

## Clearinghouse Rule 07-025

### ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD AMENDING, REPEALING AND RECREATING AND CREATING RULES

The Natural Resource Board proposes an order to amend NR 809.30 (1)(b), NR 809.30(3), NR 809.31(6), NR 809.50(3) Table B, NR 809.542(2)(c)3, NR 809.546(1)(a), NR 809.725(1) Table A, NR 809.725(1) Table F, NR 809.75(4), NR 809.76 (1) (a) and (b), NR 809.76 (2)(a) and (b), NR 809.765 (1), NR 809.80 (3), NR 809.833(3)(b)2., NR 809.833(3)(e), NR 809.833(4)(c), NR 809.833(6)(a) through (d), NR 809.835(2), NR 809.835(3), NR 809.837(7), NR 809.90(4)(b) , NR 809.957, NR 809.959 Appendix A to Subchapter X footnote 7, NR 809.959 Appendix A to Subchapter X footnote 8; to repeal and recreate NR 809.569(1)(b), NR 809.725(1) Table B; to create NR 809.53(3) (e) relating to the IESWTR, LT1, DDBP, PN, CCR, radionuclide, and total coliform rules and updating of analytical methods for public water systems.

DG-33-06

Analysis prepared by Department of Natural Resources

Statutory authority: ss.280.11 and 281.17 (8), Stats.

Statutes interpreted: ss.280.11 and 281.17(8), Stats.

Explanation of Authority: 280.11 - The department shall, after a public hearing, prescribe, publish and enforce minimum reasonable standards and rules and regulations for methods to be pursued in the obtaining of pure drinking water for human consumption and the establishing of all safeguards deemed necessary in protecting the public health against the hazards of polluted sources of impure water supplies intended or used for human consumption . . .

281.17(8) - The department may establish, administer and maintain a safe drinking water program no less stringent than the requirements of the safe drinking water act, 42 USC 300f to 300j-26.

Plain Language analysis:

On January 14, 2002, U.S. EPA published National Drinking Water Regulations for Long-Term 1 Enhanced Surface Water Treatment (LT1); these changes impact all public drinking water systems using surface water or groundwater under the direct influence of surface water (GWUDI) and serve fewer than ten thousand (10,000) people.

In order to maintain primacy, Wisconsin must adopt all federal requirements under the Safe Drinking Water Act (SDWA) or have requirements that are equal to or more stringent than the SDWA. In the case of the LT1 regulation there are two alternatives available for Wisconsin to meet this requirement:

1. Full adoption of the LT1 rule for surface water and groundwater under the direct influence of surface water (GWUDI) systems with populations of 10,000 or less. Or,
2. Amending the state version of the Interim Enhanced Surface Water Treatment Rule (IESWTR) to apply to all surface water and GWUDI systems.

Using alternative #1 requires incorporation of rule language that will not be used by any drinking water systems and will only add confusion in understanding NR 809 requirements. Only two systems in Wisconsin will fall under the LT1 requirements and in reality, the LT1 rule will not apply to either. The first system, Wisconsin Veterans Home at King will be using all groundwater in the near future. The second system, Ashland Water Utility, uses an alternative technology – membrane filtration and is required to meet standards of the IESWTR

by virtue of their plan of operation. Wisconsin has no systems that are considered GWUDI under the federal regulations.

Alternative #2 changes the application of the IESWTR to all surface water and GWUDI systems rather than just those over 10,000. This is consistent with current practice. The requirements of the LT1 were developed based on the IESWTR, but were modified by EPA to reduce the burden on small systems. Since there are no Wisconsin systems to be burdened we do not feel it is necessary to promulgate additional rule language.

The recommendation is to use alternative #2 for meeting the primacy requirement to adopt rules at least as stringent as the federal rules. We propose to have the IESWTR apply to all surface water and GWUDI systems in Wisconsin.

This rulemaking includes revisions to correct minor errors in and updates to the following:

1. the existing interim enhanced surface water treatment rule (IESWTR);
2. the stage 1 disinfection and disinfection byproducts rule (DDBPR);
3. the lead and copper rule (LCR);
4. the drinking water public notification rule (PNR);
5. the radionuclide rule; and
6. updating analytical methods.

All the minor errors and additions edits have been identified by EPA in various primacy reviews and are required to be completed.

Additionally, language will be clarified with regard to total coliform rule (TCR) maximum contaminant level (MCL) determinations impacting systems collecting less than 40 samples per month.

The existing language on non-acute or monthly TCR MCL determination is not clear and therefore needs elucidation, the actual meaning will not be changed.

Summary and comparison of federal regulations: This rule change will allow WDNR regulations to incorporate the remaining federal surface water treatment EPA regulations so that WDNR may maintain primacy ("primary enforcement authority") for the affected regulation. All the minor errors and additions edits have been identified by EPA in various primacy reviews and are required to be completed as a condition of primacy.

Comparison to other states: The surrounding states have numerous small public surface water systems using conventional treatment that serve systems with a population under 10,000 people. Therefore, the LT 1 rule provides relief in those states from the monitoring required by the IESWT rule. In Wisconsin only two surface water systems with populations under 10,000 are presently operating: The system at the Wisconsin Veterans Home in King, WI will be fully served by a groundwater source by the end of 2007. The city of Ashland water utility has a membrane filtration plant and is required by a DNR issued plan approval to meet requirements that are at least as stringent as the IESWT rule. Since adding the additional language of the LT1 rule would not change any requirements for public water systems in Wisconsin, NR 809 remains consistent with the requirements of the surrounding states.

