances, by a SEP issue pursuant to Section 611.110, allow additional time for the initial notice of up to three months from the date the supplier learns of the violation. It is not appropriate for the Agency to grant an extension to the 30-day deadline for any unresolved violation or to allow across-the-board extensions by rule or policy for other violations or situations requiring a Tier 2 public notice. Extensions granted by the Agency must be in writing.

2) The PWS supplier must repeat the notice every three months as long as the violation or situation persists, unless the Agency determines that appropriate circumstances warrant a different repeat notice frequency. In no circumstance may the repeat notice be given less frequently than once per year. It is not appropriate for the Agency to allow less frequent repeat notice for an MCL violation under the Total Coliform Rule or a treatment technique violation under the Surface Water Treatment Rule or Interim Enhanced Surface Water Treatment Rule. It is also not appropriate for the Agency to allow across-the-board reductions in the repeat notice frequency for other ongoing violations requiring a Tier 2 repeat notice. An Agency determination allowing repeat notices to be given less frequently than once every three months must be in writing.

3) For the turbidity violations specified in this subsection (b)(3), a PWS supplier must consult with the Agency as soon as practical but no later than

24 hours after the supplier learns of the violation, to determine whether a Tier 1 public notice under Section 611.902(a) is required to protect public health. When consultation does not take place within the 24-hour period, the water system must distribute a Tier 1 notice of the violation within the next 24 hours (i.e., no later than 48 hours after the supplier learns of the violation), following the requirements under Section 611.902(b) and (c). Consultation with the Agency is required for the following:

A) Violation of the turbidity MCL under Section 141.320(b); or

B) Violation of the SWTR or IESWTR treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit.

c) The form and manner of Tier 2 public notice. A PWS supplier must provide the initial public notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it must at a minimum meet the following requirements:

1) Unless directed otherwise by the Agency in writing, by a SEP issued pursuant to Section 611.110, a CWS supplier must provide notice by:

A) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the PWS supplier; and

B) Any other method reasonably calculated to reach other persons regularly served by the supplier, if they would not normally be reached by the notice required in subsection (c)(1)(A) of this Section. Such persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include: Publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places served by the supplier or on the Internet; or delivery to community organizations.

2) Unless directed otherwise by the Agency in writing, by a SEP issued pursuant to Section 611.110, a non-CWS supplier must provide notice by the following:

A) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the supplier, or by mail or direct delivery to each customer and service connection (where known); and

B) Any other method reasonably calculated to reach other persons served by the system if they would not normally be reached by the notice required in subsection (c)(2)(A) of this Section. Such persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include the following: Publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (e.g., community centers).

BOARD NOTE: Derived from 40 CFR 141.203, as added at 65 Fed. Reg. 26036 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.904 Tier 3 Public Notice--Form, Manner, and Frequency of Notice

a) Which violations or situations require a Tier 3 public notice. This subsection (a) lists the violation categories and other situations requiring a Tier 3 public notice. Appendix G of this Part identifies the tier assignment for each specific violation or situation.

1) Monitoring violations under this Part, except where a Tier 1 notice is required under Section 611.902(a) or where the Agency determines by a SEP issued pursuant to Section 611.110 that a Tier 2 notice is required;

2) Failure to comply with a testing procedure established in this Part, except where a Tier 1 notice is required under Section 611.902(a) or where the Agency determines by a SEP issued pursuant to Section 611.110 that a Tier 2 notice is required;

3) Operation under relief equivalent to a SDWA Section 1415 variance granted under Section 611.111 or relief equivalent to a SDWA Section 1416 exemption granted under Section 611.112;

4) Availability of unregulated contaminant monitoring results, as required under Section 611.907; and

5) Exceedance of the secondary standard for fluoride under Section 611.858, as required under Section 611.908.

b) When the Tier 3 public notice is to be provided.

1) A PWS supplier must provide the public notice not later than one year after the supplier learns of the violation or situation or begins operating under

relief equivalent to a SDWA Section 1415 variance or Section 1416 exemption. Following the initial notice, the supplier must repeat the notice annually for as long as the violation, relief equivalent to a SDWA Section 1415 variance or Section 1416 exemption, or other situation persists. If the public notice is posted, the notice must remain in place for as long as the violation, relief equivalent to a SDWA Section 1415 variance or Section 1416 exemption, or other situation persists, but in no case less than seven days (even if the violation or situation is resolved).

2) Instead of individual Tier 3 public notices, a PWS supplier may use an annual report detailing all violations and situations that occurred during the previous twelve months, as long as the timing requirements of subsection (b)(1) of this Section are met.

c) The form and manner of the Tier 3 public notice. A PWS supplier must provide the initial notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it must at a minimum meet the following requirements:

1) Unless directed otherwise by the Agency by a SEP issued pursuant to Section 611.110 in writing, a CWS supplier must provide notice by the following:

A) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the supplier; and

B) Any other method reasonably calculated to reach other persons regularly served by the supplier, if they would not normally be reached by the notice required in subsection (c)(1)(A) of this Section. Such persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include the follwoing: publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places or on the Internet; or delivery to community organizations.

2) Unless directed otherwise by the Agency by a SEP issued pursuant to Section 611.110 in writing, a non-CWS supplier must provide notice by the following:

A) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the supplier, or by mail or direct delivery to each customer and service connection (where known); and

B) Any other method reasonably calculated to reach other persons served by the supplier, if they would not normally be reached by the notice required in subsection (c)(2)(A) of this Section. Such persons may include those who may not see a posted notice because the notice is not in a location they routinely pass by. Other methods may include the following: publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (e.g., community centers).

d) When the Consumer Confidence Report may be used to meet the Tier 3 public notice requirements. For a CWS supplier, the Consumer Confidence Report (CCR) required under Subpart U of this Part may be used as a vehicle for the initial Tier 3 public notice and all required repeat notices, as long as the following is true:

1) The CCR is provided to persons served no later than 12 months after the supplier learns of the violation or situation as required under Section 611.904(b);

2) The Tier 3 notice contained in the CCR follows the content requirements under Section 611.905; and

3) The CCR is distributed following the delivery requirements under Section 611.904(c).

BOARD NOTE: Derived from 40 CFR 141.204, as added at 65 Fed. Reg. 26037 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ____________________)

Section 611.905 Content of the Public Notice

a) Elements included in public notice for violation of an NPDWR or other situations. When a PWS supplier violates a NPDWR or has a situation requiring public notification, each public notice must include the following elements:

1) A description of the violation or situation, including the contaminants of concern, and (as applicable) the contaminant levels;

2) When the violation or situation occurred;

3) Any potential adverse health effects from the violation or situation, including the standard language under subsection (d)(1) or (d)(2) of this Section, whichever is applicable;

4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water;

5) Whether alternative water supplies should be used;

6) What actions consumers should take, including when they should seek medical help, if known;

7) What the supplier is doing to correct the violation or situation;

8) When the water supplier expects to return to compliance or resolve the situation;

9) The name, business address, and phone number of the water system owner, operator, or designee of the public water system as a source of additional information concerning the notice; and

10) A statement to encourage the notice recipient to distribute the public notice to other persons served, using the standard language under subsection (d)(3) of this Section, where applicable.

b) The elements that must be included in the public notice for public water systems operating under relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption.

1) If a PWS supplier has been granted a relief equivalent to a SDWA Section 1415 variance, under Section 611.111, or a Section 1416 exemption, under Section 611.112, the public notice must contain the following:

A) An explanation of the reasons for the relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption;

B) The date on which the relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption was issued;

C) A brief status report on the steps that the supplier is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption; and

D) A notice of any opportunity for public input in the review of the relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption.

2) If a PWS supplier violates the conditions of relief equivalent to a SDWA

Section 1415 variance or a Section 1416 exemption, the public notice must contain the ten elements listed in subsection (a) of this Section.

c) How the public notice is to be presented.

1) Each public notice required by this Section must comply with the following:

A) It must be displayed in a conspicuous way when printed or posted;

B) It must not contain overly technical language or very small print;

C) It must not be formatted in a way that defeats the purpose of the notice;

D) It must not contain language which nullifies the purpose of the notice.

2) Each public notice required by this Section must comply with multilingual requirements, as follows:

A) For PWS supplier serving a large proportion of non-English speaking consumers, as determined by the Agency by a SEP issued pursuant to Section 611.110, the public notice must contain information in the appropriate languages regarding the importance of the notice or contain a telephone number or address where persons served may contact the water supplier to obtain a translated copy of the notice or to request assistance in the appropriate language.

B) In cases where the Agency has not determined what constitutes a large proportion of non-English speaking consumers, the PWS supplier must include in the public notice the same information as in subsection (c)(2)(A) of this Section, where appropriate to reach a large proportion of non-English speaking persons served by the water supplier.

d) Standard language that a PWS supplier must include in its public notice. A PWS supplier is required to include the following standard language in its public notice:

1) Standard health effects language for MCL or MRDL violations, treatment technique violations, and violations of the condition of relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption. A PWS supplier must include in each public notice the health effects language specified in Appendix H to this Part corresponding to each MCL, MRDL, and treatment technique violation listed in Appendix G to this Part, and for each violation of a condition of relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption.

2) Standard language for monitoring and testing procedure violations. A PWS supplier must include the following language in its notice, including the language necessary to fill in the blanks, for all monitoring and testing procedure violations listed in Appendix G of this Part:

> We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period], we "did not monitor or test" or "did not complete all monitoring or testing" for [contaminants], and therefore cannot be sure of the quality of your drinking water during that time.

3) Standard language to encourage the distribution of the public notice to all persons served. A PWS supplier must include the following language in its notice (where applicable):

> Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

BOARD NOTE: Derived from 40 CFR 141.205, as added at 65 Fed. Reg. 26038 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.906 Notice to New Billing Units or New Customers

a) The requirement for a CWS. A CWS supplier must give a copy of the most recent public notice for any continuing violation, the existence of relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption, or other ongoing situations requiring a public notice to all new billing units or new customers prior to or at the time service begins.

b) The requirement for non-CWS. A non-CWS supplier must continuously post the public notice in conspicuous locations in order to inform new consumers of any continuing violation, relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption, or other situation requiring a public notice for as long as the relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption, or other situation persists.

BOARD NOTE: Derived from 40 CFR 141.206, as added at 65 Fed. Reg. 26039 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.907 Special Notice of the Availability of Unregulated Contaminant Monitoring Results

a) When to give special notice. The owner or operator of a CWS supplier or a NTNCWS supplier required to monitor for unregulated contaminants under Section 611.510 must notify persons served by the supplier of the availability of the results of such sampling no later than 12 months after the monitoring results are known.

b) The form and manner of a special notice. The form and manner of the public notice must follow the requirements for a Tier 3 public notice prescribed in Secs. 611.904(c), (d)(1), and (d)(3). The notice must also identify a person and provide the telephone number to contact for information on the monitoring results.

BOARD NOTE: Derived from 40 CFR 141.207, as added at 65 Fed. Reg. 26039 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.908 Special Notice for Exceedance of the Fluoride Secondary Standard

a) When to give special notice. A CWS supplier that exceeds the fluoride secondary standard of 2 mg/l, as specified in Section 611.858 (determined by the last single sample taken in accordance with Section 611.603), but do not exceed the maximum contaminant level (MCL) of 4 mg/l for fluoride (as specified in Section 611.301), must provide the public notice in subsection (c) of this Section to persons served. Public notice must be provided as soon as practical but no later than 12 months from the day the supplier learns of the exceedance. A copy of the notice must also be sent to all new billing units and new customers at the time service begins and to the Department of Pubic Health. The PWS supplier must repeat the notice at least annually for as long as the SMCL is exceeded. If the public notice is posted, the notice must remain in place for as long as the fluoride secondary standard is exceeded, but in no case less than seven days (even if the exceedance is eliminated). On a case-by-case basis, the Agency may require an initial notice sooner than 12 months and repeat notices more frequently than annually.

b) The form and manner of a special notice. The form and manner of the public notice (including repeat notices) must follow the requirements for a Tier 3 public notice in Section 611.904(c), (d)(1), and (d)(3).

c) Mandatory language in a special notice. The notice must contain the following language, including the language necessary to fill in the blanks:

> This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system [name] has a fluoride

concentration of [insert value] mg/L. Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L of fluoride (the USEPA's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/l of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/l because of this cosmetic dental problem.

For more information, please call [name of water system contact] of [name of community water system] at [phone number]. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP."

BOARD NOTE: Derived from 40 CFR 141.208, as added at 65 Fed. Reg. 26039 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.909 Special Notice for Nitrate Exceedances above the MCL by a Non-Community Water System

a) When the special notice is to be given. The owner or operator of a non-CWS supplier granted permission by the Agency under Section 611.300(d) to exceed the nitrate MCL must provide notice to persons served according to the requirements for a Tier 1 notice under Section 611.902(a) and (b).

b) The form and manner of the special notice. A non-CWS supplier granted permission by the Agency to exceed the nitrate MCL under Section 611.300(d) must provide continuous posting of the fact that nitrate levels exceed 10 mg/l and the potential health effects of exposure, according to the requirements for Tier 1 notice delivery under Section 611.902(c) and the content requirements under Section 611.905.

BOARD NOTE: Derived from 40 CFR 141.209, as added at 65 Fed. Reg. 26039 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.910 Notice by the Agency on Behalf of a PWS

a) The Agency may issue the notice required by this subpart on behalf of the owner and operator of the PWS supplier if the Agency complies with the requirements of this Subpart V.

b) The responsibility of the PWS supplier when notice is given by the Agency. The owner or operator of the PWS supplier remains responsible for ensuring that the requirements of this Subpart V are met.

BOARD NOTE: Derived from 40 CFR 141.210, as added at 65 Fed. Reg. 26039 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.Appendix A ~~Mandatory Health Effects Information~~Regulated Contaminants

Microbiological contaminants:

Contaminant (units): Total Coliform Bacteria
Traditional MCL in mg/L: MCL: (systems that collect ≥40 samples/month) 5% of monthly samples are positive; (systems that collect 40 samples/month) 1 positive monthly sample.
To convert for CCR, multiply by: --
MCL in CCR units: MCL: (systems that collect ≥40 samples/month) 5% of monthly samples are positive; (systems that collect 40 samples/month) 1 positive monthly sample.
MCLG: 0
Major sources in drinking water: Naturally present in the environment.
Health effects language: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Contaminant (units): Fecal coliform and E. coli
Traditional MCL in mg/L: 0
To convert for CCR, multiply by: --
MCL in CCR units: 0
MCLG: 0
Major sources in drinking water: Human and animal fecal waste.
Health effects language: Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely-compromised immune systems.

Contaminant (units): Total organic carbon (ppm)
Traditional MCL in mg/L: TT
To convert for CCR, multiply by: --

MCL in CCR units: TT
MCLG: N/A
Major sources in drinking water: Naturally present in the environment.
Health effects language: Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Contaminant (units): Turbidity (NTU)
Traditional MCL in mg/L: TT
To convert for CCR, multiply by: --
MCL in CCR units: TT
MCLG: N/A
Major sources in drinking water: Soil runoff.
Health effects language: Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Radioactive contaminants:

Contaminant (units): Beta/photon emitters (mrem/yr)
Traditional MCL in mg/L: 4 mrem/yr
To convert for CCR, multiply by: --
MCL in CCR units: 4
MCLG: N/A
Major sources in drinking water: Decay of natural and man-made deposits.
Health effects language: Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units): Alpha emitters (pCi/l).
Traditional MCL in mg/L: 15 pCi/l
To convert for CCR, multiply by: --
MCL in CCR units: 15
MCLG: N/A
Major sources in drinking water: Erosion of natural deposits.
Health effects language: Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units): Combined radium (pCi/l)

Traditional MCL in mg/L: 5 pCi/l
To convert for CCR, multiply by: --
MCL in CCR units: 5
MCLG: N/A
Major sources in drinking water: Erosion of natural deposits.
Health effects language: Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Inorganic contaminants:

Contaminant (units): Antimony (ppb)
Traditional MCL in mg/L: 0.006
To convert for CCR, multiply by: 1000
MCL in CCR units: 6
MCLG: 6
Major sources in drinking water: Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Health effects language: Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.

Contaminant (units): Arsenic (ppb)
Traditional MCL in mg/L: 0.05
To convert for CCR, multiply by: 1000
MCL in CCR units: 50
MCLG: N/A
Major sources in drinking water: Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Health effects language: Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Contaminant (units): Asbestos (MFL)
Traditional MCL in mg/L: 7 MFL
To convert for CCR, multiply by: --
MCL in CCR units: 7
MCLG: 7
Major sources in drinking water: Decay of asbestos cement water mains; erosion of natural deposits.
Health effects language: Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.

Contaminant (units): Barium (ppm)
Traditional MCL in mg/L: 2
To convert for CCR, multiply by: --

MCL in CCR units: 2
MCLG: 2
Major sources in drinking water: Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Health effects language: Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Contaminant (units): Beryllium (ppb)
Traditional MCL in mg/L: 0.004
To convert for CCR, multiply by: 1000
MCL in CCR units: 4
MCLG: 4
Major sources in drinking water: Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries.
Health effects language: Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

Contaminant (units): Cadmium (ppb)
Traditional MCL in mg/L: 0.005
To convert for CCR, multiply by: 1000
MCL in CCR units: 5
MCLG: 5
Major sources in drinking water: Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Health effects language: Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

Contaminant (units): Chromium (ppb)
Traditional MCL in mg/L: 0.1
To convert for CCR, multiply by: 1000
MCL in CCR units: 100
MCLG: 100
Major sources in drinking water: Discharge from steel and pulp mills; erosion of natural deposits.
Health effects language: Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

Contaminant (units): Copper (ppm)
Traditional MCL in mg/L: AL=1.3
To convert for CCR, multiply by: --
MCL in CCR units: AL=1.3
MCLG: 1.3
Major sources in drinking water: Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Health effects language: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of

time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Contaminant (units): Cyanide (ppb)
Traditional MCL in mg/L: 0.2
To convert for CCR, multiply by: 1000
MCL in CCR units: 200
MCLG: 200
Major sources in drinking water: Discharge from steel/metal factories; discharge from plastic and fertilizer factories.
Health effects language: Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.

