

§ 141.209

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.”

§ 141.209 Special notice for nitrate exceedances above MCL by non-community water systems (NCWS), where granted permission by the primacy agency under § 141.11(d)

(a) *When is the special notice to be given?* The owner or operator of a non-community water system granted permission by the primacy agency under § 141.11(d) to exceed the nitrate MCL must provide notice to persons served according to the requirements for a Tier 1 notice under § 141.202(a) and (b).

(b) *What is the form and manner of the special notice?* Non-community water systems granted permission by the primacy agency to exceed the nitrate

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MCL under § 141.11(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 § 141.202(c) and the content requirements under § 141.205.

§ 141.210 Notice by primacy agency on behalf of the public water system.

(a) *May the primacy agency give the notice on behalf of the public water system?* The primacy agency may give the notice required by this subpart on behalf of the owner and operator of the public water system if the primacy agency complies with the requirements of this subpart.

(b) *What is the responsibility of the public water system when notice is given by the primacy agency?* The owner or operator of the public water system remains responsible for ensuring that the requirements of this subpart are met.

APPENDIX A TO SUBPART Q OF PART 141—NPDWR VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE¹

Contaminant	MCL/MRDL/TT violations ²		Monitoring & testing procedure violations	
	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	141.63(a)	3	141.21(a)–(e)
2. Fecal coliform/E. coli	1	141.63(b)	⁴ 1, 3	141.21(e)
3. Turbidity MCL	2	141.13(a)	3	141.22
4. Turbidity MCL (average of 2 days' samples >5 NTU)	⁵ 2, 1	141.13(b)	3	141.22
5. Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	⁶ 2, 1	141.71(a)(2), 141.71(c)(2)(i), 141.73(a)(2), 141.73 (b)(2), 141.73 (c)(2), 141.73(d), 141.173(a)(2), 141.173(b), 141.551(b)	3	141.74(a)(1), 141.74(b)(2), 141.74(c)(1), 141.174, 141.560(a)–(c), 141.561.
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT)	2	141.70–141.73	3	141.74
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. turbidity level (TT)	⁷ 2	141.170–141.173, 141.500–141.553	3	141.172, 141.174, 141.530–141.544, 141.560–141.564.
8. Filter Backwash Recycling Rule violations	2	141.76	3	141.76
9. Long Term 1 Enhanced Surface Water Treatment Rule violations	2	141.500–141.553	3	141.530–141.544, 141.560–141.564.
B. Inorganic Chemicals (IOCs)				
1. Antimony	2	141.62(b)	3	141.23(a), (c)
2. Arsenic	2	⁸ 141.62(b)	3	⁹ 141.23(a), (c)
3. Asbestos (fibers >10 µm)	2	141.62(b)	3	141.23(a)–(b)
4. Barium	2	141.62(b)	3	141.23(a), (c)
5. Beryllium	2	141.62(b)	3	141.23(a), (c)
6. Cadmium	2	141.62(b)	3	141.23(a), (c)
7. Chromium (total)	2	141.62(b)	3	141.23(a), (c)
8. Cyanide	2	141.62(b)	3	141.23(a), (c)
9. Fluoride	2	141.62(b)	3	141.23(a), (c)
10. Mercury (inorganic)	2	141.62(b)	3	141.23(a), (c)
11. Nitrate	1	141.62(b)	¹⁰ 1, 3	141.23(a), (d), 141.23(f)(2)
12. Nitrite	1	141.62(b)	¹⁰ 1, 3	141.23(a), (e), 141.23(f)(2)
13. Total Nitrate and Nitrite	1	141.62(b)	3	141.23(a)
14. Selenium	2	141.62(b)	3	141.23(a), (c)
15. Thallium	2	141.62(b)	3	141.23(a), (c)