The minor revisions, corrections and clarifications included in this rule package should serve to bring Wisconsin's SDWA rule in line with the surrounding states.

Analysis to determine affect on small business: The majority of these rule changes are clarification of federal requirements that are already in existence. The proposed rule changes for surface water and GWUDI systems will not impact small business, since no small systems will be regulated under them. The addition of EPA approved analytical methods may provide laboratories with additional flexibility in analyzing public drinking water samples.

Effects on small business: The effects of these rule changes are to provide additional flexibility to laboratories that perform analyses for public water systems. Since there are no small surface water systems or GWUDI in Wisconsin the LT1 rule is not necessary to provide monitoring relief for small water systems.

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Written comments: Written comments may be submitted until April 20, 2007 to Carol McCurry, Bureau of Drinking Water and Groundwater, P.O. Box 7921, Madison, WI 53707. Comments may also be electronically submitted at the following Internet site: <http://adminrules.wisconsin.gov>.

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SECTION 1. NR 809.30 (1)(b) is amended to read:

NR 809.30 (1)(b) For a system which collects fewer than 40 samples per month, if no more than one sample, ~~including routine and repeat samples,~~ collected during a ~~sampling monitoring~~ period is total coliform-positive, the system is in compliance with the MCL for total coliforms.

SECTION 2. NR 809.30 (3) is amended to read:

NR 809.30(3) The water supplier for a public water system shall determine compliance with the MCL for total coliforms in subs. (1) and (2) for each monitoring period in which the system is required to monitor for total coliforms.

SECTION 3. NR 809.31(6) is amended to read:

NR 809.31(6) SANITARY SURVEYS. (a) ~~Public~~ All public water systems shall undergo a sanitary survey every 5 years, ~~except that non-community water systems using only protected and disinfected ground water, as determined on a case-by-case basis by the department, shall undergo a sanitary survey at least every 10 years after the initial sanitary survey.~~ The department will review the results of each sanitary survey to determine whether the existing monitoring frequency is adequate and what additional measures, if any, the system needs to undertake to improve drinking water quality.

SECTION 4. NR 809.50(3) Table B is amended to read:

**Table B**

**BAT for Combined Radium-226 and Radium-228, Uranium, Gross Alpha Particle Activity, and Beta Particle and Photon Radioactivity**

<b>Contaminant</b>	<b>BAT</b>
1. Combined radium-226 and radium-228	Ion exchange, reverse osmosis, lime softening
2. Uranium	Ion exchange, reverse osmosis, lime softening, coagulation/ filtration
3. Gross alpha particle activity (excluding Radon and Uranium).	Reverse osmosis.
4. Beta particle and photon <del>ion exchange</del> radioactivity	<del>Ion exchange and Reverse reverse osmosis radioactivity.</del>

SECTION 5. NR 809.53(3) (e) is created to read:

NR 809.53(3)(e) If the MCL for radioactivity set forth in ss. NR 809.50(1) and 809.51(1) and (2) is exceeded, the operator of a community water system shall give notice to the department pursuant to s. NR 809.80(1) and to the public as required by subch. X.

SECTION 6. NR 809.542(2)(c)3. is amended to read:

NR 809.542(2)(c)3. Any water system deemed to have optimized corrosion control pursuant to this paragraph shall notify the department in writing pursuant to s. NR 809.55 (1)(~~f~~) (e) of any change in treatment or the addition of a new source. The department may require any system to conduct additional monitoring or to take other action the department deems appropriate to ensure that systems maintain minimal levels of corrosion in the distribution system.

SECTION 7. NR 809.546(1)(a) is amended to read:

NR 809.546(1)(a) The United States environmental protection agency (EPA) 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 EPA 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 each lead service line that we control if the line contributes lead concentrations of more than 15 ppb ~~or more~~ 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.

SECTION 8. NR 809.569(1)(b) is repealed and recreated to read:

Step 1 Required Removal of TOC by Enhanced Coagulation and Enhanced Softening for Surface Water Systems Using Conventional Treatment <sup>1,2</sup>

Source water TOC, mg/l	Source water alkalinity, mg/L as CaCO <sub>3</sub>		
	0 - 60 %	≤ > 60 - 120 %	> 120% <sup>3</sup>
>2.0 - 4.0	35.0	25.0	15.0
>4.0 - 8.0	45.0	35.0	25.0
>8.0	50.0	40.0	30.0

<sup>1</sup> Systems meeting at least one of the conditions in sub.(2) (b) 1. to 7. are not required to operate with enhanced coagulation.

<sup>2</sup> Softening systems meeting one of the alternative compliance criteria in sub.(2)(c) are not required to operate with enhanced softening.

<sup>3</sup> Systems practicing softening shall meet the TOC removal requirements in this column.