Contaminant (units): Fluoride (ppm)
Traditional MCL in mg/L: 4
To convert for CCR, multiply by: --
MCL in CCR units: 4
MCLG: 4
Major sources in drinking water: Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Health effects language: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Contaminant (units): Lead (ppb)
Traditional MCL in mg/L: AL=0.015
To convert for CCR, multiply by: 1000
MCL in CCR units: AL=15
MCLG: 0
Major sources in drinking water: Corrosion of household plumbing systems; erosion of natural deposits.
Health effects language: Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Contaminant (units): Mercury [inorganic] (ppb)
Traditional MCL in mg/L: 0.002
To convert for CCR, multiply by: 1000

MCL in CCR units: 2
MCLG: 2
Major sources in drinking water: Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland.
Health effects language: Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.

Contaminant (units): Nitrate (ppm)
Traditional MCL in mg/L: 10
To convert for CCR, multiply by: --
MCL in CCR units: 10
MCLG: 10
Major sources in drinking water: Runoff from fertilizer use; leaching from septic tanks, sew age; erosion of natural deposits.
Health effects language: Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Contaminant (units): Nitrite (ppm)
Traditional MCL in mg/L: 1
To convert for CCR, multiply by: --
MCL in CCR units: 1
MCLG: 1
Major sources in drinking water: Runoff from fertilizer use; leaching from septic tanks, sew age; erosion of natural deposits.
Health effects language: Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Contaminant (units): Selenium (ppb)
Traditional MCL in mg/L: 0.05
To convert for CCR, multiply by: 1000
MCL in CCR units: 50
MCLG: 50
Major sources in drinking water: Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Health effects language: Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

Contaminant (units): Thallium (ppb)
Traditional MCL in mg/L: 0.002
To convert for CCR, multiply by: 1000
MCL in CCR units: 2
MCLG: 0.5

Major sources in drinking water: Leaching from ore-processing sites; discharge from electronics, glass, and drug factories.
Health effects language: Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

Synthetic organic contaminants including pesticides and herbicides:

Contaminant (units): 2,4-D (ppb)
Traditional MCL in mg/L: 0.07
To convert for CCR, multiply by: 1000
MCL in CCR units: 70
MCLG: 70
Major sources in drinking water: Runoff from herbicide used on row crops.
Health effects language: Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.

Contaminant (units): 2,4,5-TP [Silvex](ppb)
Traditional MCL in mg/L: 0.05
To convert for CCR, multiply by: 1000
MCL in CCR units: 50
MCLG: 50
Major sources in drinking water: Residue of banned herbicide.
Health effects language: Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.

Contaminant (units): Acrylamide
Traditional MCL in mg/L: TT
To convert for CCR, multiply by: --
MCL in CCR units: TT
MCLG: 0
Major sources in drinking water: Added to water during sewage/wastewater treatment.
Health effects language: Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.

Contaminant (units): Alachlor (ppb)
Traditional MCL in mg/L: 0.002
To convert for CCR, multiply by: 1000
MCL in CCR units: 2
MCLG: 0
Major sources in drinking water: Runoff from herbicide used on row crops.
Health effects language: Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.

Contaminant (units): Atrazine (ppb)
Traditional MCL in mg/L: 0.003
To convert for CCR, multiply by: 1000
MCL in CCR units: 3
MCLG: 3
Major sources in drinking water: Runoff from herbicide used on row crops.
Health effects language: Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.

Contaminant (units): Benzo(a)pyrene [PAH] (nanograms/l)
Traditional MCL in mg/L: 0.0002
To convert for CCR, multiply by: 1,000,000
MCL in CCR units: 200
MCLG: 0
Major sources in drinking water: Leaching from linings of water storage tanks and distribution lines.
Health effects language: Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.

Contaminant (units): Carbofuran (ppb)
Traditional MCL in mg/L: 0.04
To convert for CCR, multiply by: 1000
MCL in CCR units: 40
MCLG: 40
Major sources in drinking water: Leaching of soil fumigant used on rice and alfalfa.
Health effects language: Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.

Contaminant (units): Chlordane (ppb)
Traditional MCL in mg/L: 0.002
To convert for CCR, multiply by: 1000
MCL in CCR units: 2
MCLG: 0
Major sources in drinking water: Residue of banned termiticide.
Health effects language: Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.

Contaminant (units): Dalapon (ppb)
Traditional MCL in mg/L: 0.2
To convert for CCR, multiply by: 1000
MCL in CCR units: 200

MCLG: 200
Major sources in drinking water: Runoff from herbicide used on rights of way.
Health effects language: Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.

Contaminant (units): Di(2-ethylhexyl)adipate (ppb)
Traditional MCL in mg/L: 0.4
To convert for CCR, multiply by: 1000
MCL in CCR units: 400
MCLG: 400
Major sources in drinking water: Discharge from chemical factories.
Health effects language: Some people who drink water containing di(2-ethylhexyl)adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.

Contaminant (units): Di(2-ethylhexyl)phthalate (ppb)
Traditional MCL in mg/L: 0.006
To convert for CCR, multiply by: 1000
MCL in CCR units: 6
MCLG: 0
Major sources in drinking water: Discharge from rubber and chemical factories
Health effects language: Some people who drink water containing di(2-ethylhexyl)phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.

Contaminant (units): Dibromochloropropane (ppt)
Traditional MCL in mg/L: 0.0002
To convert for CCR, multiply by: 1,000,000
MCL in CCR units: 200
MCLG: 0
Major sources in drinking water: Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Health effects language: Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.

Contaminant (units): Dinoseb (ppb)
Traditional MCL in mg/L: 0.007
To convert for CCR, multiply by: 1000
MCL in CCR units: 7
MCLG: 7
Major sources in drinking water: Runoff from herbicide used on soybeans and vegetables.
Health effects language: Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.

Contaminant (units): Diquat (ppb)
Traditional MCL in mg/L: 0.02
To convert for CCR, multiply by: 1000
MCL in CCR units: 20
MCLG: 20
Major sources in drinking water: Runoff from herbicide use.
Health effects language: Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.

Contaminant (units): Dioxin [2,3,7,8-TCDD] (ppq)
Traditional MCL in mg/L: 0.00000003
To convert for CCR, multiply by: 1,000,000,000
MCL in CCR units: 30
MCLG: 0
Major sources in drinking water: Emissions from waste incineration and other combustion; discharge from chemical factories.
Health effects language: Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.

Contaminant (units): Endothall (ppb)
Traditional MCL in mg/L: 0.1
To convert for CCR, multiply by: 1000
MCL in CCR units: 100
MCLG: 100
Major sources in drinking water: Runoff from herbicide use.
Health effects language: Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.

Contaminant (units): Endrin (ppb)
Traditional MCL in mg/L: 0.002
To convert for CCR, multiply by: 1000
MCL in CCR units: 2
MCLG: 2
Major sources in drinking water: Residue of banned insecticide.
Health effects language: Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.

Contaminant (units): Epichlorohydrin.
Traditional MCL in mg/L: TT
To convert for CCR, multiply by: --
MCL in CCR units: TT
MCLG: 0
Major sources in drinking water: Discharge from industrial chemical factories; an impurity of some water treatment chemicals.

Health effects language: Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

Contaminant (units): Ethylene dibromide (ppt)
Traditional MCL in mg/L: 0.00005
To convert for CCR, multiply by: 1,000,000
MCL in CCR units: 50
MCLG: 0
Major sources in drinking water: Discharge from petroleum refineries.
Health effects language: Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.

Contaminant (units): Glyphosate (ppb)
Traditional MCL in mg/L: 0.7
To convert for CCR, multiply by: 1000
MCL in CCR units: 700
MCLG: 700
Major sources in drinking water: Runoff from herbicide use.
Health effects language: Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.

Contaminant (units): Heptachlor (ppt)
Traditional MCL in mg/L: 0.0004
To convert for CCR, multiply by: 1,000,000
MCL in CCR units: 400
MCLG: 0
Major sources in drinking water: Residue of banned pesticide.
Health effects language: Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.

Contaminant (units): Heptachlor epoxide (ppt)
Traditional MCL in mg/L: 0.0002
To convert for CCR, multiply by: 1,000,000
MCL in CCR units: 200
MCLG: 0
Major sources in drinking water: Breakdown of heptachlor.
Health effects language: Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.

Contaminant (units): Hexachlorobenzene (ppb)

Traditional MCL in mg/L: 0.001
To convert for CCR, multiply by: 1000
MCL in CCR units: 1
MCLG: 0
Major sources in drinking water: Discharge from metal refineries and agricultural chemical factories.
Health effects language: Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.

Contaminant (units): Hexachlorocyclopentadiene (ppb)
Traditional MCL in mg/L: 0.05
To convert for CCR, multiply by: 1000
MCL in CCR units: 50
MCLG: 50
Major sources in drinking water: Discharge from chemical factories.
Health effects language: Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.

Contaminant (units): Lindane (ppt)
Traditional MCL in mg/L: 0.0002
To convert for CCR, multiply by: 1,000,000
MCL in CCR units: 200
MCLG: 200
Major sources in drinking water: Runoff/leaching from insecticide used on cattle, lumber, gardens.
Health effects language: Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.

Contaminant (units): Methoxychlor (ppb)
Traditional MCL in mg/L: 0.04
To convert for CCR, multiply by: 1000
MCL in CCR units: 40
MCLG: 40
Major sources in drinking water: Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock.
Health effects language: Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.

Contaminant (units): Oxamyl [Vydate] (ppb)
Traditional MCL in mg/L: 0.2
To convert for CCR, multiply by: 1000
MCL in CCR units: 200
MCLG: 200

Major sources in drinking water: Runoff/leaching from insecticide used on apples, potatoes and tomatoes.
Health effects language: Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.

Contaminant (units): PCBs [Polychlorinated biphenyls] (ppt)
Traditional MCL in mg/L: 0.0005
To convert for CCR, multiply by: 1,000,000
MCL in CCR units: 500
MCLG: 0
Major sources in drinking water: Runoff from landfills; Discharge of waste chemicals.
Health effects language: Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.

Contaminant (units): Pentachlorophenol (ppb)
Traditional MCL in mg/L: 0.001
To convert for CCR, multiply by: 1000
MCL in CCR units: 1
MCLG: 0
Major sources in drinking water: Discharge from wood preserving factories.
Health effects language: Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.

Contaminant (units): Picloram (ppb)
Traditional MCL in mg/L: 0.5
To convert for CCR, multiply by: 1000
MCL in CCR units: 500
MCLG: 500
Major sources in drinking water: Herbicide runoff.
Health effects language: Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

Contaminant (units): Simazine (ppb)
Traditional MCL in mg/L: 0.004
To convert for CCR, multiply by: 1000
MCL in CCR units: 4
MCLG: 4
Major sources in drinking water: Herbicide runoff.
Health effects language: Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

Contaminant (units): Toxaphene (ppb)
Traditional MCL in mg/L: 0.003

To convert for CCR, multiply by: 1000
MCL in CCR units: 3
MCLG: 0
Major sources in drinking water: Runoff/leaching from insecticide used on cotton and cattle.
Health effects language: Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

Volatile organic contaminants:

Contaminant (units): Benzene (ppb)
Traditional MCL in mg/L: 0.005
To convert for CCR, multiply by: 1000
MCL in CCR units: 5
MCLG: 0
Major sources in drinking water: Discharge from factories; Leaching from gas storage tanks and landfills.
Health effects language: Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.

Contaminant (units): Bromate (ppb)
Traditional MCL in mg/L: 0.010
To convert for CCR, multiply by: 1000
MCL in CCR units: 10
MCLG: 0
Major sources in drinking water: By-product of drinking water chlorination.
Health effects language: Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units): Carbon tetrachloride (ppb)
Traditional MCL in mg/L: 0.005
To convert for CCR, multiply by: 1000
MCL in CCR units: 5
MCLG: 0
Major sources in drinking water: Discharge from chemical plants and other industrial activities.
Health effects language: Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

Contaminant (units): Chloramines (ppm)
Traditional MCL in mg/L: MRDL = 4
To convert for CCR, multiply by: --
MCL in CCR units: MRDL = 4

MCLG: MRDLG = 4
Major sources in drinking water: Water additive used to control microbes.
Health effects language: Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

Contaminant (units): Chlorine (ppm)
Traditional MCL in mg/L: MRDL = 4
To convert for CCR, multiply by: --
MCL in CCR units: MRDL = 4
MCLG: MRDLG = 4
Major sources in drinking water: Water additive used to control microbes.
Health effects language: Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Contaminant (units): Chlorite (ppm)
Traditional MCL in mg/L: 1
To convert for CCR, multiply by: --
MCL in CCR units: 1
MCLG: 0.8
Major sources in drinking water: By-product of drinking water chlorination.
Health effects language: Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.

Contaminant (units): Chloride dioxide (ppb)
Traditional MCL in mg/L: MRDL = 0.8
To convert for CCR, multiply by: 1000
MCL in CCR units: MRDL = 800
MCLG: MRDLG = 800
Major sources in drinking water: Water additive used to control microbes.
Health effects language: Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.

Contaminant (units): Chlorobenzene (ppb)
Traditional MCL in mg/L: 0.1
To convert for CCR, multiply by: 1000
MCL in CCR units: 100
MCLG: 100
Major sources in drinking water: Discharge from chemical and agricultural chemical

factories.
Health effects language: Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.

Contaminant (units): o-Dichlorobenzene (ppb)
Traditional MCL in mg/L: 0.6
To convert for CCR, multiply by: 1000
MCL in CCR units: 600
MCLG: 600
Major sources in drinking water: Discharge from industrial chemical factories.
Health effects language: Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

Contaminant (units): p-Dichlorobenzene (ppb)
Traditional MCL in mg/L: 0.075
To convert for CCR, multiply by: 1000
MCL in CCR units: 75
MCLG: 75
Major sources in drinking water: Discharge from industrial chemical factories.
Health effects language: Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.

Contaminant (units): 1,2-Dichloroethane (ppb)
Traditional MCL in mg/L: 0.005
To convert for CCR, multiply by: 1000
MCL in CCR units: 5
MCLG: 0
Major sources in drinking water: Discharge from industrial chemical factories.
Health effects language: Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units): 1,1-Dichloroethylene (ppb)
Traditional MCL in mg/L: 0.007
To convert for CCR, multiply by: 1000
MCL in CCR units: 7
MCLG: 7
Major sources in drinking water: Discharge from industrial chemical factories.
Health effects language: Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

Contaminant (units): cis-1,2-Dichloroethylene (ppb)
Traditional MCL in mg/L: 0.07
To convert for CCR, multiply by: 1000
MCL in CCR units: 70

MCLG: 70
Major sources in drinking water: Discharge from industrial chemical factories.
Health effects language: Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

Contaminant (units): trans-1,2-Dichloroethylene (ppb)
Traditional MCL in mg/L: 0.1
To convert for CCR, multiply by: 1000
MCL in CCR units: 100
MCLG: 100
Major sources in drinking water: Discharge from industrial chemical factories.
Health effects language: Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.

Contaminant (units): Dichloromethane (ppb)
Traditional MCL in mg/L: 0.005
To convert for CCR, multiply by: 1000
MCL in CCR units: 5
MCLG: 0
Major sources in drinking water: Discharge from pharmaceutical and chemical factories.
Health effects language: Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.

Contaminant (units): 1,2-Dichloropropane (ppb)
Traditional MCL in mg/L: 0.005
To convert for CCR, multiply by: 1000
MCL in CCR units: 5
MCLG: 0
Major sources in drinking water: Discharge from industrial chemical factories.
Health effects language: Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units): Ethylbenzene (ppb)
Traditional MCL in mg/L: 0.7
To convert for CCR, multiply by: 1000
MCL in CCR units: 700
MCLG: 700
Major sources in drinking water: Discharge from petroleum refineries.
Health effects language: Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.

Contaminant (units): Haloacetic Acids (HAA) (ppb)

Traditional MCL in mg/L: 0.060
To convert for CCR, multiply by: 1000
MCL in CCR units: 60
MCLG: N/A
Major sources in drinking water: By-product of drinking water disinfection.
Health effects language: Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units): Styrene (ppb)
Traditional MCL in mg/L: 0.1
To convert for CCR, multiply by: 1000
MCL in CCR units: 100
MCLG: 100
Major sources in drinking water: Discharge from rubber and plastic factories; leaching from landfills.
Health effects language: Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

Contaminant (units): Tetrachloroethylene (ppb)
Traditional MCL in mg/L: 0.005
To convert for CCR, multiply by: 1000
MCL in CCR units: 5
MCLG: 0
Major sources in drinking water: Discharge from factories and dry cleaners.
Health effects language: Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.

Contaminant (units): 1,2,4-Trichlorobenzene (ppb)
Traditional MCL in mg/L: 0.07
To convert for CCR, multiply by: 1000
MCL in CCR units: 70
MCLG: 70
Major sources in drinking water: Discharge from textile-finishing factories.
Health effects language: Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.