SECTION 9. NR 809.725(1) Table A is amended to read:

**TABLE A**  
**Approved Methodology for Primary Inorganic Contaminants**

Contaminant and Methodology <sup>12</sup>	Reference (Method Number)			
	EPA	ASTM <sup>3</sup>	SM <sup>4</sup>	Other
<b>Antimony</b>				
Atomic absorption; furnace technique	-	-	3113B	-
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-
Inductively Coupled Plasma-Mass	200.8 <sup>2</sup>	-	-	-

Spectrometry (ICP/MS)				
Atomic absorption; gaseous hydride <sup>9</sup>	-	D3697-92	-	-
<b>Asbestos</b>				
Transmission Electron Microscopy	100.1 <sup>9</sup>	-	-	-
Transmission Electron Microscopy	100.2 <sup>10</sup>	-	-	-
<b>Arsenic<sup>13</sup></b>				
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-
Atomic absorption; furnace technique	-	D2972-93C	3113 B	-
Atomic absorption; gaseous hydride	-	D2972-93B	3114 B	-
<del>Inductively Coupled Plasma (ICP)<sup>14</sup></del>	<del>200.7<sup>2</sup></del>	-	<del>3120 B<sup>14</sup></del>	-
ICP/MS	200.8 <sup>2</sup>	-	<del>3120 B</del>	-
<b>Barium</b>				
Atomic absorption; direct aspiration	-	-	3111 D	-
Atomic absorption; furnace technique	-	-	3113 B	-
ICP	200.7 <sup>2</sup>	-	3120 B	-
ICP/MS	200.8 <sup>2</sup>	-	-	-
<b>Beryllium</b>				
Atomic absorption; furnace technique	-	D3645-93B	3113 B	-
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-
ICP	200.7 <sup>2</sup>	-	3120 B	-
ICP/MS	200.8 <sup>2</sup>	-	-	-
<b>Cadmium</b>				
Atomic absorption; furnace technique <sup>6</sup>	-	-	3113 B	-
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-
ICP	200.7 <sup>2</sup>	-	-	-
ICP/MS	200.8 <sup>2</sup>	-	-	-
<b>Copper</b>				
Atomic absorption; furnace technique	-	D1688-90C	3113 B	-
Atomic absorption; direct aspiration	-	D1688-90A	3111 B	-
ICP	200.7 <sup>2</sup>	-	3120 B	-
ICP/MS	200.8 <sup>2</sup>	-	-	-
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-
<b>Chromium</b>				
Atomic absorption; furnace technique	-	-	3113 B	-
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-
ICP	200.7 <sup>2</sup>	-	3120 B	-
ICP/MS	200.8 <sup>2</sup>	-	-	-
<b>Cyanide</b>				
Manual Distillation, followed by Spectrophotometric, Amenable	-	<u>D2036-91A</u>	4500-CN-C	-
Spectrophotometric, Manual	-	D2036-91B	4500-CN-G	-
	-	D2036-91A	4500-CN-E	-

Semi-automated Selective Electrode	335.4 <sup>6</sup> -	- -	- 4500-CN-F	- -
<b>Fluoride</b>				
Ion Chromatography	300.0 <sup>6</sup>	D4327-91	4110B	-
Manual distillation; Colorimetric. SPADNS	-	-	4500-F- B, D	-
Manual electrode	-	D1179-93B	4500-F- C	-
Automated Alizarin flouride blue; with distillation	-	-	4500-F- E,	129-71W <sup>11</sup>
Automated ion selective electrode	-	-	-	380-75WE <sup>11</sup>
<b>Lead</b>				
Atomic absorption; furnace technique	-	<del>D3559-90D</del> <u>D3539-95D</u>	3113 B	-
ICP/MS	200.8 <sup>2</sup>	-	-	-
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-
<b>Mercury</b>				
Manual cold vapor technique <sup>9</sup>	245.1 <sup>2</sup>	D3223-91	3112 B	-
Automated cold vapor technique <sup>9</sup>	245.2 <sup>1</sup>	-	-	-
ICP/MS	200.8 <sup>2</sup>	-	-	-
<b>Nickel</b>				
Atomic absorption; direct aspiration	-	-	3111 B	-
Atomic absorption; furnace technique	-	-	3113 B	-
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-
ICP	200.7 <sup>2</sup>	-	3120 B	-
ICP/MS	200.8 <sup>2</sup>	-	-	-
<b>Nitrate</b>				
Manual cadmium reduction	-	D3867-90B	4500-NO <sub>3</sub> -E	-
Automated cadmium reduction	353.2 <sup>6</sup>	D3867-90A	4500-NO <sub>3</sub> -F	-
Ion selective electrode	-	-	4500-NO <sub>3</sub> -D	601 <sup>7</sup>
Ion Chromatography	300.0 <sup>6</sup>	D4327-91	4110B	B-1011 <sup>8</sup>
<b>Nitrite</b>				
Spectrophotometric	-	-	4500-NO <sub>2</sub> -B	-
Automated cadmium reduction	353.2 <sup>6</sup>	D3867-90A	4500-NO <sub>3</sub> F	-
Manual cadmium reduction	-	D3867-90B	4500-NO <sub>3</sub> E	-
Ion chromatography	300.0 <sup>6</sup>	D4327-91	4110B	B-1011 <sup>8</sup>
<b>Selenium</b>				
Atomic absorption; gaseous hydride	-	D3859-93A	3114 B	-
ICP/MS	200.8 <sup>2</sup>	-	-	-
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-
Atomic absorption; furnace technique	-	D3859-93B	3113 B	-
<b>Thallium</b>				
Atomic absorption; platform furnace	200.9 <sup>2</sup>	-	-	-

ICP/MS	200.8 <sup>2</sup>	-	-	-
<b>Turbidity</b>				
Nephelometric	180.1 <sup>6</sup>	-	2130 B	-
Great Lakes Instruments	-	-	-	Method 2 <sup>5</sup>

<sup>1</sup>Method 245.2 is available from US EPA, EMSL, Cincinnati, OH 45268. The identical methods were formerly in “Methods for Chemical Analysis of Water and Wastes”, EPA-600/4-79-020, March 1983, Available at National Technical Information Services, PB84-128677, 5285 Port Royal Road, Springfield, VA 22161.

<sup>2</sup> “Methods for the Determination of Metals in Environmental Samples-Supplement I”, ORD Publications, EPA/600/R-94-111 May, 1994. Available from National Technical Information Service, Order #~~PB94-184942~~ PB95-125472, 5285 Port Royal Road, Springfield, VA 22161.

<sup>3</sup>The procedures shall be done in accordance with the “Annual Book of ASTM Standards”, 1994, Vols 11.01 and 11.02. American Society for Testing and Material. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U. S. C. 552 (a) and 1 CFR Part 51. Copies may be obtained from the American Society for Testing and Material, 1916 Race Street, Philadelphia, Pennsylvania 19103. Copies may be inspected at EPA’s Drinking Water Docket, 401 M Street, SW, Washington, DC 20460; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

<sup>4</sup>The procedures shall be done in accordance with the “Standard Methods for the Examination of Water and Wastewater”, 18th and 19th Editions, American Public Health Association, American Water Works Association, 1992 and 1995. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U. S. C. 552 (a) and 1 CFR Part 51. Copies may be obtained from the American Public Health Association, 1015 Fifteenth Street, NW, Washington, D.C., 20005. Copies may be inspected at EPA’s Drinking Water Docket, 401 M Street, SW, Washington, DC 20460; or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington DC.

<sup>5</sup>GLI Method 2, “Turbidity”, November 2, 1992, Great Lakes Instruments, Inc., 8855 North 55th Street, Milwaukee, Wisconsin 53223.

<sup>6</sup> “Methods for the Determination of Inorganic Substances in Environmental Samples”, EPA-600/R-93-100, August 1993, Available at NTIS, PB94-121811.

<sup>7</sup>The procedure shall be done in accordance with the Technical Bulletin 601, “Standard Method of Test for Nitrate in Drinking Water”, July 1994, PN 221890-001, Analytical Technology, Inc. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U. S. C. 552 (a) and 1 CFR Part 51. Copies may be obtained from ATI Orion, 529 Main Street, Boston, MA 02129. Copies may be inspected at EPA’s Drinking Water Docket, 401 M Street, SW, Washington, DC 20460; or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC.

<sup>8</sup>“Waters Test Method for the Determination of Nitrite/Nitrate in Water Using Single Column Ion Chromatography”, Method B-1011, Millipore Corporation, Waters Chromatography Division, 34 Maple Street, Milford, MA 01757.

<sup>9</sup>Method 100.1, “Analytical Method for Determination of Asbestos Fibers in Water”, EPA-600/4-83-043, September 1983. U.S. EPA, Environmental Research Laboratory, Athens, GA 30613. Available at NTIS, PB83-260471.

<sup>10</sup>Method 100.2, “Determination Of Asbestos Structures over 10-um In Length In Drinking Water”, EPA-600/R-94-134, June 1994. Available at NTIS, PB94-201902.

<sup>11</sup>The procedures shall be done in accordance with the Industrial Method No. 129-71 W, “Fluoride in Water and Wastewater”, December 1972, and Method No. 380-75WE, “Fluoride in Water and Wastewater”, February 1976, Technicon Industrial Systems. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U. S. C. 552 (a) and 1 CFR Part 51,. Copies may be obtained from the Technicon Industrial Systems, Tarrytown, NY 10591. Copies may be inspected at EPA’s Drinking Water Docket, 401 M Street, SW Washington, DC 20460; or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC.

<sup>12</sup>Because method detection limits reported in EPA Methods 200.7 and 200.9 were determined using a 2X preconcentration step during sample digestion, method detection limits determined when samples are analyzed by direct analysis (*i.e.*, no sample digestion) will be higher. For direct analysis of cadmium and arsenic by Method 200.7, and arsenic by Method 3120 B sample preconcentration using pneumatic nebulization may be required to achieve lower detection limits. Preconcentration may also be required for direct analysis of

antimony, lead, and thallium by Method 200.9; antimony and lead by Method 3113 B; and lead by Method D3559–90D unless multiple in-furnace depositions are made.

<sup>13</sup>If ultrasonic nebulization is used in the determination of arsenic by Methods 200.7, 200.8, or SM 3120 B, the arsenic must be in the pentavalent state to provide uniform signal response. For methods 200.7 and 3120 B, both samples and standards must be diluted in the same mixed acid matrix concentration of nitric and hydrochloric acid with the addition of 100 µL of 30% hydrogen peroxide per 100ml of solution. For direct analysis of arsenic with method 200.8 using ultrasonic nebulization, samples and standards must contain one mg/L of sodium hypochlorite.