Contaminant (units): 1,1,1-Trichloroethane (ppb)
Traditional MCL in mg/L: 0.2
To convert for CCR, multiply by: 1000
MCL in CCR units: 200
MCLG: 200
Major sources in drinking water: Discharge from metal degreasing sites and other factories.

Health effects language: Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.

Contaminant (units): 1,1,2-Trichloroethane (ppb)
Traditional MCL in mg/L: 0.005
To convert for CCR, multiply by: 1000
MCL in CCR units: 5
MCLG: 3
Major sources in drinking water: Discharge from industrial chemical factories.
Health effects language: Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.

Contaminant (units): Trichloroethylene (ppb)
Traditional MCL in mg/L: 0.005
To convert for CCR, multiply by: 1000
MCL in CCR units: 5
MCLG: 0
Major sources in drinking water: Discharge from metal degreasing sites and other factories.
Health effects language: Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

Contaminant (units): TTHMs [Total trihalomethanes] (ppb)
Traditional MCL in mg/L: 0.10/0.080
To convert for CCR, multiply by: 1000
MCL in CCR units: 100/80
MCLG: N/A
Major sources in drinking water: By-product of drinking water chlorination.
Health effects language: Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Contaminant (units): Toluene (ppm)
Traditional MCL in mg/L: 1
To convert for CCR, multiply by: --
MCL in CCR units: 1
MCLG: 1
Major sources in drinking water: Discharge from petroleum factories.
Health effects language: Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

Contaminant (units): Vinyl Chloride (ppb)
Traditional MCL in mg/L: 0.002
To convert for CCR, multiply by: 1000
MCL in CCR units: 2
MCLG: 0
Major sources in drinking water: Leaching from PVC piping; discharge from plastics factories.
Health effects language: Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units): Xylenes (ppm)
Traditional MCL in mg/L: 10
To convert for CCR, multiply by: --
MCL in CCR units: 10
MCLG: 10
Major sources in drinking water: Discharge from petroleum factories; discharge from chemical factories.
Health effects language: Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Key:

Abbreviation	Meaning
AL	Action Level
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MFL	million fibers per liter
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
mrem/year	millirems per year (a measure of radiation absorbed by the body)
N/A	Not Applicable
NTU	Nephelometric Turbidity Units (a measure of water clarity)
pCi/l	picocuries per liter (a measure of radioactivity)
ppm	parts per million, or milligrams per liter (mg/l)
ppb	parts per billion, or micrograms per liter (g/l)
ppt	parts per trillion, or nanograms per liter
ppq	parts per quadrillion, or picograms per liter
TT	Treatment Technique

~~1) Trichloroethylene. The United States Environmental Protection Agency (USEPA) 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. USEPA 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 (USEPA) 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. USEPA 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 (USEPA) 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 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. USEPA 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 (USEPA) 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. USEPA 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 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 (USEPA) 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 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. USEPA 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 (USEPA) 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 that 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. USEPA 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 (USEPA) 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 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. USEPA 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 (USEPA) sets drinking water standards and has determined that 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. USEPA 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 laboratory animals. Drinking water which meets this standard is associated with little to none of this risk and should be considered safe.~~

~~9) Fluoride. 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 [concentration to be provided by supplier] 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 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 [name of contact person to be provided by supplier] at your water system.~~

~~BOARD NOTE: Derived from 40 CFR 141.32(e)(9) and 143.5 (1998).~~

~~10) Microbiological contaminants (for use when there is a violation of the treatment technique requirements for filtration and disinfection in Subpart B or Subpart R of this Part). The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that the presence of microbiological contaminants are a health concern at certain levels of exposure. If water is inadequately treated, microbiological contaminants in that water may cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and any associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water. USEPA has set enforceable requirements for treating drinking water to reduce the risk of these adverse health effects. Treatment such as filtering and disinfecting the water removes or destroys microbiological contaminants. Drinking water which is treated to meet USEPA requirements is associated with little to none of this risk and should be considered safe.~~

~~11) Total coliforms. (To be used when there is a violation of Section 611.325(a) and not a violation of Section 611.325(b)). The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that the presence of total coliforms is a possible health concern. Total coliforms are common in the environment and are generally not harmful themselves. The presence of these bacteria in drinking water, however, generally is a result of a problem with water treatment or the pipes which distribute the water and indicates that the water may be contaminated with organisms that can cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and any associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water. USEPA has set an enforceable drinking water standard for total coliforms to reduce the risk of these adverse health effects. Under this standard, no more than 5.0 percent of the samples collected during a month can contain these bacteria, except that systems collecting fewer than 40 samples/month that have one total coliform-positive sample per month are not violating the standard. Drinking water which meets this standard is usually not associated with a health risk from disease-causing~~

~~bacteria and should be considered safe.~~

~~12) Fecal Coliforms/E. coli. (To be used when there is a violation of Section 611.325(b) or both Section 611.325(a) and (b).) The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that the presence of fecal coliforms or E. coli is a serious health concern. Fecal coliforms and E. coli are generally not harmful themselves, but their presence in drinking water is serious because they usually are associated with sewage or animal wastes. The presence of these bacteria in drinking water is generally a result of a problem with water treatment or the pipes which distribute the water and indicates that the water may be contaminated with organisms that can cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and associated headaches and fatigue. These symptoms, however, are not just associated with disease causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water. USEPA has set an enforceable drinking water standard for fecal coliforms and E. coli to reduce the risk of these adverse health effects. Under this standard all drinking water samples must be free of these bacteria. Drinking water which meets this standard is associated with little or none of this risk and should be considered safe. State and local health authorities recommend that consumers take the following precautions: [To be inserted by the public water system, according to instruction from State or local authorities].~~

~~13) Lead. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that lead is a health concern at certain exposure levels. Materials that contain lead have frequently been used in the construction of water supply distribution systems, and plumbing systems in private homes and other buildings. The most commonly found materials include service lines, pipes, brass and bronze fixtures, and solders and fluxes. Lead in these materials can contaminate drinking water as a result of the corrosion that takes place when water comes into contact with those materials. Lead can cause a variety of adverse health effects in humans. At relatively low levels of exposure, these effects may include interference with red blood cell chemistry, delays in normal physical and mental development in babies and young children, slight deficits in the attention span, hearing, and learning abilities of children, and slight increases in the blood pressure of some adults. USEPA's national primary drinking water regulation requires all public water systems to optimize corrosion control to minimize lead contamination resulting from the corrosion of plumbing materials. Public water systems serving 50,000 people or fewer that have lead concentrations below 15 parts per billion (ppb) in more than 90% of tap water samples (the USEPA "action level") have optimized their corrosion control treatment. Any water system that exceeds the action level must also monitor their source water to determine whether treatment to remove lead in source water is needed. Any water system that continues to exceed the action level after installation of corrosion control or source water treatment must eventually replace all lead service lines contributing in excess of 15 ppb of lead to drinking water. Any water system that exceeds the action level must also undertake a public education program to inform consumers of ways they can reduce their exposure to potentially high levels of lead in drinking water.~~

~~14) Copper. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that copper is a health concern at certain exposure levels. Copper, a reddish-brown metal, is often used to plumb residential and commercial structures that are connected to water distribution systems. Copper contaminating drinking water as a corrosion byproduct occurs as the result of the corrosion of copper pipes that remain in contact with water for a prolonged period of time. Copper is an essential nutrient, but at high doses it has been shown to cause stomach and intestinal distress, liver and kidney damage, and anemia. Persons with Wilson's disease may be at a higher risk of health effects due to copper than the general public. USEPA's national primary drinking water regulation requires all public water systems to install optimal corrosion control to minimize copper contamination resulting from the corrosion of plumbing materials. Public water systems serving 50,000 people or fewer that have copper~~

~~concentrations below 1.3 parts per million (ppm) in more than 90% of tap water samples (the USEPA "action level") are not required to install or improve their treatment. Any water system that exceeds the action level must also monitor their source water to determine whether treatment to remove copper in source water is needed.~~

~~15) Asbestos. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that asbestos fibers greater than 10 micrometers in length are a health concern at certain levels of exposure. Asbestos is a naturally occurring mineral. Most asbestos fibers in drinking water are less than 10 micrometers in length and occur in drinking water from natural sources and from corroded asbestos cement pipes in the distribution system. The major uses of asbestos were in the production of cements, floor tiles, paper products, paint, and caulking; in transportation-related applications; and in the production of textiles and plastics. Asbestos was once a popular insulating and fire retardant material. Inhalation studies have shown that various forms of asbestos have produced lung tumors in laboratory animals. The available information on the risk of developing gastrointestinal tract cancer associated with the ingestion of asbestos from drinking water is limited. Ingestion of intermediate range chrysolite asbestos fibers greater than 10 micrometers in length is associated with causing benign tumors in male rats. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. USEPA has set the drinking water standard for asbestos at 7 million long fibers per liter to reduce the potential risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water which meets the USEPA standard is associated with little to none of this risk and should be considered safe with respect to asbestos.~~

~~16) Barium. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that barium is a health concern at certain levels of exposure. This inorganic chemical occurs naturally in some aquifers that serve as sources of groundwater. It is also used in oil and gas drilling muds, automotive paints, bricks, tiles, and jet fuels. It generally gets into drinking water after dissolving from naturally occurring minerals in the ground. This chemical may damage the heart and vascular system, and is associated with high blood pressure in laboratory animals such as rats exposed to high levels during their lifetimes. In humans, USEPA believes that effects from barium on blood pressure should not occur below 2 parts per million (ppm) in drinking water. USEPA has set the drinking water standard for barium at 2 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to barium.~~

~~17) Cadmium. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that cadmium is a health concern at certain levels of exposure. Food and the smoking of tobacco are common sources of general exposure. This inorganic metal is a contaminant in the metals used to galvanize pipe. It generally gets into water by corrosion of galvanized pipes or by improper waste disposal. This chemical has been shown to damage the kidney in 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 working careers also suffered damage to the kidney. USEPA has set the drinking water standard for cadmium at 0.005 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to cadmium.~~

~~18) Chromium. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that chromium is a health concern at certain levels of exposure. This inorganic metal occurs naturally in the ground and is often used in the electroplating of metals. It generally gets into water from runoff from old mining operations and improper waste disposal from plating operations. This chemical has been shown to damage the kidney, nervous~~

~~system, and the circulatory system of laboratory animals such as rats and mice when the animals are exposed at high levels. Some humans who were exposed to high levels of this chemical suffered liver and kidney damage, dermatitis, and respiratory problems. USEPA has set the drinking water standard for chromium at 0.1 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to chromium.~~

~~19) Mercury. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that mercury is a health concern at certain levels of exposure. This inorganic metal is used in electrical equipment and some water pumps. It usually gets into water as a result of improper waste disposal. This chemical has been shown to damage the kidney of laboratory animals such as rats when the animals are exposed at high levels over their lifetimes. USEPA has set the drinking water standard for mercury at 0.002 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to mercury.~~

~~20) Nitrate. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that nitrate poses an acute health concern at certain levels of exposure. Nitrate is used in fertilizer and is found in sewage and wastes from human or farm animals and generally gets into drinking water from those activities. Excessive levels of nitrate in drinking water have caused serious illness and sometimes death in infants under six months of age. The serious illness in infants is caused because nitrate is converted to nitrite in the body. Nitrite interferes with the oxygen carrying capacity of the child's blood. This is an acute disease in that symptoms can develop rapidly in infants. In most cases, health deteriorates over a period of days. Symptoms include shortness of breath and blueness of the skin. Clearly, expert medical advice should be sought immediately if these symptoms occur. The purpose of this notice is to encourage parents and other responsible parties to provide infants with an alternate source of drinking water. Local and State health authorities are the best source for information concerning alternate sources of drinking water for infants. USEPA has set the drinking water standard at 10 parts per million (ppm) for nitrate to protect against the risk of these adverse effects. USEPA has also set a drinking water standard for nitrite at 1 ppm. To allow for the fact that the toxicity of nitrate and nitrite are additive, USEPA has also established a standard for the sum of nitrate and nitrite at 10 ppm. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to nitrate.~~

~~21) Nitrite. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that nitrite poses an acute health concern at certain levels of exposure. This inorganic chemical is used in fertilizers and is found in sewage and wastes from humans or farm animals and generally gets into drinking water as a result of those activities. While excessive levels of nitrite in drinking water have not been observed, other sources of nitrite have caused serious illness and sometimes death in infants under six months of age. The serious illness in infants is caused because nitrite interferes with the oxygen carrying capacity of the child's blood. This is an acute disease in that symptoms can develop rapidly. However, in most cases, health deteriorates over a period of days. Symptoms include shortness of breath and blueness of the skin. Clearly, expert medical advice should be sought immediately if these symptoms occur. The purpose of this notice is to encourage parents and other responsible parties to provide infants with an alternate source of drinking water. Local and State health authorities are the best source for information concerning alternate sources of drinking water for infants. USEPA has set the drinking water standard at 1 part per million (ppm) for nitrite to protect against the risk of these adverse effects. USEPA has also set a drinking water standard for nitrate (converted to nitrite in humans) at 10 ppm and for the sum of nitrate and nitrite at 10 ppm. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to nitrite.~~

~~22) Selenium. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that selenium is a health concern at certain high levels of exposure. Selenium is also an essential nutrient at low levels of exposure. This inorganic chemical is found naturally in food and soils and is used in electronics, photocopy operations, the manufacture of glass, chemicals, drugs, and as a fungicide and a feed additive. In humans, exposure to high levels of selenium over a long period of time has resulted in a number of adverse health effects, including a loss of feeling and control in the arms and legs. USEPA has set the drinking water standard for selenium at 0.05 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to selenium.~~

~~23) Acrylamide. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that acrylamide is a health concern at certain levels of exposure. Polymers made from acrylamide are sometimes used to treat water supplies to remove particulate contaminants. Acrylamide 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 over long periods of time. Sufficiently large doses of acrylamide are known to cause neurological injury. USEPA has set the drinking water standard for acrylamide using a treatment technique to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. This treatment technique limits the amount of acrylamide in the polymer and the amount of the polymer which may be added to drinking water to remove particulates. Drinking water systems which comply with this treatment technique have little to no risk and are considered safe with respect to acrylamide.~~

~~24) Alachlor. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that alachlor is a health concern at certain levels of exposure. This organic chemical is a widely used pesticide. When soil and climatic conditions are favorable, alachlor may get into drinking water by runoff into surface water or by leaching into groundwater. 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 over long periods of time. USEPA has set the drinking water standard for alachlor at 0.002 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to alachlor.~~

~~25) Aldicarb. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that aldicarb is a health concern at certain levels of exposure. Aldicarb is a widely used pesticide. Under certain soil and climatic conditions (e.g., sandy soil and high rainfall), aldicarb may leach into groundwater after normal agricultural applications to crops such as potatoes or peanuts or may enter drinking water supplies as a result of surface runoff. This chemical has been shown to damage the nervous system in laboratory animals such as rats and dogs exposed to high levels. USEPA has set the drinking water standard for aldicarb at 0.003 parts per million (ppm) to reduce the risk of adverse health effects. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to aldicarb.~~

~~26) Aldicarb sulfoxide. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that aldicarb sulfoxide is a health concern at certain levels of exposure. Aldicarb is a widely used pesticide. Aldicarb sulfoxide in groundwater is primarily a breakdown product of aldicarb. Under certain soil and climatic conditions (e.g., sandy soil and high rainfall), aldicarb sulfoxide may leach into groundwater after normal agricultural applications to crops such as potatoes or peanuts or may enter drinking water supplies as a result of surface runoff. This chemical has been shown to damage the nervous system in laboratory~~

~~animals such as rats and dogs exposed to high levels. USEPA has set the drinking water standard for aldicarb sulfoxide at 0.004 parts per million (ppm) to reduce the risk of adverse health effects. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to aldicarb sulfoxide.~~

~~27) Aldicarb sulfone. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that aldicarb sulfone is a health concern at certain levels of exposure. Aldicarb is a widely used pesticide. Aldicarb sulfone in groundwater is primarily a breakdown product of aldicarb. Under certain soil and climatic conditions (e.g., sandy soil and high rainfall), aldicarb sulfone may leach into groundwater after normal agricultural applications to crops such as potatoes or peanuts or may enter drinking water supplies as a result of surface runoff. This chemical has been shown to damage the nervous system in laboratory animals such as rats and dogs exposed to high levels. USEPA has set the drinking water standard for aldicarb sulfone at 0.002 parts per million (ppm) to reduce the risk of adverse health effects. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to aldicarb sulfone.~~

~~28) Atrazine. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that atrazine is a health concern at certain levels of exposure. This organic chemical is a herbicide. When soil and climatic conditions are favorable, atrazine may get into drinking water by runoff into surface water or by leaching into groundwater. This chemical has been shown to affect offspring of rats and the hearts of dogs. USEPA has set the drinking water standard for atrazine at 0.003 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to atrazine.~~

~~29) Carbofuran. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that carbofuran is a health concern at certain levels of exposure. This organic chemical is a pesticide. When soil and climatic conditions are favorable, carbofuran may get into drinking water by runoff into surface water or by leaching into groundwater. This chemical has been shown to damage the nervous and reproductive systems of laboratory animals such as rats and mice exposed at high levels over their lifetimes. Some humans who were exposed to relatively large amounts of this chemical during their working careers also suffered damage to the nervous system. Effects on the nervous system are generally rapidly reversible. USEPA has set the drinking water standard for carbofuran at 0.04 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to carbofuran.~~

~~30) Chlordane. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that chlordane is a health concern at certain levels of exposure. This organic chemical is a pesticide used to control termites. Chlordane is not very mobile in soils. It usually gets into drinking water after application near water supply intakes or wells. 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 over long periods of time. USEPA has set the drinking water standard for chlordane at 0.002 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to chlordane.~~