~~<sup>14</sup>After January 23, 2006 analytical methods using the ICP–AES technology, may not be used because the detection limits for these methods are 0.008 mg/L or higher. This restriction means that the two ICP–AES methods (EPA Method 200.7 and SM 3120 B) approved for use for the MCL of 0.05 mg/L may not be used for compliance determinations for the revised MCL of 0.010 mg/L. However, prior to 2005 systems may have compliance samples analyzed with these less sensitive methods.~~

SECTION 10. NR 809.725(1) Table B is repealed and recreated to read:

**TABLE B**  
**SDWA Approved Methodology for Organic Contaminants**

Contaminant	Reference (Method Number) EPA <sup>1,7</sup>
<b>Regulated Parameters: Volatile Organic Chemical</b>	
Benzene	502.2, 524.2
Carbon tetrachloride	502.2, 524.2, 551.1
Chlorobenzene	502.2, 524.2
Dibromochloropropane (DBCP)	504.1, 551.1
1,2-Dichlorobenzene	502.2, 524.2
1,4-Dichlorobenzene	502.2, 524.2
1,2-Dichloroethane	502.2, 524.2
cis-Dichloroethylene	502.2, 524.2
trans-Dichloroethylene	502.2, 524.2
Dichloromethane	502.2, 524.2
1,2-Dichloropropane	502.2, 524.2
Ethylbenzene	502.2, 524.2
Styrene	502.2, 524.2
Tetrachloroethylene	502.2, 524.2, 551.1
1,1,1-Trichloroethane	502.2, 524.2, 551.1
Trichloroethylene	502.2, 524.2, 551.1
Toluene	502.2, 524.2
1,2,4-Trichlorobenzene	502.2, 524.2
1,1-Dichloroethylene	502.2, 524.2
1,1,2-Trichloroethane	502.2, 524.2, 551.1
Vinyl chloride	502.2, 524.2
Xylenes (total)	502.2, 524.2
<b>Synthetic Organic Chemicals</b>	
2,3,7,8-TCDD (dioxin)	1613 <sup>3</sup>
2,4-D (as acid, salts and esters)	515.2, 555, 515.1, 515.3, D5317-93
2,4,5-TP (Silvex)	515.2, 555, 515.1, 515.3, D5317-93
Alachlor	507, 525.2, 508.1, 505 <sup>6</sup> , 551.1
Atrazine	507, 525.2, 508.1, 505 <sup>6</sup> ,



	551.1
Benzo(a)pyrene	525.2, 550, 550.1
Carbofuran	531.1, 6610 <sup>5</sup>
Chlordane	508, 525.2, 508.1, 505
Dalapon	552.1, 515.1, 552.2, 515.3
Di(2-ethylhexyl)adipate	506, 525.2
Di(2-ethylhexyl)phthalate	506, 525.2
Dibromochloropropane (DBCP)	504.1, 551.1
Dinoseb	515.2, 555, 515.1, 515.3
Diquat	549.2
Endothall	548.1
Endrin	508, 525.2, 508.1, 505,
	551.1
Ethylene dibromide (EDB)	504.1, 551.1
Glyphosate	547, 6651 <sup>4</sup>
Heptachlor	508, 525.2, 508.1, 505,
	551.1
Heptachlor Epoxide	508, 525.2, 508.1, 505,
	551.1
Hexachlorobenzene	508, 525.2, 508.1, 505,
	551.1
Hexachlorocyclopentadiene	508, 525.2, 508.1, 505,
	551.1
Lindane	508, 525.2, 508.1, 505,
	551.1
Methoxychlor	508, 525.2, 508.1, 505,
	551.1
Oxamyl	531.1, 6610 <sup>5</sup>
PCBs (as decachlorobiphenyl)	508A <sup>2</sup>
(as Aroclors)	508.1, 508, 525.2, 505
Pentachlorophenol	515.2, 525.2, 555, 515.1,
	515.3, D5317-93
Picloram	515.2, 555, 515.1, 515.3,
	D5317-93
Simazine	507, 525.2, 508.1, 505 <sup>6</sup> ,
	551.1
Toxaphene	508, 508.1, 525.2, 505
Total Trihalomethanes	502.2, 524.2, 551.1
<b>Unregulated Parameters</b>	
Aldicarb	531.1, 6610 <sup>5</sup>
Aldicarb sulfone	531.1, 6610 <sup>5</sup>
Aldicarb Sulfoxide	531.1, 6610 <sup>5</sup>
Aldrin	505, 508, 525.2, 508.1
Butachlor	507, 525.2
Carbaryl	531.1, 6610
Dicamba	515.1, 555, 515.2
Dieldrin	505, 508, 525.2, 508.1
3-Hydroxycarbofuran	531.1, 6610 <sup>5</sup>
Methomyl	531.1, 6610 <sup>5</sup>
Metolachlor	507, 525.2, 508.1
Metribuzin	507, 525.2, 508.1
Propachlor	507, 525.2, 508.1

<sup>1</sup> Procedures for Methods 502.2, 504.1, 505, 506, 507, 508, 508.1, 515.2, 524.2 525.2, 531.1, 551.1 and 552.2 are in Methods for the Determination of Organic Compounds in Drinking Water Supplement III, EPA/600/R-95-131, August 1995. Methods 508A and 515.1 are in “Methods for the Determination of Organic Compounds in Drinking Water”, EPA-600/4-88/039, December 1988, Revised, July 1991. Methods 547, 550, 550.1 are in “Methods for the Determination of Organic Compounds in Drinking Water, Supplement I”, EPA-600/4-90/020, July 1990. Methods 548.1, 549.1 and 555 are in “Methods for the Determination of Organic Compounds in Drinking Water, Supplement II”, EPA-600/R-92-129, August 1992. These documents are available from the National Technical Information Service (NTIS), U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161 as publications NTIS PB91-231480, PB91-146027, and PB92-207703. The toll free number is 1-800-553-6847. EPA Methods 515.3 and 549.2 are available from U.S. Environmental Protection Agency, National Exposure Research Laboratory (NERL)-Cincinnati, 26 West Martin Luther King Drive, Cincinnati, OH 45268. ASTM Method D 5317-93 is available in the Annual Book of ASTM Standards, 1996, Vol. 11.02, American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428, or in any edition published after 1993.

<sup>2</sup> Method 505 or 508 can be used as a screen for PCBs. Method 508A shall be used to quantitate PCBs as decachlorobiphenyl if detected in Method 505 or 508. PCBs are qualitatively identified as Aroclors and measured for compliance purposes as decachlorobiphenyl.

<sup>3</sup> Method 1613, “Tetra- through Octa- Chlorinated Dioxins and Furans by Isotope Dilution. HRGC/HRMS, EPA-821/B-94/005, October 1994, Method 1613 can be used to measure 2, 3, 7, 8-TCDD (dioxin). This method is available from National Technical Information Service, NTIS PB95-104774.

<sup>4</sup> Method 6651 shall be followed in accordance with the “Standard Methods for the Examination of Water and Wastewater”, 18th Edition, 1992, and 19th edition, 1995, American Public Health Association. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552 (a) and 1 CFR Part 51. Copies may be obtained from the American Public Health Association, 1015 Fifteenth Street, N.W., Washington, D.C., 20005.

<sup>5</sup> Method 6610 shall be followed in accordance with the “Supplement to the 18th edition of Standard Methods for the Examination of Water and Wastewater”, 1994, or with the 19th edition of Standard Methods for the Examination of Water and Wastewater, 1995, APHA; either publication may be used. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552 (a) and 1 CFR Part 51. Copies may be obtained from the American Public Health Association, 1015 Fifteenth Street, N.W., Washington, D.C., 20005. Other required analytical test procedures germane to conducting these analyses are contained in Technical Notes on Drinking Water Methods, EPA/600/R-94-173, October 1994, NTIS PB95-104766.

<sup>6</sup> A nitrogen-phosphorus detector should be substituted for the electron capture detector in Method 505 (or other approved method should be used) to determine alachlor, atrazine and simazine, if lower detection limits are required.

<sup>7</sup> EPA Methods 504.1, 508.1, and 525.2 are available from US EPA EMSL, Cincinnati, OH 45268. The phone number is (513) 569-7586.

SECTION 11. NR 809.725(1) Table F is amended to read:

**TABLE F**  
**Sample Preservation, Containers and**  
**Maximum Holding Times for Inorganic Parameters**

Parameter	Preservation <sup>1</sup>	Container <sup>2</sup>	Holding Time <sup>3</sup>
<b>METALS</b>			
Aluminum	HNO <sub>3</sub>	P or G	6 months

Antimony	HNO <sub>3</sub>	P or G	6 months
Arsenic	Conc. HNO <sub>3</sub> to pH<2	P or G	6 months
Barium	HNO <sub>3</sub>	P or G	6 months
Beryllium	HNO <sub>3</sub>	P or G	6 months
Cadmium	HNO <sub>3</sub>	P or G	6 months
Copper	HNO <sub>3</sub>	P or G	6 months
Chromium	HNO <sub>3</sub>	P or G	6 months
Iron	HNO <sub>3</sub>	P or G	6 months
Lead	HNO <sub>3</sub>	P or G	6 months
Manganese	HNO <sub>3</sub>	P or G	6 months
Mercury	HNO <sub>3</sub>	P or G	28 days
Nickel	HNO <sub>3</sub>	P or G	6 months
Selenium	HNO <sub>3</sub>	P or G	6 months
Silver	HNO <sub>3</sub>	P or G	6 months
Thallium	HNO <sub>3</sub>	P or G	6 months
Zinc	HNO <sub>3</sub>	P or G	6 months
<b>OTHER PARAMETERS</b>			
Asbestos	Cool, 4°C	P or G	48 hours <sup>4</sup>
Bromate	Ethylenediamine	P or G	28 days
Chloride	None	P or G	28 days
Chlorite	50 mg/L EDA, Cool to 4°C	P or G	14 days
Color	Cool, 4°C	P or G	48 hours
Cyanide	Cool, 4°C+NaOH to pH>12 NaOH to pH>12 0.6 g Ascorbic acid	P or G	14 days
Fluoride	None	P or G	28 days
Foaming Agents	Cool,4°C	P or G	48 hours
Nitrate (as N)			
Chlorinated	Cool, 4°C	P or G	14 days <sup>5</sup>
Non-Chlorinated	Cool, 4°C	P or G	<del>14 days</del> 48 hours
Nitrite (as N)	Cool, 4°C or Conc. H <sub>2</sub> SO <sub>4</sub> to pH<2	P or G	48 hours <sup>5</sup>
Nitrate + Nitrite <sup>6</sup>	<del>Cool, 4°C</del> or Conc. H <sub>2</sub> SO <sub>4</sub> to pH<2	P or G	14 days
Odor	Cool, 4°C	G	48 hours
pH	None	P or G	Analyze Immediately
Solids (TDS)	Cool, 4°C	P or G	7 days
Sulfate	Cool, 4°C	P or G	28 days
Turbidity	Cool, 4°C	P or G	48 hours