~~31) Dibromochloropropane (DBCP). The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that DBCP is a health concern at certain levels of exposure. This organic chemical was once a popular pesticide. When soil and climatic conditions are favorable, DBCP may get into drinking water by runoff into surface water or by~~

~~leaching into groundwater. 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 over long periods of time. USEPA has set the drinking water standard for DBCP at 0.0002 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to DBCP.~~

~~32) o-Dichlorobenzene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that o-dichlorobenzene is a health concern at certain levels of exposure. This organic chemical is used as a solvent in the production of pesticides and dyes. It generally gets into water by improper waste disposal. This chemical has been shown to damage the liver, kidney, and the blood cells of laboratory animals such as rats and mice exposed to high levels during their lifetimes. Some industrial workers who were exposed to relatively large amounts of this chemical during working careers also suffered damage to the liver, nervous system, and circulatory system. USEPA has set the drinking water standard for o-dichlorobenzene at 0.6 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to o-dichlorobenzene.~~

~~33) cis-1,2-Dichloroethylene. The United States Environmental Protection Agency (USEPA) establishes drinking water standards and has determined that cis-1,2-dichloroethylene is a health concern at certain levels of exposure. This organic chemical is used as a solvent and intermediate in chemical production. It generally gets into 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 exposed at high levels over their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the nervous system. USEPA has set the drinking water standard for cis-1,2-dichloroethylene at 0.07 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to cis-1,2-dichloroethylene.~~

~~34) trans-1,2-Dichloroethylene. The United States Environmental Protection Agency (USEPA) establishes drinking water standards and has determined that trans-1,2-dichloroethylene is a health concern at certain levels of exposure. This organic chemical is used as a solvent and intermediate in chemical production. It generally gets into water by improper waste disposal. This chemical has been shown to damage the liver, nervous system, and the circulatory system of laboratory animals such as rats and mice when exposed at high levels over their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the nervous system. USEPA has set the drinking water standard for trans-1,2-dichloroethylene at 0.1 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to trans-1,2-dichloroethylene.~~

~~35) 1,2-Dichloropropane. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that 1,2-dichloropropane is a health concern at certain levels of exposure. This organic chemical is used as a solvent and pesticide. When soil and climatic conditions are favorable, 1,2-dichloropropane may get into drinking water by runoff into surface water or by leaching into groundwater. It may also get into drinking water through 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 over long periods of time. USEPA has set the drinking water standard for 1,2-dichloropropane 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 that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to 1,2-dichloropropane.~~

~~36) 2,4-D. This contaminant is subject to an "additional State requirement". The supplier shall give the following notice if the level exceeds the Section 611.311 MCL. If the level exceeds the Section 611.310 MCL, but not that of Section 611.311, the supplier shall give a general notice under Section 611.854.~~

~~The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that 2,4-D is a health concern at certain levels of exposure. This organic chemical is used as a herbicide and to control algae in reservoirs. When soil and climatic conditions are favorable, 2,4-D may get into drinking water by runoff into surface water or by leaching into groundwater. This chemical has been shown to damage the liver and kidney of laboratory animals such as rats exposed at high levels during their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the nervous system. USEPA has set the drinking water standard for 2,4-D at 0.07 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to 2,4-D.~~

~~37) Epichlorohydrin. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that epichlorohydrin is a health concern at certain levels of exposure. Polymers made from epichlorohydrin are sometimes used in the treatment of water supplies as a flocculent to remove particulates. Epichlorohydrin generally gets into drinking water by improper use of these polymers. 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 over long periods of time. USEPA has set the drinking water standard for epichlorohydrin using a treatment technique to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. This treatment technique limits the amount of epichlorohydrin in the polymer and the amount of the polymer which may be added to drinking water as a flocculent to remove particulates. Drinking water systems which comply with this treatment technique have little to no risk and are considered safe with respect to epichlorohydrin.~~

~~38) Ethylbenzene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined ethylbenzene is a health concern at certain levels of exposure. This organic chemical is a major component of gasoline. It generally gets into water by improper waste disposal or leaking gasoline tanks. This chemical has been shown to damage the kidney, liver, and nervous system of laboratory animals such as rats exposed to high levels during their lifetimes. USEPA has set the drinking water standard for ethylbenzene at 0.7 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to ethylbenzene.~~

~~39) Ethylene dibromide (EDB). The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that EDB is a health concern at certain levels of exposure. This organic chemical was once a popular pesticide. When soil and climatic conditions are favorable, EDB may get into drinking water by runoff into surface water or by leaching into groundwater. 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 over long periods of time. USEPA has set the drinking water standard for EDB at 0.00005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of~~

~~this risk and is considered safe with respect to EDB.~~

~~40) Heptachlor. This contaminant is subject to an "additional State requirement". The supplier shall give the following notice if the level exceeds the Section 611.311 MCL. If the level exceeds the Section 611.310 MCL, but not that of Section 611.311, the supplier shall give a general notice under Section 611.854.~~

~~The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that heptachlor is a health concern at certain levels of exposure. This organic chemical was once a popular pesticide. When soil and climatic conditions are favorable, heptachlor may get into drinking water by runoff into surface water or by leaching into groundwater. 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 over long periods of time. USEPA has set the drinking water standards for heptachlor at 0.0004 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to heptachlor.~~

~~41) Heptachlor epoxide. This contaminant is subject to an "additional State requirement". The supplier shall give the following notice if the level exceeds the Section 611.311 MCL. If the level exceeds the Section 611.310 MCL, but not that of Section 611.311, the supplier shall give a general notice under Section 611.854.~~

~~The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that heptachlor epoxide is a health concern at certain levels of exposure. This organic chemical was once a popular pesticide. When soil and climatic conditions are favorable, heptachlor epoxide may get into drinking water by runoff into surface water or by leaching into groundwater. 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 over long periods of time. USEPA has set the drinking water standards for heptachlor epoxide at 0.0002 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to heptachlor epoxide.~~

~~42) Lindane. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that lindane is a health concern at certain levels of exposure. This organic chemical is used as a pesticide. When soil and climatic conditions are favorable, lindane may get into drinking water by runoff into surface water or by leaching into groundwater. This chemical has been shown to damage the liver, kidney, nervous system, and immune system of laboratory animals such as rats, mice and dogs exposed at high levels during their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the nervous system and circulatory system. USEPA has established the drinking water standard for lindane at 0.0002 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to lindane.~~

~~43) Methoxychlor. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that methoxychlor is a health concern at certain levels of exposure. This organic chemical is used as a pesticide. When soil and climatic conditions are favorable, methoxychlor may get into drinking water by runoff into surface water or by leaching into groundwater. This chemical has been shown to damage the liver, kidney, nervous system, and reproductive system of laboratory animals such as rats exposed at high levels during their lifetimes.~~

~~It has also been shown to produce growth retardation in rats. USEPA has set the drinking water standard for methoxychlor at 0.04 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to methoxychlor.~~

~~44) Monochlorobenzene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that monochlorobenzene is a health concern at certain levels of exposure. This organic chemical is used as a solvent. It generally gets into water by improper waste disposal. This chemical has been shown to damage the liver, kidney, and nervous system of laboratory animals such as rats and mice exposed to high levels during their lifetimes. USEPA has set the drinking water standard for monochlorobenzene at 0.1 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to monochlorobenzene.~~

~~45) Polychlorinated biphenyls (PCBs). The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that polychlorinated biphenyls (PCBs) are a health concern at certain levels of exposure. These organic chemicals were once widely used in electrical transformers and other industrial equipment. They generally get into drinking water by improper waste disposal or leaking electrical industrial equipment. 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 over long periods of time. USEPA has set the drinking water standard for PCBs at 0.0005 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to PCBs.~~

~~46) Pentachlorophenol. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that pentachlorophenol is a health concern at certain levels of exposure. This organic chemical is widely used as a wood preservative, herbicide, disinfectant, and defoliant. It generally gets into drinking water by runoff into surface water or leaching into groundwater. This chemical has been shown to produce adverse reproductive effects and to damage the liver and kidneys of laboratory animals such as rats and mice when the animals are exposed at high levels over their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the liver and kidneys. 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 over long periods of time. USEPA has set the drinking water standard for pentachlorophenol at 0.001 parts per million (ppm) to reduce the risk of adverse health effects. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to pentachlorophenol.~~

~~47) Styrene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that styrene is a health concern at certain levels of exposure. This organic chemical is commonly used to make plastics and is sometimes a component of resins used for drinking water treatment. Styrene may get into drinking water from improper waste disposal. This chemical has been shown to damage the liver and nervous system in laboratory animals when exposed at high levels during their lifetimes. USEPA has set the drinking water standard for styrene at 0.1 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to styrene.~~

~~48) Tetrachloroethylene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that tetrachloroethylene is a health concern at certain levels~~

~~of exposure. This organic chemical has been a popular solvent, particularly for dry cleaning. 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 over long periods of time. USEPA has set the drinking water standard for tetrachloroethylene 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 that meets this standard is associated with little to none of this risk and is considered safe with respect to tetrachloroethylene.~~

~~49) Toluene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that toluene is a health concern at certain levels of exposure. This organic chemical is used as a solvent and in the manufacture of gasoline for airplanes. It generally gets into water by improper waste disposal or leaking underground storage tanks. This chemical has been shown to damage the kidney, nervous system, and circulatory system of laboratory animals such as rats and mice exposed to high levels during their lifetimes. Some industrial workers who were exposed to relatively large amounts of this chemical during working careers also suffered damage to the liver, kidney, and nervous system. USEPA has set the drinking water standard for toluene at 1 part per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to toluene.~~

~~50) Toxaphene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that toxaphene is a health concern at certain levels of exposure. This organic chemical was once a pesticide widely used on cotton, corn, soybeans, pineapples, and other crops. When soil and climatic conditions are favorable, toxaphene may get into drinking water by runoff into surface water or by leaching into groundwater. 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 over long periods of time. USEPA has set the drinking water standard for toxaphene at 0.003 parts per million (ppm) to reduce the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets this standard is associated with little to none of this risk and is considered safe with respect to toxaphene.~~

~~51) 2,4,5-TP. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that 2,4,5-TP is a health concern at certain levels of exposure. This organic chemical is used as a herbicide. When soil and climatic conditions are favorable, 2,4,5-TP may get into drinking water by runoff into surface water or by leaching into groundwater. This chemical has been shown to damage the liver and kidney of laboratory animals such as rats and dogs exposed to high levels during their lifetimes. Some industrial workers who were exposed to relatively large amounts of this chemical during working careers also suffered damage to the nervous system. USEPA has set the drinking water standard for 2,4,5-TP at 0.05 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to 2,4,5-TP.~~

~~52) Xylenes. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that xylene is a health concern at certain levels of exposure. This organic chemical is used in the manufacture of gasoline for airplanes and as a solvent for pesticides, and as a cleaner and degreaser of metals. It usually gets into water by improper waste disposal. This chemical has been shown to damage the liver, kidney, and nervous system of laboratory animals such as rats and dogs exposed to high levels during their lifetimes. Some humans who were exposed to relatively large amounts of this chemical also suffered damage to the~~

~~nervous system. USEPA has set the drinking water standard for xylene at 10 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to xylene.~~

~~53) Antimony. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that antimony is a health concern at certain levels of exposure. This inorganic chemical occurs naturally in soils, groundwater, and surface water and is often used in the flame retardant industry. It is also used in ceramics and glass, batteries, fireworks, and explosives. It may get into drinking water through natural weathering of rock, industrial production, municipal waste disposal, or manufacturing processes. This chemical has been shown to decrease longevity, and altered blood levels of cholesterol and glucose in laboratory animals such as rats exposed to high levels during their lifetimes. USEPA has set the drinking water standard for antimony at 0.006 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to antimony.~~

~~54) Beryllium. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that beryllium is a health concern at certain levels of exposure. This inorganic chemical occurs naturally in soils, groundwater, and surface water and is often used in electrical equipment and electrical components. It generally gets into water from runoff from mining operations, discharge from processing plants, and improper waste disposal. Beryllium compounds have been associated with damage to the bones and lungs and induction of cancer in laboratory animals such as rats and mice when the animals are exposed to high levels during their lifetimes. There is limited evidence to suggest that beryllium may pose a cancer risk via drinking water exposure. Therefore, USEPA based the health assessment on noncancer effects with and extra uncertainty factor to account for possible carcinogenicity. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. USEPA has set the drinking water standard for beryllium at 0.004 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to beryllium.~~

~~55) Cyanide. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that cyanide is a health concern at certain levels of exposure. This inorganic chemical is used in electroplating, steel processing, plastics, synthetic fabrics, and fertilizer products. It usually gets into water as a result of improper waste disposal. This chemical has been shown to damage the spleen, brain, and liver of humans fatally poisoned with cyanide. USEPA has set the drinking water standard for cyanide at 0.2 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to cyanide.~~

~~56) Nickel. This subsection corresponds with 40 CFR 141.32(e)(56) marked "reserved" by USEPA. This statement maintains structural consistency with USEPA rules.~~

~~57) Thallium. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that thallium is a health concern at certain high levels of exposure. This inorganic chemical occurs naturally in soils, groundwater, and surface water and is used in electronics, pharmaceuticals, and the manufacture of glass and alloys. This chemical has been shown to damage the kidney, liver, brain, and intestines of laboratory animals when the animals are exposed to high levels during their lifetimes. USEPA has set the drinking water standard for thallium at 0.002 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to thallium.~~

~~58) Benzo(a)pyrene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that benzo(a)pyrene is a health concern at certain levels of exposure. Cigarette smoke and charbroiled meats are common sources of general exposure. The major source of benzo(a)pyrene in drinking water is the leaching from coal tar lining and sealants in water storage tanks. This chemical has been shown to cause cancer in animals such as rats and mice when the animals are exposed to high levels. USEPA has set the drinking water standard for benzo(a)pyrene at 0.0002 parts per million (ppm) to protect against the risk of cancer. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to benzo(a)pyrene.~~

~~59) Dalapon. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that dalapon is a health concern at certain levels of exposure. This organic chemical is a widely used herbicide. It may get into drinking water after application to control grasses in crops, drainage ditches, and along railroads. This chemical has been associated with damage to the kidney and liver in laboratory animals when the animals are exposed to high levels during their lifetimes. USEPA has set the drinking water standard for dalapon at 0.2 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to dalapon.~~

~~60) Dichloromethane. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that dichloromethane (methylene chloride) is a health concern at certain levels of exposure. This organic chemical is a widely used solvent. It is used in the manufacture of paint remover, as a metal degreaser, and as an aerosol propellant. It generally gets into water after improper discharge of waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed to high levels during their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. USEPA has set the drinking water standard for dichloromethane at 0.005 parts per million (ppm) to protect against the risk of cancer or other adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to dichloromethane.~~

~~61) Di(2-ethylhexyl)adipate. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that di(2-ethylhexyl)adipate is a health concern at certain levels of exposure. Di(2-ethylhexyl)adipate is a widely used plasticizer in a variety of products, including synthetic rubber, food packaging materials, and cosmetics. It may get into drinking water after improper waste disposal. This chemical has been shown to damage the liver and testes in laboratory animals such as rats and mice when the animals are exposed to high levels. USEPA has set the drinking water standard for di(2-ethylhexyl)adipate at 0.4 parts per million (ppm) to protect against the risk of adverse health effects that have been observed in laboratory animals. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to di(2-ethylhexyl)adipate.~~

~~62) Di(2-ethylhexyl)phthalate. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that di(2-ethylhexyl)phthalate is a health concern at certain levels of exposure. Di(2-ethylhexyl)phthalate is a widely used plasticizer, which is primarily used in the production of polyvinyl chloride (PVC) resins. It may get into drinking water after improper waste disposal. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed to high levels during their lifetimes. USEPA has set the drinking water standard for di(2-ethylhexyl)phthalate at 0.006 parts per million (ppm) to protect against the risk of cancer or other adverse health effects which have been observed in laboratory animals. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to di(2-ethylhexyl)phthalate.~~

~~63) Dinoseb. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that dinoseb is a health concern at certain levels of exposure. Dinoseb is a widely used pesticide and generally gets into water after application on orchards, vineyards, and other crops. This chemical has been shown to damage the thyroid and reproductive organs in laboratory animals such as rats exposed to high levels. USEPA has set the drinking water standard for dinoseb at 0.007 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to dinoseb.~~

~~64) Diquat. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that diquat is a health concern at certain levels of exposure. This organic chemical is a herbicide used to control terrestrial and aquatic weeds. It may get into drinking water by runoff into surface water. This chemical has been shown to damage the liver, kidney, and gastrointestinal tract and causes cataract formation in laboratory animals such as dogs and rats exposed at high levels over their lifetimes. USEPA has set the drinking water standard for diquat at 0.02 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to diquat.~~

~~65) Endothall. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that endothall is a health concern at certain levels of exposure. This organic chemical is a herbicide used to control terrestrial and aquatic weeds. It may get into drinking water by runoff into surface water. This chemical has been shown to damage the liver, kidney, gastrointestinal tract, and reproductive system of laboratory animals such as rats and mice exposed at high levels over their lifetimes. USEPA has set the drinking water standard for endothall at 0.1 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to endothall.~~

~~66) Endrin. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that endrin is a health concern at certain levels of exposure. This organic chemical is a pesticide no longer registered for use in the United States. However, this pesticide is persistent in treated soils and accumulates in sediments and aquatic and terrestrial biota. This chemical has been shown to cause damage to the liver, kidney, and heart in laboratory animals such as rats and mice when the animals are exposed to high levels during their lifetimes. USEPA has set the drinking water standard for endrin at 0.002 parts per million (ppm) to protect against the risk of these adverse health effects that have been observed in laboratory animals. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to endrin.~~