<sup>1</sup>If HNO<sub>3</sub> cannot be used because of shipping restrictions; sample may be initially preserved by icing and immediately shipping it to the laboratory. Upon receipt in the laboratory, the sample must be acidified with conc HNO<sub>3</sub> to pH < 2. At time of analysis, sample container should be thoroughly rinsed with 1:1 HNO<sub>3</sub>; washings should be added to sample.

<sup>2</sup> P = plastic, hard or soft. G = glass, hard or soft.

<sup>3</sup> In all cases, samples should be analyzed as soon after collection as possible.

<sup>4</sup> Instructions for containers, preservation procedures and holding times as specified in Method 100.2 must be adhered to for all compliance analyses including those conducted with Method 101.1.

<sup>5</sup> If the sample is chlorinated, the holding time for an unacidified sample kept at 4°C is extended to 14 days.

<sup>6</sup> Nitrate-nitrite refers to a measurement of total nitrate.

SECTION 12. NR 809.75(4)(intro.) is amended to read:

NR 809.75(4) (intro.) After December 31, 2001, systems ~~servicing at least 10,000 people~~ shall install and operate water treatment processes that will reliably achieve all of the following:

SECTION 13. NR 809.76 (1) (a) and (b) are amended to read:

NR 809.76 (1) CONVENTIONAL FILTRATION TREATMENT. (a) For systems using conventional filtration, the turbidity level of representative samples of a system's filtered water shall be less than or equal to 0.5 NTU in at least 95% of the measurements taken each month, measured as specified in s. NR 809.725 (1), Table E. Beginning January 1, 2002, the turbidity level of filtered water of a system ~~servicing at least 10,000 people and~~ using conventional filtration shall be less than or equal to 0.3 NTU in at least 95% of the measurements taken each month, measured as specified in s. NR 809.725 (1), Table E.

(b) The turbidity level of representative samples of a system's filtered water may not exceed 5 NTU, measured as specified in s. NR 809.725 (1) Table E. Beginning January 1, 2002, the turbidity level of filtered water of a system ~~servicing at least 10,000 people and~~ using conventional filtration shall at no time exceed 1 NTU, measured as specified in s. NR 809.725 (1) Table E.

SECTION 14. NR 809.76 (2)(a) and (b) are amended to read:

NR 809.76 (2) DIRECT FILTRATION. (a) For systems using direct filtration, the turbidity level of representative samples of a system's filtered water shall be less than or equal to 0.5 NTU in at least 95% of the measurements taken each month, measured as specified in s. NR 809.725 (1), Table E. The department may approve a turbidity limit up to 1 NTU if the water supplier provides the department with documentation which reliably indicates the system achieves at least 99.9% removal or inactivation of *Giardia lamblia* cysts at a turbidity level above 0.5 NTU at least 95% of the time that the system delivers water to the public. Beginning January 1, 2002, the turbidity level of filtered water of a system ~~servicing at least 10,000 people and~~ using direct filtration shall be less than or equal to 0.3 NTU in at least 95% of the measurements taken each month, measured as specified in s. NR 809.725 (1), Table E.

(b) The turbidity level of representative samples of a system's filtered water may not exceed 5 NTU, measured as specified in s. NR 809.725 (1), Table E. Beginning January 1, 2002, the turbidity level of filtered water of a system ~~servicing at least 10,000 people and~~ using direct filtration shall at no time exceed 1 NTU, measured as specified in s. NR 809.725 (1), Table E.

SECTION 15. NR 809.765 (1) is amended to read:

NR 809.765 Filtration sampling requirements. (1) Monitoring requirements for systems using filtration treatment. In addition to monitoring required by s. NR 809.76, a public water system ~~servicing at least 10,000 people and~~ using conventional or direct filtration shall conduct continuous monitoring of turbidity for each individual filter using a method approved in s. NR 809.725 (1) and shall calibrate turbidimeters using the procedure specified by the manufacturer. Systems shall record the results of individual filter monitoring every 15 minutes.

SECTION 16. NR 809.80 (3) is amended to read:

NR 809.80 (3) The supplier of water is not required to report analytical results to the department in cases where the ~~state laboratory of hygiene performs the analysis and~~ laboratory doing the analysis reports the results electronically to the department within the time frames contained in this section. The supplier of water is responsible for analytical results that are not reported within the required time frames.

SECTION 17. NR 809.833(3)(b)2. is amended to read:

NR 809.833(3)(b)2. Results of monitoring in compliance with requirements issued under 40 CFR ~~Sub. D~~, part 141, ss. 141.142 and 141.143 (information collection rule) need only be included for 5 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.

SECTION 18. NR 809.833(3)(e) is amended to read:

NR 809.833(3)(e) The tables shall clearly identify any data indicating violations of MCLs, MRDL or treatment techniques and the report shall contain a clear and readily understandable explanation of the violation including: the length of the violation, the potential adverse health effects, and actions taken by the system to address the violation. To describe the potential health effects, the system shall use the relevant language of Appendix A to this subchapter.

SECTION 19. NR 809.833(4)(c) note is created to read:

NR 809.833(4)(c) **Note:** To determine the significance of the results it is recommended that systems call the Safe Drinking Water Hotline (800-426-4791).

SECTION 20. NR 809.833(6)(a) through (d) are amended to read:

NR 809.833(6) EXEMPTIONS. (a) An explanation of the reasons for the ~~variance or exemption~~ conditional waiver or variance.

(b) The date on which the ~~variance or exemption~~ conditional waiver or variance was issued.

(c) A brief status report on the steps the system is taking to install treatment, find alternative sources of water or otherwise comply with the terms and schedules of the ~~variance or exemption~~ conditional waiver or variance.

(d) A notice of any opportunity for public input in the review, or renewal, of the ~~variance or exemption~~ conditional waiver or variance.

SECTION 21. NR 809.835(2) is amended to read:

NR 809.835 (2) Beginning July 1, 2002 a system that detects arsenic above 0.005 mg/L and up to and including ~~0.01~~ 0.010 mg/L:

SECTION 22. NR 809.835(3) is amended to read:

NR 809.835 (3) Beginning July 1, 2002 and ending January 22, 2006 a community water system that detects arsenic above 0.010 mg/L and up to and including 0.05 mg/L shall include health effects language for arsenic prescribed by Appendix A to this subchapter.

SECTION 23. NR 809.837(7)(intro.) is amended to read:

NR 809.837(7)(intro.) The governor of Wisconsin or the governor's designee may waive the requirement of ~~par. (a)~~ sub. (1) for community water systems serving fewer than 10,000 persons.

SECTION 24. NR 809.90(4)(b) is amended to read:

NR 809.90(4)(b) The public water systemowner or operator shall receive a certification from the bottled water company that the bottled water supplied meets all requirements of ~~s. ATCP 40.07~~ ch. ATCP 70. The public water systemowner or operator shall provide the certification to the department the first quarter after it supplies bottled water and annually thereafter.

SECTION 25. NR 809.957(1) is amended to read:

NR 809.957 (1) WHEN SPECIAL NOTICE IS TO BE GIVEN. Community water systems that exceed the fluoride secondary maximum contaminant level of ~~2~~ 2.0 mg/l as specified in s. NR 809.60, determined by the last single sample taken in accordance with s. NR 809.12, but do not exceed the maximum contaminant level (MCL) of ~~4~~ 4.0 mg/l for fluoride, as specified in s. NR 809.11, shall provide the public notice in sub. (3) to persons served. Public notice shall be provided as soon as practical but no later than 12 months from the day the water system learns of the exceedance. A copy of the notice shall also be sent to all new billing units and new customers at the time service begins and to the state public health officer. The public water system shall repeat the notice at least annually for as long as the secondary maximum contaminant level is exceeded. If the public notice is posted, the notice shall remain in place for as long as the secondary maximum contaminant level is exceeded, but in no case less than 7 days, even if the exceedance is eliminated. On a case-by-case basis, the department may require an initial notice sooner than 12 months and repeat notices more frequently than annually.

SECTION 26. NR 809.959 Appendix A to Subchapter X footnote 7 is amended to read:

<sup>7</sup> Most of the requirements of the Interim Enhanced Surface Water Treatment Rule (63 FR 69477) become effective January 1, 2002 for systems using surface water or ground water under the direct influence of surface water ~~servicing at least 10,000 persons~~. However, NR 809.77 has some requirements that become effective as early as April 16, 1999. The Surface Water Treatment Rule remains in effect for systems ~~servicing at least 10,000 persons~~ even after 2002; the Interim Enhanced Surface Water Treatment Rule adds additional requirements and does not in many cases supersede the Surface Water Treatment Rule.

SECTION 27. NR 809.959 Appendix B to Subchapter X footnote 8 is amended to read:

<sup>8</sup> There are various regulations that set turbidity standards for different types of systems, including 40 CFR 141.13, the 1989 Surface Water Treatment Rule, and the 1998 Interim Enhanced Surface Water Treatment Rule. For systems subject to the interim enhanced surface water treatment rule (systems ~~servicing 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 shall not exceed 1 NTU at any time. Systems subject to the interim enhanced surface water treatment rule using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration shall meet turbidity limits set by the department.

SECTION 28. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2) (intro), Stats.

SECTION 29. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on \_\_\_\_\_.

Dated at Madison, Wisconsin \_\_\_\_\_.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_

(SEAL)

Scott Hassett, Secretary