~~67) Glyphosate. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that glyphosate is a health concern at certain levels of exposure. This organic chemical is a herbicide used to control grasses and weeds. It may get into drinking water by runoff into surface water. This chemical has been shown to cause damage to the liver and kidneys in laboratory animals such as rats and mice when the animals are exposed to high levels during their lifetimes. USEPA has set the drinking water standard for glyphosate at 0.7 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to glyphosate.~~

~~68) Hexachlorobenzene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that hexachlorobenzene is a health concern at certain levels of exposure. This organic chemical is produced as an impurity in the manufacture of certain~~

~~solvents and pesticides. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed to high levels during their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. USEPA has set the drinking water standard for hexachlorobenzene at 0.001 parts per million (ppm) to protect against the risk of cancer and other adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to hexachlorobenzene.~~

~~69) Hexachlorocyclopentadiene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that hexachlorocyclopentadiene is a health concern at certain levels of exposure. This organic chemical is a used as an intermediate in the manufacture of pesticides and flame retardants. It may get into water by discharge from production facilities. This chemical has been shown to damage the kidney and the stomach of laboratory animals when exposed to high levels during their lifetimes. USEPA has set the drinking water standard for hexachlorocyclopentadiene at 0.05 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to hexachlorocyclopentadiene.~~

~~70) Oxamyl. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that oxamyl is a health concern at certain levels of exposure. This organic chemical is used as a pesticide for the control of insects and other pests. It may get into drinking water by runoff into surface water or leaching into groundwater. This chemical has been shown to damage the kidneys of laboratory animals such as rats when exposed at high levels during their lifetimes. USEPA has set the drinking water standard for oxamyl at 0.2 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to oxamyl.~~

~~71) Picloram. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that picloram is a health concern at certain levels of exposure. This organic chemical is used as a pesticide for broadleaf weed control. It may get into drinking water by runoff into surface water or leaching into groundwater as a result of pesticide application and improper waste disposal. This chemical has been shown to cause damage to the kidneys and liver in laboratory animals such as rats when the animals are exposed to high levels during their lifetimes. USEPA has set the drinking water standard for picloram at 0.5 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to picloram.~~

~~72) Simazine. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that simazine is a health concern at certain levels of exposure. This organic chemical is a herbicide used to control annual grasses and broadleaf weeds. It may leach into groundwater or run off into surface water after application. This chemical may cause cancer in laboratory animals such as rats and mice when the animals are exposed to high levels during their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. USEPA has set the drinking water standard for simazine at 0.004 parts per million (ppm) to reduce the risk of cancer or adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to simazine.~~

~~73) 1,2,4 Trichlorobenzene. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that 1,2,4 trichlorobenzene is a health concern at certain levels of exposure. This organic chemical is used as a dye carrier and as a precursor in~~

~~herbicide manufacture. It generally gets into drinking water by discharges from industrial activities. This chemical has been shown to cause damage to several organs, including the adrenal glands. USEPA has set the drinking water standard for 1,2,4 trichlorobenzene at 0.07 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to 1,2,4 trichlorobenzene.~~

~~74) 1,1,2 Trichloroethane. The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that 1,1,2 trichloroethane is a health concern at certain levels of exposure. This organic chemical is an intermediate in the production of 1,1 dichloroethylene. It generally gets into water by industrial discharge of wastes. This chemical has been shown to damage the kidney and liver of laboratory animals such as rats exposed to high levels during their lifetimes. USEPA has set the drinking water standard for 1,1,2 trichloroethane at 0.005 parts per million (ppm) to protect against the risk of these adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to 1,1,2 trichloroethane.~~

~~75) 2,3,7,8 TCDD (dioxin). The United States Environmental Protection Agency (USEPA) sets drinking water standards and has determined that dioxin is a health concern at certain levels of exposure. This organic chemical is an impurity in the production of some pesticides. It may get into drinking water by industrial discharge of wastes. This chemical has been shown to cause cancer in laboratory animals such as rats and mice when the animals are exposed to high levels during their lifetimes. Chemicals that cause cancer in laboratory animals also may increase the risk of cancer in humans who are exposed over long periods of time. USEPA has set the drinking water standard for dioxin at 0.00000003 parts per million (ppm) to protect against the risk of cancer or other adverse health effects. Drinking water that meets the USEPA standard is associated with little to none of this risk and is considered safe with respect to dioxin.~~

~~76) Chlorine. The USEPA sets drinking water standards and has determined that chlorine is a health concern at certain levels of exposure. Chlorine is added to drinking water as a disinfectant to kill bacteria and other disease causing microorganisms and is also added to provide continuous disinfection throughout the distribution system. Disinfection is required for surface water systems. However, at high doses for extended periods of time, chlorine has been shown to affect blood and the liver in laboratory animals. USEPA has set a drinking water standard for chlorine to protect against the risk of these adverse effects. Drinking water which meets this USEPA standard is associated with little to none of this risk and should be considered safe with respect to chlorine.~~

~~77) Chloramines. The USEPA sets drinking water standards and has determined that chloramines are a health concern at certain levels of exposure. Chloramines are added to drinking water as a disinfectant to kill bacteria and other disease causing microorganisms and are also added to provide continuous disinfection throughout the distribution system. Disinfection is required for surface water systems. However, at high doses for extended periods of time, chloramines have been shown to affect blood and the liver in laboratory animals. USEPA has set a drinking water standard for chloramines to protect against the risk of these adverse effects. Drinking water which meets this USEPA standard is associated with little to none of this risk and should be considered safe with respect to chloramines.~~

~~78) Chlorine dioxide. The USEPA sets drinking water standards and has determined that chlorine dioxide is a health concern at certain levels of exposure. Chlorine dioxide is used in water treatment to kill bacteria and other disease causing microorganisms and can be used to control tastes and odors. Disinfection is required for surface water systems. However, at high doses, chlorine dioxide treated drinking water has been shown to affect blood in laboratory animals. Also, high levels of chlorine dioxide given to laboratory animals in drinking water have been shown to cause neurological effects on the developing nervous system. These neurodevelopmental~~

~~effects may occur as a result of a short-term excessive chlorine dioxide exposure. To protect against such potentially harmful exposures, USEPA requires chlorine dioxide monitoring at the treatment plant, where disinfection occurs, and at representative points in the distribution system serving water users. USEPA has set a drinking water standard for chlorine dioxide to protect against the risk of these adverse effects.~~

~~Note: In addition to the language in this introductory text of subsection (78), systems must include either the language in subsection (78)(a) or (78)(b) of this Appendix. Systems with a violation at the treatment plant, but not in the distribution system, are required to use the language in subsection (78)(a) and treat the violation as a nonacute violation. Systems with a violation in the distribution system are required to use the language in subsection (78)(b) of this Appendix and treat the violation as an acute violation.~~

~~a) The chlorine dioxide violations reported today are the result of exceedences at the treatment facility only, and do not include violations within the distribution system serving users of this water supply. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to present consumers.~~

~~b) The chlorine dioxide violations reported today include exceedences of the USEPA standard within the distribution system serving water users. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including pregnant women, infants, and young children, may be especially susceptible to adverse effects of excessive exposure to chlorine dioxide-treated water. The purpose of this notice is to advise that such persons should consider reducing their risk of adverse effects from these chlorine dioxide violations by seeking alternate sources of water for human consumption until such exceedences are rectified. Local and State health authorities are the best sources for information concerning alternate drinking water.~~

~~79) Disinfection byproducts (DBPs) and treatment technique for DBPs. The USEPA sets drinking water standards and requires the disinfection of drinking water. However, when used in the treatment of drinking water, disinfectants react with naturally-occurring organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). USEPA has determined that a number of DBPs are a health concern at certain levels of exposure. Certain DBPs, including some trihalomethanes (THMs) and some haloacetic acids (HAAs), have been shown to cause cancer in laboratory animals. Other DBPs have been shown to affect the liver and the nervous system, and cause reproductive or developmental effects in laboratory animals. Exposure to certain DBPs may produce similar effects in people. USEPA has set standards to limit exposure to THMs, HAAs, and other DBPs.~~

~~80) Bromate. The USEPA sets drinking water standards and has determined that bromate is a health concern at certain levels of exposure. Bromate is formed as a byproduct of ozone disinfection of drinking water. Ozone reacts with naturally occurring bromide in the water to form bromate. Bromate has been shown to produce cancer in rats. USEPA has set a drinking water standard to limit exposure to bromate.~~

~~81) Chlorite. The USEPA sets drinking water standards and has determined that chlorite is a health concern at certain levels of exposure. Chlorite is formed from the breakdown of chlorine dioxide, a drinking water disinfectant. Chlorite in drinking water has been shown to affect blood and the developing nervous system. USEPA has set a drinking water standard for chlorite to protect against these effects. Drinking water which meets this standard is associated with little to none of these risks and should be considered safe with respect to chlorite.~~

BOARD NOTE: Derived from Appendix A to Subpart O to 40 CFR 141~~.32(e) (1998)~~ (1999), as added at 65 Fed. Reg. 26024 (May 4, 1999).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.Appendix E Mandatory Lead Public Education Information for Community Water Systems

1) INTRODUCTION

The United States Environmental Protection Agency (USEPA) and [insert name of water supplier] are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have lead levels above the USEPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by [insert date when corrosion control will be completed for your system]. This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace the portion of each lead service line that we ~~control~~ own if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at [insert water system's phone number]. This brochure explains the simple steps you can take to protect you and your family by reducing your exposure to lead in drinking water.

2) HEALTH EFFECTS OF LEAD

Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells, and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination -- like dirt and dust -- that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

3) LEAD IN DRINKING WATER

A) Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

B) Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead that connect your house to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

C) When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

4) STEPS YOU CAN TAKE IN THE HOME TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

A) Despite our best efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. To find out whether you need to take action in your own home, have your drinking water tested to determine if it contains excessive concentrations of lead. Testing the water is essential because you cannot see, taste, or smell lead in drinking water. Some local laboratories that can provide this service are listed at the end of this booklet. For more information on having your water tested, please call [insert phone number of water system].

B) If a water test indicates that the drinking water drawn from a tap in your home contains lead above 15 ppb, then you should take the following precautions:

i) Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15-30 seconds. If your house has a lead service line to the water main, you may have to flush the water for a longer time, perhaps one minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. It usually uses less than one or two gallons of water and costs less than [insert a cost estimate based on flushing two times a day for 30 days] per month. To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash the dishes or water the plants. If you live in a high-rise building, letting the water flow before using it may not work to lessen your risk from lead. The plumbing systems have more, and sometimes larger pipes than smaller buildings. Ask your landlord for help in locating the source of the lead and for advice on reducing the lead level.

ii) Try not to cook with, or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it on the stove.

iii) Remove loose lead solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced, by removing the faucet strainers from all taps and running the water from 3 to 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

iv) If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks dull gray, and when scratched with a key looks shiny. In addition, notify your State [insert name of department responsible for enforcing the Safe Drinking Water Act in your State] about the violation.

v) Determine whether or not the service line that connects your home or apartment to the water main is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You can identify the plumbing contractor by checking the city's record of building permits which should be maintained in the files of the [insert name of department that issues building permits]. A licensed plumber can at the same time check to see if your homes's plumbing contains lead solder, lead pipes, or pipe fittings that contain lead. The public water system that delivers water to your home should also maintain records of the materials located in the distribution system. If the service line that connects your dwelling to the water main contributes more than 15 ppb to drinking water, after our comprehensive treatment program is in place, we are required to replace the portion of the line that we own. If the line is only partially ~~controlled~~ owned by the [insert name of the city, county, or water system that controls the line], we are required to provide ~~you~~ the owner of the privately-owned portion of the line with information on how to replace ~~your~~ the privately-owned portion of the service line, and offer to replace that portion of the line at ~~your~~ the owner's expense ~~and take a follow-up tap water sample within 14 days of the replacement~~. If we replace only the portion of the line that we own, we also are required to notify you in advance and provide you with information on the steps that you can take to minimize exposure to any temporary increase in lead levels which may result from the partial replacement, to take a follow-up sample at our expense from the line within 72 hours after the partial replacement, and to mail or otherwise provide you with the results of that sample within three business days of receiving the results. Acceptable replacement alternatives include copper, steel, iron, and plastic pipes.

vi) Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical code to determine if your wiring can be grounded elsewhere. DO NOT attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

C) The steps described above will reduce the lead concentrations in your drinking water. However, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing, or after we have completed our actions to minimize lead levels, then you may want to take the following additional measures:

i) Purchase or lease a home treatment device. Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap, however all lead reduction claims should be investigated. Be sure to check the actual performance of a specific home treatment device before and after installing the unit.

ii) Purchase bottled water for drinking and cooking.

D) You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include the following:

i) [insert the name of city or county department of public utilities] at [insert phone number] can provide you with information about your community's water supply, and a list of local laboratories that have been certified by EPA for testing water quality;

ii) [insert the name of city or county department that issues building permits] at [insert phone number] can provide you with information about building permit records that should contain the names of plumbing contractors that plumbed your home; and

iii) [insert the name of the State Department of Public Health] at [insert phone number] or the [insert the name of the city or county health department] at [insert phone number] can provide you with information about the health effects of lead and how you can have your child's blood tested.

E) The following is a list of some State-approved laboratories in your area that you can call to have your water tested for lead. [Insert names and phone numbers of at least two laboratories].

BOARD NOTE: Derived from 40 CFR 141.85(a)(1) ~~(1992)~~ (1999), as renumbered and amended at 65 Fed. Reg. 2005 (Jan. 12, 2000).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)

Section 611.Appendix F ~~Converting Maximum Contaminant Level (MCL) Compliance Values for Consumer Confidence Reports~~Mandatory Lead Public Education Information for Non-Transient Non-Community Water Systems

1) INTRODUCTION

The United States Environmental Protection Agency (USEPA) and [insert name of water supplier] are concerned about lead in your drinking water. Some drinking water samples taken from this this facility have lead levels above the USEPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L). Under Federal law we are required to have a program in place to minimize lead in your drinking water by [insert date when corrosion control will be completed for your system]. This program includes corrosion control treatment, source water treatment, and public education. We are also required to replace the portion of each lead service line that we own if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. If you have any questions about how we are carrying out the requirements of the lead regulation please give us a call at [insert water system's phone number]. This brochure explains the simple steps you can take to protect you and your family by reducing your exposure to lead in drinking water.

2) HEALTH EFFECTS OF LEAD

Lead is found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells, and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. In addition, a child at play often comes into contact with sources of lead contamination -- like dirt and dust -- that rarely affect an adult. It is important to wash children's hands and toys often, and to try to make sure they only put food in their mouths.

3) LEAD IN DRINKING WATER

A) Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

B) Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead that connect houses and buildings to the water main (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials to 8.0%.

C) When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon after returning from work or school, can contain fairly high levels of lead.

4) STEPS YOU CAN TAKE IN THE HOME TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

A) Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer water resides in your home's plumbing the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15-30 seconds. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. It usually uses less than one gallon.

B) Do not cook with or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw water from the cold tap and heat it.

C) The steps described above will reduce the lead concentrations in your drinking water. However, if you are still concerned, you may wish to use bottled water for drinking and cooking.

D) You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include the following:

i) [insert the name or title of facility official if appropriate] at [insert phone number] can provide you with information about your facility's water supply; and

ii) [insert the name of the State Department of Public Health] at [insert phone number] or the [insert the name of the city or county health department] at [insert phone number] can provide you with information about the health effects of lead.

BOARD NOTE: Derived from 40 CFR 141.85(a)(2), as added at 65 Fed. Reg. 2006 (Jan. 12, 2000). The Department of Public Health (Department) regulates non-community water supplies, including non-transient, non-community water supplies. The Department has incorporated this Part into its regulations at 77 Ill. Adm. Code 900.15(a)(2)(A) and 900-20(k)(2). Thus, the Board has included the notice language of 40 CFR 141.85(a)(2) as this Section for the purposes of facilitating federal review and authorization of the Illinois drinking water regulations.

~~Key~~

~~AL=Action Level~~
~~MCL=Maximum Contaminant Level~~
~~MCLG=Maximum Contaminant Level Goal~~
~~MFL=million fibers per liter~~
~~mrem/year=millirems per year (a measure of radiation absorbed by the body)~~
~~NTU=Nephelometric Turbidity Units~~
~~pCi/L=picocuries per liter (a measure of radioactivity)~~
~~ppm=parts per million, or milligrams per liter (mg/L)~~
~~ppb=parts per billion, or micrograms per liter (µg/L)~~
~~ppt=parts per trillion, or nanograms per liter~~
~~ppq=parts per quadrillion, or picograms per liter~~
~~TT=Treatment Technique~~

~~Contaminant~~	~~MCL in compliance~~	~~multiply by . . .~~	~~MCL in CCR units~~	~~MCLG in CCR~~

	~~units (mg/L)~~			~~units~~
~~Microbiological Contaminants~~				
~~1. Total Coliform Bacteria~~			~~(systems that collect 40 or more samples per month) 5% of monthly samples are positive; (systems that collect fewer than 40 samples per month) 1 positive monthly sample.~~	~~0~~
~~2. Fecal coliform and E. coli~~			~~A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive.~~	~~0~~
~~3. Turbidity~~			~~TT (NTU)~~	~~n/a~~
~~Radioactive Contaminants~~				
~~4. Beta/photon emitters~~	~~4 mrem/yr~~		~~4 mrem/yr~~	~~0~~
~~5. Alpha emitters~~	~~15 pCi/L~~		~~15 pCi/L~~	~~0~~
~~6. Combined radium~~	~~5 pCi/L~~		~~5 pCi/L~~	~~0~~
~~Inorganic Contaminants~~				
~~7. Antimony~~	~~0.006~~	~~1000~~	~~6 ppb~~	~~6~~
~~8. Arsenic~~	~~0.05~~	~~1000~~	~~50 ppb~~	~~n/a~~
~~9. Asbestos~~	~~7 MFL~~		~~7 MFL~~	~~7~~
~~10. Barium~~	~~2~~		~~2 ppm~~	~~2~~
~~11. Beryllium~~	~~0.004~~	~~1000~~	~~4 ppb~~	~~4~~
~~12. Cadmium~~	~~0.005~~	~~1000~~	~~5 ppb~~	~~5~~
~~13. Chromium~~	~~0.1~~	~~1000~~	~~100 ppb~~	~~100~~
~~14. Copper~~	~~AL=1.3~~		~~AL=1.3 ppm~~	~~1.3~~
~~15. Cyanide~~	~~0.2~~	~~1000~~	~~200 ppb~~	~~200~~
~~16. Fluoride~~	~~4~~		~~4 ppm~~	~~4~~
~~17. Lead~~	~~AL=.015~~	~~1000~~	~~AL=15 ppb~~	~~0~~
~~18. Mercury (inorganic)~~	~~0.002~~	~~1000~~	~~2 ppb~~	~~2~~
~~19. Nitrate (as Nitrogen)~~	~~10~~		~~10 ppm~~	~~10~~
~~20. Nitrite (as Nitrogen)~~	~~1~~		~~1 ppm~~	~~1~~
~~21. Selenium~~	~~0.05~~	~~1000~~	~~50 ppb~~	~~50~~
~~22. Thallium~~	~~0.002~~	~~1000~~	~~2 ppb~~	~~0.5~~
~~Synthetic Organic Contaminants Including Pesticides and Herbicides~~				
~~23. 2,4-D~~	~~0.07~~	~~1000~~	~~70 ppb~~	~~70~~
~~24. 2,4,5-TP [Silvex]~~	~~0.05~~	~~1000~~	~~50 ppb~~	~~50~~
~~25. Acrylamide~~			~~TT~~	~~0~~
~~26. Alachlor~~	~~0.002~~	~~1000~~	~~2 ppb~~	~~0~~
~~27. Atrazine~~	~~0.003~~	~~1000~~	~~3 ppb~~	~~3~~
~~28. Benzo(a)pyrene [PAH]~~	~~0.0002~~	~~1,000,000~~	~~200 ppt~~	~~0~~
~~29. Carbofuran~~	~~0.04~~	~~1000~~	~~40 ppb~~	~~40~~
~~30. Chlordane~~	~~0.002~~	~~1000~~	~~2 ppb~~	~~0~~
~~31. Dalapon~~	~~0.2~~	~~1000~~	~~200 ppb~~	~~200~~
~~32. Di(2-ethylhexyl)adipate~~	~~0.4~~	~~1000~~	~~400 ppb~~	~~400~~

~~33. Di(2-ethylhexyl) phthalate~~	~~0.006~~	~~1000~~	~~6 ppb~~	~~0~~
~~34. Dibromochloropropane~~	~~0.0002~~	~~1,000,000~~	~~200 ppt~~	~~0~~
~~35. Dinoseb~~	~~0.007~~	~~1000~~	~~7 ppb~~	~~7~~
~~36. Diquat~~	~~0.02~~	~~1000~~	~~20 ppb~~	~~20~~
~~37. Dioxin [2,3,7,8-TCDD]~~	~~0.00000003~~	~~1,000,000,000~~	~~30 ppq~~	~~0~~
~~38. Endothall~~	~~0.1~~	~~1000~~	~~100 ppb~~	~~100~~
~~39. Endrin~~	~~0.002~~	~~1000~~	~~2 ppb~~	~~2~~
~~40. Epichlorohydrin~~			~~TT~~	~~0~~
~~41. Ethylene dibromide~~	~~0.00005~~	~~1,000,000~~	~~50 ppt~~	~~0~~
~~42. Glyphosate~~	~~0.7~~	~~1000~~	~~700 ppb~~	~~700~~
~~43. Heptachlor~~	~~0.0004~~	~~1,000,000~~	~~400 ppt~~	~~0~~
~~44. Heptachlor epoxide~~	~~0.0002~~	~~1,000,000~~	~~200 ppt~~	~~0~~
~~45. Hexachlorobenzene~~	~~0.001~~	~~1000~~	~~1 ppb~~	~~0~~
~~46. Hexachlorocyclopentadiene~~	~~0.05~~	~~1000~~	~~50 ppb~~	~~50~~
~~47. Lindane~~	~~0.0002~~	~~1,000,000~~	~~200 ppt~~	~~200~~
~~48. Methoxychlor~~	~~0.04~~	~~1000~~	~~40 ppb~~	~~40~~
~~49. Oxamyl [Vydate]~~	~~0.2~~	~~1000~~	~~200 ppb~~	~~200~~
~~50. PCBs [Polychlorinated biphenyls]~~	~~0.0005~~	~~1,000,000~~	~~500 ppt~~	~~0~~
~~51. Pentachlorophenol~~	~~0.001~~	~~1000~~	~~1 ppb~~	~~0~~
~~52. Picloram~~	~~0.5~~	~~1000~~	~~500 ppb~~	~~500~~
~~53. Simazine~~	~~0.004~~	~~1000~~	~~4 ppb~~	~~4~~
~~54. Toxaphene~~	~~0.003~~	~~1000~~	~~3 ppb~~	~~0~~
~~Volatile Organic Contaminants~~				
~~55. Benzene~~	~~0.005~~	~~1000~~	~~5 ppb~~	~~0~~
~~56. Carbon tetrachloride~~	~~0.005~~	~~1000~~	~~5 ppb~~	~~0~~
~~57. Chlorobenzene~~	~~0.1~~	~~1000~~	~~100 ppb~~	~~100~~
~~58. o-Dichlorobenzene~~	~~0.6~~	~~1000~~	~~600 ppb~~	~~600~~
~~59. p-Dichlorobenzene~~	~~0.075~~	~~1000~~	~~75 ppb~~	~~75~~
~~60. 1,2-Dichloroethane~~	~~0.005~~	~~1000~~	~~5 ppb~~	~~0~~
~~61. 1,1-Dichloroethylene~~	~~0.007~~	~~1000~~	~~7 ppb~~	~~7~~
~~62. cis-1,2-Dichloroethylene~~	~~0.07~~	~~1000~~	~~70 ppb~~	~~70~~
~~63. trans-1,2-Dichloroethylene~~	~~0.1~~	~~1000~~	~~100 ppb~~	~~100~~
~~64. Dichloromethane~~	~~0.005~~	~~1000~~	~~5 ppb~~	~~0~~
~~65. 1,2-Dichloropropane~~	~~0.005~~	~~1000~~	~~5 ppb~~	~~0~~
~~66. Ethylbenzene~~	~~0.7~~	~~1000~~	~~700 ppb~~	~~700~~
~~67. Styrene~~	~~0.1~~	~~1000~~	~~100 ppb~~	~~100~~
~~68. Tetrachloroethylene~~	~~0.005~~	~~1000~~	~~5 ppb~~	~~0~~
~~69. 1,2,4-Trichlorobenzene~~	~~0.07~~	~~1000~~	~~70 ppb~~	~~70~~
~~70. 1,1,1-Trichloroethane~~	~~0.2~~	~~1000~~	~~200 ppb~~	~~200~~
~~71. 1,1,2-Trichloroethane~~	~~0.005~~	~~1000~~	~~5 ppb~~	~~3~~
~~72. Trichloroethylene~~	~~0.005~~	~~1000~~	~~5 ppb~~	~~0~~
~~73. TTHMs [Total trihalomethanes]~~	~~0.10~~	~~1000~~	~~100 ppb~~	~~n/a~~
~~74. Toluene~~	~~1~~		~~1 ppm~~	~~1~~
~~75. Vinyl Chloride~~	~~0.002~~	~~1000~~	~~2 ppb~~	~~0~~
~~76. Xylenes~~	~~10~~		~~10 ppm~~	~~10~~

~~BOARD NOTE: Derived from Appendix A to Subpart O, 40 CFR Subpart O (1998).~~

(Source: Former Appendix F repealed and new Appendix F adopted at 25 Ill. Reg. ________ effective ________________________)

Section 611.Appendix G ~~Regulated Contaminants~~Violations and Situations Requiring Public Notice

See note 1 at the end of this Appendix for an explanation of the Agency's authority to alter the magnitude of a violation from that set forth in the following table.

	MCL/MRDL/TT violations[2]		Monitoring & testing procedure violations	
Contaminant	Tier of public notice required	Citation	Tier of public notice required	Citation

I. Violations of National Primary Drinking Water Regulations (NPDWR):[3]

A. Microbiological Contaminants

1. Total coliform	2	611.325(a)	3	611.521-611.525
2. Fecal coliform/E. coli	1	611.325(b)	[4] 1, 3	611.525
3. Turbidity MCL	2	611.320(a)	3	611.560
4. Turbidity MCL (average of 2 days' samples >5 NTU)	[5] 2, 1	611.320(b)	3	611.560
5. Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	[6] 2, 1	611.231(2), 611.233(b)(1), 611.250(a)(2), 611.250(b)(2), 611.250(c)(2), 611.250(d), 611.743(a)(2), 611.743(b)	3	611.531(a), 611.532(b), 611.533(a), 611.744
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT)	2	611.211, 611.213, 611.220, 611.230-611.233, 611.240-611.242, 611.250	3	611.531-611.533
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. turbidity level (TT)	2	[7] 611.740-611.743	3	611.742, 611.744

B. Inorganic Chemicals (IOCs)

1. Antimony	2	611.301(b)	3	611.600, 611.601, 611.603
2. Arsenic	2	611.300(b), 611.612(c)	3	611.100, 611.101, 611.612
3. Asbestos (fibers >10 m)	2	611.301(b)	3	611.600, 611.601, 611.602
4. Barium	2	611.301(b)	3	611.600, 611.601, 611.603
5. Beryllium	2	611.301(b)	3	611.600, 611.601, 611.603
6. Cadmium	2	611.301(b)	3	611.600, 611.601, 611.603
7. Chromium (total)	2	611.301(b)	3	611.600, 611.601, 611.603
8. Cyanide	2	611.301(b)	3	611.600, 611.601, 611.603
9. Fluoride	2	611.301(b)	3	611.600, 611.601, 611.603
10. Mercury (inorganic)	2	611.301(b)	3	611.600, 611.601, 611.603
11. Nitrate	1	611.301(b)	[8] 1, 3	611.600, 611.601, 611.604, 611.606
12. Nitrite	1	611.301(b)	[8] 1, 3	611.600, 611.601, 611.605, 611.606
13. Total Nitrate and Nitrite	1	611.301(b)	3	611.600, 611.601
14. Selenium	2	611.301(b)	3	611.600, 611.601, 611.603

15. Thallium	2	611.301(b)	3	611.600, 611.601, 611.603

C. Lead and Copper Rule (Action Level for lead is 0.015 mg/L, for copper is 1.3 mg/L)

1. Lead and Copper Rule (TT)	2	611.350-611.355	3	611.356-611.359

D. Synthetic Organic Chemicals (SOCs)

1. 2,4-D	2	611.310(c)	3	611.648
2. 2,4,5-TP (Silvex)	2	611.310(c)	3	611.648
3. Alachlor	2	611.310(c)	3	611.648
4. Atrazine	2	611.310(c)	3	611.648
5. Benzo(a)pyrene (PAHs)	2	611.310(c)	3	611.648
6. Carbofuran	2	611.310(c)	3	611.648
7. Chlordane	2	611.310(c)	3	611.648
8. Dalapon	2	611.310(c)	3	611.648
9. Di (2-ethylhexyl) adipate	2	611.310(c)	3	611.648
10. Di (2-ethylhexyl) phthalate	2	611.310(c)	3	611.648
11. Dibromochloropropane	2	611.310(c)	3	611.648
12. Dinoseb	2	611.310(c)	3	611.648
13. Dioxin (2,3,7,8-TCDD)	2	611.310(c)	3	611.648
14. Diquat	2	611.310(c)	3	611.648
15. Endothall	2	611.310(c)	3	611.648
16. Endrin	2	611.310(c)	3	611.648
17. Ethylene dibromide	2	611.310(c)	3	611.648
18. Glyphosate	2	611.310(c)	3	611.648
19. Heptachlor	2	611.310(c)	3	611.648
20. Heptachlor epoxide	2	611.310(c)	3	611.648
21. Hexachlorobenzene	2	611.310(c)	3	611.648
22. Hexachlorocyclo-pentadiene	2	611.310(c)	3	611.648
23. Lindane	2	611.310(c)	3	611.648
24. Methoxychlor	2	611.310(c)	3	611.648
25. Oxamyl (Vydate)	2	611.310(c)	3	611.648
26. Pentachlorophenol	2	611.310(c)	3	611.648
27. Picloram	2	611.310(c)	3	611.648
28. Polychlorinated biphenyls (PCBs)	2	611.310(c)	3	611.648
29. Simazine	2	611.310(c)	3	611.648
30. Toxaphene	2	611.310(c)	3	611.648

E. Volatile Organic Chemicals (VOCs)

1. Benzene	2	611.310(a)	3	611.646
2. Carbon tetrachloride	2	611.310(a)	3	611.646

3. Chlorobenzene (monochlorobenzene)	2	611.310(a)	3	611.646
4. o-Dichlorobenzene	2	611.310(a)	3	611.646
5. p-Dichlorobenzene	2	611.310(a)	3	611.646
6. 1,2-Dichloroethane	2	611.310(a)	3	611.646
7. 1,1-Dichloroethylene	2	611.310(a)	3	611.646
8. cis-1,2-Dichloroethylene	2	611.310(a)	3	611.646
9. trans-1,2-Dichloroethylene	2	611.310(a)	3	611.646
10. Dichloromethane	2	611.310(a)	3	611.646
11. 1,2-Dichloropropane	2	611.310(a)	3	611.646
12. Ethylbenzene	2	611.310(a)	3	611.646
13. Styrene	2	611.310(a)	3	611.646
14. Tetrachloroethylene	2	611.310(a)	3	611.646
15. Toluene	2	611.310(a)	3	611.646
16. 1,2,4-Trichlorobenzene	2	611.310(a)	3	611.646
17. 1,1,1-Trichloroethane	2	611.310(a)	3	611.646
18. 1,1,2-Trichloroethane	2	611.310(a)	3	611.646
19. Trichloroethylene	2	611.310(a)	3	611.646
20. Vinyl chloride	2	611.310(a)	3	611.646
21. Xylenes (total)	2	611.310(a)	3	611.646

F. Radioactive Contaminants

1. Beta/photon emitters	2	611.331	3	611.720(a), 611.732
2. Alpha emitters	2	611.330(b)	3	611.720(a), 611.731
3. Combined radium (226 & 228)	2	611.330(a)	3	611.720(a), 611.731

G. Disinfection Byproducts (DBPs), Byproduct Precursors, Disinfectant Residuals. Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). EPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs).[9]

1. Total trihalomethanes (TTHMs)	2	[10] 611.310, 611.312(a)	3	611.680-611.688, 611.382(a)-(b)
2. Haloacetic Acids (HAA5)	2	611.312(a)	3	611.382(a)-(b)
3. Bromate	2	611.312(a)	3	611.382(a)-(b)
4. Chlorite	2	611.312(a)	3	611.382(a)-(b)
5. Chlorine (MRDL)	2	611.313(a)	3	611.382(a), (c)
6. Chloramine (MRDL)	2	611.313(a)	3	611.382(a), (c)

7. Chlorine dioxide (MRDL), where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2	611.313(a), 611.383(c)(3)	2 [11], 3	611.382(a), (c), 611.383(c)(2)
8. Chlorine dioxide (MRDL), where sample(s) in distribution system the next day are also above MRDL	[12] 1	611.313(a), 611.383(c)(3)	1	611.382(a), (c), 611.383(c)(2)
9. Control of DBP precursors--TOC (TT)	2	611.385(a)-(b)	3	611.382(a), (d)
10. Bench marking and disinfection profiling	N/A	N/A	3	611.742
11. Development of monitoring plan	N/A	N/A	3	611.382(f)

H. Other Treatment Techniques

1. Acrylamide (TT)	2	611.296	N/A	N/A
2. Epichlorohydrin (TT)	2	611.296	N/A	N/A

II. Unregulated Contaminant Monitoring: [13]

A. Unregulated contaminants	N/A	N/A	3	611.510
B. Nickel	N/A	N/A	3	611.603, 611.611

III. Public Notification for Relief Equivalent to a SDWA Section 1415 Variance or a Section 1416 Exemption:

A. Operation under relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption	3	[14] 1415, 1416,	N/A	N/A
B. Violation of conditions of relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption	2	1415, 1416, [15] 611.111, 611.112	N/A	N/A

IV. Other Situations Requiring Public Notification:

A. Fluoride secondary maximum contaminant level (SMCL) exceedance	3	611.858	N/A	N/A
B. Exceedance of nitrate MCL for non-community systems, as allowed by the Agency	1	611.300(d)	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	611.510	N/A	N/A

D. Waterborne disease outbreak	1	611.101, 611.233(b)(2)	N/A	N/A
E. Other waterborne emergency [16]	1	N/A	N/A	N/A
F. Other situations as determined by the Agency by a SEP issued pursuant to Section 611.110	[17] 1, 2, 3	N/A	N/A	N/A

Appendix G--Endnotes

1. Violations and other situations not listed in this table (e.g., reporting violations and failure to prepare Consumer Confidence Reports), do not require notice, unless otherwise determined by the Agency by a SEP issued pursuant to Section 611.110. The Agency may, by a SEP issued pursuant to Section 611.110, further require a more stringent public notice tier (e.g., Tier 1 instead of Tier 2 or Tier 2 instead of Tier 3) for specific violations and situations listed in this Appendix, as authorized under Sections 611.902(a) and 611.903(a).

2. Definition of the abbreviations used: "MCL" means maximum contaminant level, "MRDL" means maximum residual disinfectant level, and "TT" means treatment technique

3. The term "violations of National Primary Drinking Water Regulations (NPDWR)" is used here to include violations of MCL, MRDL, treatment technique, monitoring, and testing procedure requirements.

4. Failure to test for fecal coliform or E. coli is a Tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are Tier 3 violations.

5. A supplier that violates the turbidity MCL of 5 NTU based on an average of measurements over two consecutive days must consult with the Agency within 24 hours after learning of the violation. Based on this consultation, the Agency may subsequently decide to issue a SEP issued pursuant to Section 611.110 that elevates the violation to a Tier 1 violation. If a system is unable to make contact with the Agency in the 24-hour period, the violation is automatically elevated to a Tier 1 violation.

6. A supplier with treatment technique a violation involving a single exceedance of a maximum turbidity limit under the Surface Water Treatment Rule (SWTR) or the Interim Enhanced Surface Water Treatment Rule (IESWTR) are required to consult with the Agency within 24 hours after learning of the violation. Based on this consultation, the Agency may subsequently decide to issue a SEP pursuant to Section 611.110 that elevates the violation to a Tier 1 violation. If a system is unable to make contact with the Agency in the 24-hour period, the violation is automatically elevated to a Tier 1 violation.

7. Most of the requirements of the Interim Enhanced Surface Water Treatment Rule (63 FR 69477) (Secs. 611.740-611.741, 611.743-611.744) become effective January 1, 2002 for a Subpart B supplier (surface water systems and ground water systems under the direct influence of surface

water) that serves at least 10,000 persons. However, Section 611.742 is currently effective. The Surface Water Treatment Rule (SWTR) remains in effect for systems serving at least 10,000 persons even after 2002; the Interim Enhanced Surface Water Treatment Rule adds additional requirements and does not in many cases supercede the SWTR.

8. Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial sample exceeds the MCL is a Tier 1 violation. Other monitoring violations for nitrate are Tier 3.

9. A subpart B community or non-transient non-community system supplier that serves 10,000 persons or more must comply with new DBP MCLs, disinfectant MRDLs, and related monitoring requirements beginning January 1, 2002. All other community and non-transient non-community systems must meet the MCLs and MRDLs beginning January 1, 2004. A Subpart B transient non-community system supplier serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. A Subpart B transient non-community system supplier that serves fewer than 10,000 persons, which uses only ground water not under the direct influence of surface water, and which uses chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.

10. Section 611.310 will no longer apply after January 1, 2004.

11. Failure to monitor for chlorine dioxide at the entrance to the distribution system the day after exceeding the MRDL at the entrance to the distribution system is a Tier 2 violation.

12. If any daily sample taken at the entrance to the distribution system exceeds the MRDL for chlorine dioxide and one or more samples taken in the distribution system the next day exceed the MRDL, Tier 1 notification is required. A failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers Tier 1 notification.

13. Some water suppliers must monitor for certain unregulated contaminants listed in Section 611.510.

14. This citation refers to Sections 1415 and 1416 of the federal Safe Drinking Water Act. Sections 1415 and 1416 require that "a schedule prescribed . . . for a public water system granted relief equivalent to a SDWA Section 1415 variance or a Section 1416 exemption shall require compliance by the system . . .."

15. In addition to Sections 1415 and 1416 of the federal Safe Drinking Water Act, 40 CFR 142.307 specifies the items and schedule milestones that must be included in relief equivalent to a SDWA Section 1415 small system variance. In granting any from of relief from an NPDWR, the Board will consider all applicable federal requirements for and limitations on the State's ability to grant relief consistent with federal law.

16. Other waterborne emergencies require a Tier 1 public notice under Section 611.902(a) for situations that do not meet the definition of a waterborne disease outbreak given in Section 611.101, but which still have the potential to have serious adverse effects on health as a result of

short-term exposure. These could include outbreaks not related to treatment deficiencies, as well as situations that have the potential to cause outbreaks, such as failures or significant interruption in water treatment processes, natural disasters that disrupt the water supply or distribution system, chemical spills, or unexpected loading of possible pathogens into the source water.

BOARD NOTE: Derived from Appendix A to Subpart Q to 40 CFR 141, as added at 65 Fed. Reg. 26040 (May 4, 2000).

~~Key~~

~~AL=Action Level~~
~~MCL=Maximum Contaminant Level~~
~~MCLG=Maximum Contaminant Level Goal~~
~~MFL=million fibers per liter~~
~~mrem/year=millirems per year (a measure of radiation absorbed by the body)~~
~~NTU=Nephelometric Turbidity Units~~
~~pCi/L=picocuries per liter (a measure of radioactivity)~~
~~ppm=parts per million, or milligrams per liter (mg/L)~~
~~ppb=parts per billion, or micrograms per liter (μg/L)~~
~~ppt=parts per trillion, or nanograms per liter~~
~~ppq=parts per quadrillion, or picograms per liter~~
~~TT=Treatment Technique~~

~~Contaminant (units)~~	~~MCLG~~	~~MCL~~	~~Major sources in drinking water~~
~~Microbiological Contaminants~~			
~~1. Total Coliform Bacteria~~	~~0~~	~~(systems that collect 40 or more samples per month) 5% of monthly samples are positive; (systems that collect fewer than 40 samples per month) 1 positive sample~~	~~Naturally present in the environment~~
~~2. Fecal coliform and E. coli~~	~~0~~	~~A routine sample and a repeat sample are fecal coliform positive, and one is also fecal coliform or E. coli positive~~	~~Human and animal fecal waste~~
~~3. Turbidity~~	~~n/a~~	~~TT~~	~~Soil runoff~~
~~Radioactive Contaminants~~			
~~4. Beta/photon emitters (mrem/yr)~~	~~0~~	~~4~~	~~Decay of natural and man-made deposits~~
~~5. Alpha emitters (pCi/L)~~	~~0~~	~~15~~	~~Erosion of natural deposits~~
~~6. Combined radium (pCi/L)~~	~~0~~	~~5~~	~~Erosion of natural deposits~~
~~Inorganic Contaminants~~			
~~7. Antimony (ppb)~~	~~6~~	~~6~~	~~Discharge from petroleum~~

			~~refineries; Fire retardants; Ceramics; Electronics; Solder~~
~~8. Arsenic (ppb)~~	~~n/a~~	~~50~~	~~Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes~~
~~9. Asbestos (MFL)~~	~~7~~	~~7~~	~~Decay of asbestos cement water mains; Erosion of natural deposits~~
~~10. Barium (ppm)~~	~~2~~	~~2~~	~~Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits~~
~~11. Beryllium (ppb)~~	~~4~~	~~4~~	~~Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries~~
~~12. Cadmium (ppb)~~	~~5~~	~~5~~	~~Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints~~
~~13. Chromium (ppb)~~	~~100~~	~~100~~	~~Discharge from steel and pulp mills; Erosion of natural deposits~~
~~14. Copper (ppm)~~	~~1.3~~	~~AL=1.3~~	~~Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives~~
~~15. Cyanide (ppb)~~	~~200~~	~~200~~	~~Discharge from steel/metal factories; Discharge from plastic and fertilizer factories~~
~~16. Fluoride (ppm)~~	~~4~~	~~4~~	
~~17. Lead (ppb)~~	~~0~~	~~AL=15~~	~~Corrosion of household plumbing systems; Erosion of natural deposits~~
~~18. Mercury [inorganic] (ppb)~~	~~2~~	~~2~~	~~Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland~~
~~19. Nitrate [as Nitrogen] (ppm)~~	~~10~~	~~10~~	~~Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits~~
~~20. Nitrite [as Nitrogen] (ppm)~~	~~1~~	~~1~~	~~Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits~~
~~21. Selenium (ppb)~~	~~50~~	~~50~~	~~Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines~~
~~22. Thallium (ppb)~~	~~0.5~~	~~2~~	~~Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories~~
~~Synthetic Organic Contaminants Including Pesticides and Herbicides~~			
~~23. 2,4-D (ppb)~~	~~70~~	~~70~~	~~Runoff from herbicide used on row crops~~

~~24. 2,4,5-TP [Silvex] (ppb)~~	~~50~~	~~50~~	~~Residue of banned herbicide~~
~~25. Acrylamide~~	~~0~~	~~TT~~	~~Added to water during sewage/wastewater treatment~~
~~26. Alachlor (ppb)~~	~~0~~	~~2~~	~~Runoff from herbicide used on row crops~~
~~27. Atrazine (ppb)~~	~~3~~	~~3~~	~~Runoff from herbicide used on row crops~~
~~28. Benzo(a)pyrene [PAH] (nanograms/L)~~	~~0~~	~~200~~	~~Leaching from linings of water storage tanks and distribution lines~~
~~29. Carbofuran (ppb)~~	~~40~~	~~40~~	~~Leaching of soil fumigant used on rice and alfalfa~~
~~30. Chlordane (ppb)~~	~~0~~	~~2~~	~~Residue of banned termiticide~~
~~31. Dalapon (ppb)~~	~~200~~	~~200~~	~~Runoff from herbicide used on rights of way~~
~~32. Di(2-ethylhexyl)adipate (ppb)~~	~~400~~	~~400~~	~~Discharge from chemical factories~~
~~33. Di(2-ethylhexyl) phthalate (ppb)~~	~~0~~	~~6~~	~~Discharge from rubber and chemical factories~~
~~34 Dibromochloropropane (ppt)~~	~~0~~	~~200~~	~~Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards~~
~~35. Dinoseb (ppb)~~	~~7~~	~~7~~	~~Runoff from herbicide used on soybeans and vegetables~~
~~36. Diquat (ppb)~~	~~20~~	~~20~~	~~Runoff from herbicide use~~
~~37. Dioxin [2,3,7,8-TCDD] (ppq)~~	~~0~~	~~30~~	~~Emissions from waste incineration and other combustion; Discharge from chemical factories~~
~~38. Endothall (ppb)~~	~~100~~	~~100~~	~~Runoff from herbicide use~~
~~39. Endrin (ppb)~~	~~2~~	~~2~~	~~Residue of banned insecticide~~
~~40. Epichlorohydrin~~	~~0~~	~~TT~~	~~Discharge from industrial chemical factories; An impurity of some water treatment chemicals~~
~~41. Ethylene dibromide (ppt)~~	~~0~~	~~50~~	~~Discharge from petroleum refineries~~
~~42. Glyphosate (ppb)~~	~~700~~	~~700~~	~~Runoff from herbicide use~~
~~43. Heptachlor (ppt)~~	~~0~~	~~400~~	~~Residue of banned termiticide~~
~~44. Heptachlor epoxide (ppt)~~	~~0~~	~~200~~	~~Breakdown of heptachlor~~
~~45. Hexachlorobenzene (ppb)~~	~~0~~	~~1~~	~~Discharge from metal refineries and agricultural chemical factories~~
~~46. Hexachlorocyclo- pentadiene (ppb)~~	~~50~~	~~50~~	~~Discharge from chemical factories~~
~~47. Lindane (ppt)~~	~~200~~	~~200~~	~~Runoff/leaching from insecticide used on cattle, lumber, gardens~~
~~48. Methoxychlor (ppb)~~	~~40~~	~~40~~	~~Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock~~
~~49. Oxamyl [Vydate](ppb)~~	~~200~~	~~200~~	~~Runoff/leaching from insecticide used on apples, potatoes, and tomatoes~~
~~50. PCBs [Polychlorinated biphenyls] (ppt)~~	~~0~~	~~500~~	~~Runoff from landfills; Discharge of waste chemicals~~
~~51. Pentachlorophenol (ppb)~~	~~0~~	~~1~~	~~Discharge from wood preserving factories~~
~~52. Picloram (ppb)~~	~~500~~	~~500~~	~~Herbicide runoff~~
~~53. Simazine (ppb)~~	~~4~~	~~4~~	~~Herbicide runoff~~
~~54. Toxaphene (ppb)~~	~~0~~	~~3~~	~~Runoff/leaching from insecticide~~

			~~used on cotton and cattle~~
~~VolatileOrganic Contaminants~~			
~~55. Benzene (ppb)~~	~~0~~	~~5~~	~~Discharge from factories; Leaching from gas storage tanks and landfills~~
~~56. Carbon tetrachloride (ppb)~~	~~0~~	~~5~~	~~Discharge from chemical plants and other industrial activities~~
~~57. Chlorobenzene (ppb)~~	~~100~~	~~100~~	~~Discharge from chemical and agricultural chemical factories~~
~~58. o-Dichlorobenzene (ppb)~~	~~600~~	~~600~~	~~Discharge from industrial chemical factories~~
~~59. p-Dichlorobenzene (ppb)~~	~~75~~	~~75~~	~~Discharge from industrial chemical factories~~
~~60. 1,2-Dichloroethane (ppb)~~	~~0~~	~~5~~	~~Discharge from industrial chemical factories~~
~~61. 1,1-Dichloroethylene (ppb)~~	~~7~~	~~7~~	~~Discharge from industrial chemical factories~~
~~62. cis-1,2-Dichloroethylene (ppb)~~	~~70~~	~~70~~	~~Discharge from industrial chemical factories~~
~~63. trans-1,2-Dichloroethylene (ppb)~~	~~100~~	~~100~~	~~Discharge from industrial chemical factories~~
~~64. Dichloromethane (ppb)~~	~~0~~	~~5~~	~~Discharge from pharmaceutical and chemical factories~~
~~65. 1,2-Dichloropropane (ppb)~~	~~0~~	~~5~~	~~Discharge from industrial chemical factories~~
~~66. Ethylbenzene (ppb)~~	~~700~~	~~700~~	~~Discharge from petroleum refineries~~
~~67. Styrene (ppb)~~	~~100~~	~~100~~	~~Discharge from rubber and plastic factories; Leaching from landfills~~
~~68. Tetrachloroethylene (ppb)~~	~~0~~	~~5~~	~~Leaching from PVC pipes; Discharge from factories and dry cleaners~~
~~69. 1,2,4-Trichlorobenzene (ppb)~~	~~70~~	~~70~~	~~Discharge from textile - finishing factories~~
~~70. 1,1,1-Trichloroethane (ppb)~~	~~200~~	~~200~~	~~Discharge from metal degreasing sites and other factories~~
~~71. 1,1,2-Trichloroethane (ppb)~~	~~3~~	~~5~~	~~Discharge from industrial chemical factories~~
~~72. Trichloroethylene (ppb)~~	~~0~~	~~5~~	~~Discharge from metal degreasing sites and other factories~~
~~73. TTHMs [Total trihalomethanes] (ppb)~~	~~n/a~~	~~100~~	~~Byproduct of drinking water chlorination~~
~~74. Toluene (ppm)~~	~~1~~	~~1~~	~~Discharge from petroleum factories~~
~~75. Vinyl Chloride (ppb)~~	~~0~~	~~2~~	~~Leaching from PVC piping; Discharge from plastics factories~~
~~76. Xylenes (ppm)~~	~~10~~	~~10~~	~~Discharge from petroleum factories; Discharge from chemical factories~~

~~BOARD NOTE: Derived from Appendix B to Subpart O, 40 CFR Subpart O (1998).~~

(Source: Former Appendix F repeals and new Appendix F adopted at 25 Ill. Reg. ________ effective _______________________)

Section 611.Appendix H Standard Health Effects Language for Public Notification

Contaminant	MCLG [1] mg/L	MCL [2] mg/L	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR):			
A. Microbiological Contaminants			
1a. Total coliform	Zero	See footnote 3	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
1b. Fecal coliform/E. coli	Zero	Zero	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
2a. Turbidity (MCL) [4]	None	1 NTU [5]/5 NTU	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
2b. Turbidity (SWTR TT)	None	TT [7]	Turbidity has no health effects. However,[6] turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

2c. Turbidity (IESWTR TT)	None	TT	Turbidity has no health effects. However,[8] turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
B. Surface Water Treatment Rule (SWTR) and Interim Enhanced Surface Water Treatment Rule (IESWTR) violations			
3. Giardia lamblia (SWTR/IESWTR)	Zero	TT [10]	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
4. Viruses (SWTR/IESWTR)			
5. Heterotrophic plate count (HPC) bacteria[9] (SWTR/IESWTR)			
6. Legionella (SWTR/IESWTR)			
7. Cryptosporidium (IESWTR)			
C. Inorganic Chemicals (IOCs)			
8. Antimony	0.006	0.006	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
9. Arsenic	None	0.05	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
10. Asbestos (10 m).	7 MFL[11]	7MFL	asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.

11. Barium	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
12. Beryllium	0.004	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
13. Cadmium	0.005	0.005	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
14. Chromium (total)	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
15. Cyanide	0.2	0.2	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
16. Fluoride	4.0	4.0	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
17. Mercury (inorganic)	0.002	0.002	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.

18. Nitrate	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
19. Nitrite	1	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
20. Total Nitrate and Nitrite	10	10	Infants below the age of six months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
21. Selenium	0.05	0.05	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
22. Thallium	0.0005	0.002	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
D. Lead and Copper Rule			
23. Lead	Zero	TT [12]	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

24. Copper	1.3	TT [13]	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
E. Synthetic Organic Chemicals (SOCs)			
25. 2,4-D	0.07	0.07	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
26. 2,4,5-TP (Silvex)	0.05	0.05	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
27. Alachlor	Zero	0.002	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
28. Atrazine	0.003	0.003	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
29. Benzo(a)pyrene (PAHs).	Zero	0.0002	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.

30. Carbofuran	0.04	0.04	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
31. Chlordane	Zero	0.002	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
32. Dalapon	0.2	0.2	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
33. Di (2-ethylhexyl)adipate	0.4	0.4	Some people who drink water containing di(2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.
34. Di (2-ethylhexyl)phthalate	Zero	0.006	Some people who drink water containing di(2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
35. Dibromochloropropane	Zero	0.0002	Some people who drink water containing (DBCP) DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
36. Dinoseb	0.007	0.007	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.

37. Dioxin (2,3,7,8-TCDD).	Zero	3×10^{-8}	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
38. Diquat	0.02	0.02	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
39. Endothall	0.1	0.1	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
40. Endrin	0.002	0.002	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
41. Ethylene dibromide	Zero	0.00005	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
42. Glyphosate	0.7	0.7	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
43. Heptachlor	Zero	0.0004	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
44. Heptachlor epoxide	Zero	0.0002	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.

45. Hexachlorobenzene	Zero	0.001	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
46. Hexachlorocyclopentadiene	0.05	0.05	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
47. Lindane	0.0002	0.0002	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
48. Methoxychlor	0.04	0.04	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
49. Oxamyl (Vydate)	0.2	0.2	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
50. Pentachlorophenol	Zero	0.001	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
51. Picloram	0.5	0.5	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

52. Polychlorinated biphenyls (PCBs)	Zero	0.0005	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
53. Simazine	0.004	0.004	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
54. Toxaphene	Zero	0.003	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
F. Volatile Organic Chemicals (VOCs)			
55. Benzene	Zero	0.005	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
56. Carbon tetrachloride	Zero	0.005	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
57. Chlorobenzene (monochlorobenzene)	0.1	0.1	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
58. o-Dichlorobenzene	0.6	0.6	Some people who drink water containing o- dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

59. p-Dichlorobenzene	0.075	0.075	Some people who drink water containing p- dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
60. 1,2-Dichloroethane	Zero	0.005	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
61. 1,1-Dichloroethylene	0.007	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
62. cis-1,2-Dichloroethylene	0.07	0.07	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
63. trans-1,2-Dichloroethylene	0.1	0.1	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
64. Dichloromethane	Zero	0.005	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
65. 1,2-Dichloropropane	Zero	0.005	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
66. Ethylbenzene	0.7	0.7	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.

67. Styrene	0.1	0.1	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
68. Tetrachloroethylene	Zero	0.005	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
69. Toluene	1	1	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
70. 1,2,4-Trichlorobenzene	0.07	0.07	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
71. 1,1,1-Trichloroethane.	0.2	0.2	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
72. 1,1,2-Trichloroethane.	0.003	0.005	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
73. Trichloroethylene	Zero	0.005	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
74. Vinyl chloride	Zero	0.002	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.

75. Xylenes (total)	10	10	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
G. Radioactive Contaminants			
76. Beta/photon emitters	Zero	4 mrem/yr [14]	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
77. Alpha emitters	Zero	15 pCi/L [15]	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
78. Combined radium (226 & 228)	Zero	5 pCi/L	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
H. Disinfection Byproducts (DBPs), Byproduct Precursors, and Disinfectant Residuals: Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). EPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs)[16]			
79. Total trihalomethanes (TTHMs)	N/A	0.10/0.080[17] [18]	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.
80. Haloacetic Acids (HAA)	N/A	0.060 [19]	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

81. Bromate	Zero	0.010	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
82. Chlorite	0.08	1.0	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
83. Chlorine	4 (MRDLG)[20]	4.0 (MRDL)[21]	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
84. Chloramines	4 (MRDLG)	4.0 (MRDL)	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
85a. Chlorine dioxide, where any 2 consecutive daily samples taken at the entrance to the distribution system are above the MRDL	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in nervous system excess of the MRDL could experience effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.

			Add for public notification only: The chlorine dioxide violations reported today are the result of exceedances at the treatment facility only, not within the distribution system which delivers water to consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers.
85b. Chlorine dioxide, where one or more distribution system samples are above the MRDL	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. Add for public notification only: The chlorine dioxide violations reported today include exceedances of the EPA standard within the distribution system which delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short- term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure.

86. Control of DBP precursors (TOC)	None	TT	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
I. Other Treatment Techniques:			
87. Acrylamide	Zero	TT	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
88. Epichlorohydrin	Zero	TT	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

Appendix H--Endnotes

1. "MCLG" means maximum contaminant level goal.

2. "MCL" means maximum contaminant level.

3. For a water supplier analyzing at least 40 samples per month, no more than 5.0 percent of the monthly samples may be positive for total coliforms. For a supplier analyzing fewer than 40 samples per month, no more than one sample per month may be positive for total coliforms.

4. There are various regulations that set turbidity standards for different types of systems, including Section 611.320, the 1989 Surface Water Treatment Rule, and the 1998 Interim Enhanced Surface Water Treatment Rule. The MCL for the monthly turbidity average is 1 NTU; the MCL for the 2-day average is 5 NTU for a supplier that is required to filter but have not yet installed filtration (Section 611.320).

5. "NTU" means nephelometric turbidity unit.

6. There are various regulations that set turbidity standards for different types of systems, including Section 611.320, the 1989 Surface Water Treatment Rule (SWTR), and the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR). A supplier subject to the Surface Water Treatment Rule (both filtered and unfiltered) may not exceed 5 NTU. In addition, in filtered systems, 95 percent of samples each month must not exceed 0.5 NTU in systems using conventional or direct filtration and must not exceed 1 NTU in systems using slow sand or diatomaceous earth filtration or other filtration technologies approved by the Agency.

7. "TT" means treatment technique.

8. There are various regulations that set turbidity standards for different types of systems, including Section 611.320, the 1989 Surface Water Treatment Rule (SWTR), and the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR). For a supplier subject to the IESWTR (systems serving at least 10,000 people, using surface water or ground water under the direct influence of surface water), that use conventional filtration or direct filtration, after January 1, 2002, the turbidity level of a system's combined filter effluent may not exceed 0.3 NTU in at least 95 percent of monthly measurements, and the turbidity level of a system's combined filter effluent must not exceed 1 NTU at any time. A supplier subject to the IESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the Agency.

9. The bacteria detected by heterotrophic plate count (HPC) are not necessarily harmful. HPC is simply an alternative method of determining disinfectant residual levels. The number of such bacteria is an indicator of whether there is enough disinfectant in the distribution system.

10. SWTR and IESWTR treatment technique violations that involve turbidity exceedances may use the health effects language for turbidity instead.

11. Millions of fibers per liter.

12. Action Level = 0.015 mg/L.

13. Action Level = 1.3 mg/L.

14. Millirems per years.

15. Picocuries per liter.

16. A surface water system supplier or a ground water system supplier under the direct influence of surface water are regulated under Subpart B of this Part. A Supbart B community water system supplier or a non-transient non-community system supplier that serves 10,000 or more persons must comply with DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs) beginning January 1, 2002. All other community and non-transient noncommunity system suppliers must meet the MCLs and MRDLs beginning January 1, 2004. Subpart B transient non-community system suppliers serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. Subpart B transient non-community system suppliers serving fewer than 10,000 persons and systems using

only ground water not under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.

17. The MCL of 0.10 mg/l for TTHMs is in effect until January 1, 2002 for a Subpart B community water system supplier serving 10,000 or more persons. This MCL is in effect until January 1, 2004 for community water systems with a population of 10,000 or more using only ground water not under the direct influence of surface water. After these deadlines, the MCL will be 0.080 mg/l. On January 1, 2004, a supplier serving less than 10,000 will have to comply with the new MCL as well.

18. The MCL for total trihalomethanes is the sum of the concentrations of the individual trihalomethanes.

19. The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.

20. "MRDLG" means maximum residual disinfectant level goal.

21. "MRDL" means maximum residual disinfectant level.

BOARD NOTE: Derived from Appendix B to Subpart Q to 40 CFR 141, as added at 65 Fed. Reg. 26043 (May 4, 2000).

~~Microbiological Contaminants~~

~~1) Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.~~

~~2) Fecal coliform/E. coli. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.~~

~~3) Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.~~

~~Radioactive Contaminants~~

~~4) Beta/photon emitters. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.~~

~~5) Alpha emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.~~

~~6) Combined Radium 226/228. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.~~

~~Inorganic Contaminants~~

~~7) Antimony. Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.~~

~~8) Arsenic. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.~~

~~9) Asbestos. Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.~~

~~10) Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.~~

~~11) Beryllium. Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.~~

~~12) Cadmium. Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.~~

~~13) Chromium. Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.~~

~~14) Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.~~

~~15) Cyanide. Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.~~

~~16) Fluoride. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.~~

~~17) Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.~~

~~18) Mercury (inorganic). Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.~~

~~19) Nitrate. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.~~

~~20) Nitrite. Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.~~

~~21) Selenium. Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.~~

~~22) Thallium. Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.~~

~~Synthetic Organic Contaminants Including Pesticides and Herbicides~~

~~23) 2,4 D. Some people who drink water containing the weed killer 2,4 D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.~~

~~24) 2,4,5 TP (Silvex). Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.~~

~~25) Acrylamide. Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.~~

~~26) Alachlor. Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.~~

~~27) Atrazine. Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.~~

~~28) Benzo(a)pyrene (PAH). Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties, and may have an increased risk of getting cancer.~~

~~29) Carbofuran. Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.~~

~~30) Chlordane. Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.~~

~~31) Dalapon. Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.~~

~~32) Di(2 ethylhexyl)adipate. Some people who drink water containing di(2 ethylhexyl)adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.~~

~~33) Di (2 ethylhexyl) phthalate. Some people who drink water containing di (2 ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.~~

~~34) Dibromochloropropane (DBCP). Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties, and may have an increased risk of getting cancer.~~

~~35) Dinoseb. Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.~~

~~36) Dioxin (2,3,7,8 TCDD). Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties, and may have an increased risk of getting cancer.~~

~~37) Diquat. Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.~~

~~38) Endothall. Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.~~

~~39) Endrin. Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.~~

~~40) Epichlorohydrin. Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.~~

~~41) Ethylene dibromide. Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.~~

~~42) Glyphosate. Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.~~

~~43) Heptachlor. Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.~~

~~44) Heptachlor epoxide. Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.~~

~~45) Hexachlorobenzene. Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.~~

~~46) Hexachlorocyclopentadiene. Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.~~

~~47) Lindane. Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.~~

~~48) Methoxychlor. Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.~~

~~49) Oxamyl [Vydate]. Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.~~

~~50) PCBs [Polychlorinated biphenyls]. Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.~~

~~51) Pentachlorophenol. Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.~~

~~52) Picloram. Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.~~

~~53) Simazine. Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.~~

~~54) Toxaphene. Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.~~

~~Volatile Organic Contaminants~~

~~55) Benzene. Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.~~

~~56) Carbon Tetrachloride. Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver, and may have an increased risk of getting cancer.~~

~~57) Chlorobenzene. Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.~~

~~58) o Dichlorobenzene. Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.~~

~~59) p Dichlorobenzene. Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.~~

~~60) 1,2 Dichloroethane. Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.~~

~~61) 1,1 Dichloroethylene. Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.~~

~~62) cis 1,2 Dichloroethylene. Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.~~

~~63) trans 1,2 Dicholoroethylene. Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.~~

~~64) Dichloromethane. Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems, and may have an increased risk of getting cancer.~~

~~65) 1,2 Dichloropropane. Some people who drink water containing 1,2 dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.~~

~~66) Ethylbenzene. Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.~~

~~67) Styrene. Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.~~

~~68) Tetrachloroethylene. Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.~~

~~69) 1,2,4 Trichlorobenzene. Some people who drink water containing 1,2,4 trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.~~

~~70) 1,1,1, Trichloroethane. Some people who drink water containing 1,1,1 trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.~~

~~71) 1,1,2 Trichloroethane. Some people who drink water containing 1,1,2 trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.~~

~~72) Trichloroethylene. Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver, and may have an increased risk of getting cancer.~~

~~73) TTHMs [Total Trihalomethanes]. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.~~

~~74) Toluene. Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.~~

~~75) Vinyl Chloride. Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.~~

~~76) Xylenes. Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.~~

(Source: Former Appendix H repealed and new Appendix H adopted at 25 Ill. Reg. ________ effective ________________________)

Section 611.Appendix I Acronyms Used in Public Notification Regulation

CCR	Consumer Confidence Report
CWS	Community Water System
DBP	Disinfection Byproduct

EPA	Environmental Protection Agency
HPC	Heterotrophic Plate Count
IESWTR	Interim Enhanced Surface Water Treatment Rule
IOC	Inorganic Chemical
LCR	Lead and Copper Rule
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
NCWS	Non-Community Water System
NPDWR	National Primary Drinking Water Regulation
NTNCWS	Non-Transient Non-Community Water System
NTU	Nephelometric Turbidity Unit
OGWDW	Office of Ground Water and Drinking Water
OW	Office of Water
PN	Public Notification
PWS	Public Water System
SDWA	Safe Drinking Water Act
SMCL	Secondary Maximum Contaminant Level
SOC	Synthetic Organic Chemical
SWTR	Surface Water Treatment Rule
TCR	Total Coliform Rule
TT	Treatment Technique
TWS	Transient Non-Community Water System
VOC	Volatile Organic Chemical

BOARD NOTE: Derived from Appendix C to Subpart Q to 40 CFR 141, as added at 65 Fed. Reg. 26048 (May 4, 2000).

(Source: Added at 25 Ill. Reg. ________ effective ______________________)

Section 611.Table G Summary of Monitoring Section 611.357 Requirements for Water Quality Parameters[1]

Monitoring Period	Parameters[2]	Location	Frequency
Initial Monitoring	pH, alkalinity, orthophosphate~~,~~ or silica(3), calcium, conductivity, temperature~~.~~	Taps and at entry ~~point(s)~~ points to the distribution system	Every ~~6~~ six months
After ~~Installation~~ installation of ~~Corrosion Control~~corrosion control	pH, alkalinity, orthophosphate or silica[3], calcium[4]	Taps	Every ~~6~~ six months

~~After Installation of Corrosion Control~~	pH, alkalinity dosage rate and concentration (if alkalinity is adjusted as part of corrosion control), inhibitor dosage rate and inhibitor esidual[5]	Entry ~~point(s)~~ points to the distribution system[6]	~~Biweekly~~No less frequently than every two weeks
After ~~State~~ the Agency specifies parameter values ~~Specifies Parameter Values~~ for optimal corrosion control~~Optimal Corrosion Control~~	pH, alkalinity, orthophosphate or silica[3], calcium[4]	Taps	Every ~~6~~ six months
~~After State Specifies Parameter Values for Optimal Corrosion Control~~	pH, alkalinity dosage rate and concentration (if alkalinity is adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual[5]	Entry ~~point(s)~~ points to the distribution system[6]	~~Biweekly~~No less frequently than every two weeks
Reduced ~~Monitoring~~monitoring	pH, alkalinity, orthophosphate or silica[3], calcium[4]	Taps	Every ~~6~~ six months, annually[7] or every three years[8]; ~~at a~~ reduced number of sites
~~Reduced Monitoring~~	pH, alkalinity dosage rate and concentration (if alkalinity is adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual[5]	Entry ~~point(s)~~ points to the distribution system[6]	~~Biweekly~~No less frequently than every two weeks

~~1~~ 1. Table G is for illustrative purposes; consult the text of Section 611.357 for precise regulatory requirements.

~~2~~ 2. Small and medium-size systems have to monitor for water quality parameters only during monitoring periods in which the system exceeds the lead or copper action level.

~~3~~ 3. Orthophosphate must be measured only when an inhibitor containing a phosphate compound is used. Silica must be measured only when an inhibitor containing silicate compound is used.

~~4~~ 4. Calcium must be measured only when calcium carbonate stabilization is used as part of corrosion control.

~~5~~ 5. Inhibitor dosage rates and inhibitor residual concentrations (orthophosphate or silica) must be measured only when an inhibitor is used.

6, A groundwater system supplier may limit monitoring to representative locations throughout the system.

7. A water supplier may reduce frequency of monitoring for water quality parameters at the tap from every six months to annually if they have maintained the range of values for water quality parameters reflecting optimal corrosion control during three consecutive years of monitoring.

8. A water supplier may further reduce the frequency of monitoring for water quality parameters at the tap from annually to once every three years if they have maintained the range of values for water quality parameters

reflecting optimal corrosion control during three consecutive years of annual monitoring. A water supplier may accelerate to triennial monitoring for water quality parameters at the tap if they have maintained 90th percentile lead levels less than or equal to 0.005 mg/L, 90th percentile copper levels less than or equal to 0.65 mg/L, and the range of water quality parameters designated by the Agency under Section 611.352(f) as representing optimal corrosion control during two consecutive six-month monitoring periods.

BOARD NOTE: Derived from the table to 40 CFR 141.87 ~~(1992)~~ (1999).

(Source: Amended at 25 Ill. Reg. ________ effective ______________________)