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Contaminant	MCL/MRDL/TT violations ²		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
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	141.80–141.85	3	141.86–141.89
D. Synthetic Organic Chemicals (SOCs)				
1. 2,4-D	2	141.61(c)	3	141.24(h)
2. 2,4,5-TP (Silvex)	2	141.61(c)	3	141.24(h)
3. Alachlor	2	141.61(c)	3	141.24(h)
4. Atrazine	2	141.61(c)	3	141.24(h)
5. Benzo(a)pyrene (PAHs)	2	141.61(c)	3	141.24(h)
6. Carbofuran	2	141.61(c)	3	141.24(h)
7. Chlordane	2	141.61(c)	3	141.24(h)
8. Dalapon	2	141.61(c)	3	141.24(h)
9. Di (2-ethylhexyl) adipate	2	141.61(c)	3	141.24(h)
10. Di (2-ethylhexyl) phthalate	2	141.61(c)	3	141.24(h)
11. Dibromochloropropane	2	141.61(c)	3	141.24(h)
12. Dinoseb	2	141.61(c)	3	141.24(h)
13. Dioxin (2,3,7,8-TCDD)	2	141.61(c)	3	141.24(h)
14. Diquat	2	141.61(c)	3	141.24(h)
15. Endothall	2	141.61(c)	3	141.24(h)
16. Endrin	2	141.61(c)	3	141.24(h)
17. Ethylene dibromide	2	141.61(c)	3	141.24(h)
18. Glyphosate	2	141.61(c)	3	141.24(h)
19. Heptachlor	2	141.61(c)	3	141.24(h)
20. Heptachlor epoxide	2	141.61(c)	3	141.24(h)
21. Hexachlorobenzene	2	141.61(c)	3	141.24(h)
22. Hexachlorocyclo-pentadiene	2	141.61(c)	3	141.24(h)
23. Lindane	2	141.61(c)	3	141.24(h)
24. Methoxychlor	2	141.61(c)	3	141.24(h)
25. Oxamyl (Vydate)	2	141.61(c)	3	141.24(h)
26. Pentachlorophenol	2	141.61(c)	3	141.24(h)
27. Picloram	2	141.61(c)	3	141.24(h)
28. Polychlorinated biphenyls (PCBs)	2	141.61(c)	3	141.24(h)
29. Simazine	2	141.61(c)	3	141.24(h)
30. Toxaphene	2	141.61(c)	3	141.24(h)
E. Volatile Organic Chemicals (VOCs)				
1. Benzene	2	141.61(a)	3	141.24(f)
2. Carbon tetrachloride	2	141.61(a)	3	141.24(f)
3. Chlorobenzene (monochlorobenzene)	2	141.61(a)	3	141.24(f)
4. o-Dichlorobenzene	2	141.61(a)	3	141.24(f)
5. p-Dichlorobenzene	2	141.61(a)	3	141.24(f)
6. 1,2-Dichloroethane	2	141.61(a)	3	141.24(f)
7. 1,1-Dichloroethylene	2	141.61(a)	3	141.24(f)
8. cis-1,2-Dichloroethylene	2	141.61(a)	3	141.24(f)
9. trans-1,2-Dichloroethylene	2	141.61(a)	3	141.24(f)
10. Dichloromethane	2	141.61(a)	3	141.24(f)
11. 1,2-Dichloropropane	2	141.61(a)	3	141.24(f)

12. Ethylbenzene	2	141.61(a)	3	141.24(f)
13. Styrene	2	141.61(a)	3	141.24(f)
14. Tetrachloroethylene	2	141.61(a)	3	141.24(f)
15. Toluene	2	141.61(a)	3	141.24(f)
16. 1,2,4-Trichlorobenzene	2	141.61(a)	3	141.24(f)
17. 1,1,1-Trichloroethane	2	141.61(a)	3	141.24(f)
18. 1,1,2-Trichloroethane	2	141.61(a)	3	141.24(f)
19. Trichloroethylene	2	141.61(a)	3	141.24(f)
20. Vinyl chloride	2	141.61(a)	3	141.24(f)
21. Xylenes (total)	2	141.61(a)	3	141.24(f)
F. Radioactive Contaminants				
1. Beta/photon emitters	2	141.16	3	141.25(a), 141.26(b)
2. Alpha emitters	2	141.15(b)	3	141.25(a), 141.26(a)
3. Combined radium (226 & 228)	2	141.15(a)	3	141.25(a), 141.26(a)
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 dis- infection byproducts (DBPs). EPA sets standards for controlling the levels of dis- infectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs). ¹¹				
1. Total trihalomethanes (TTHMs)	2	¹² 141.12, 141.64(a)	3	141.30, 141.132(a)–(b)
2. Haloacetic Acids (HAA5)	2	141.64(a)	3	141.132(a)–(b)
3. Bromate	2	141.64(a)	3	141.132(a)–(b)
4. Chlorite	2	141.64(a)	3	141.132(a)–(b)
5. Chlorine (MRDL)	2	141.65(a)	3	141.132(a), (c)
6. Chloramine (MRDL)	2	141.65(a)	3	141.132(a), (c)
7. Chlorine dioxide (MRDL), where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2	141.65(a), 141.133(c)(3)	2 ¹³ , 3	141.132(a), (c), 141.133(c)(2)
8. Chlorine dioxide (MRDL), where sample(s) in distribution system the next day are also above MRDL	141	141.65(a), 141.133(c)(3)	1	141.132(a), (c), 141.133(c)(2)
9. Control of DBP precursors—TOC (TT)	2	141.135(a)–(b)	3	141.132(a), (d)
10. Bench marking and disinfection profiling	N/A	N/A	3	141.172 141.530– 141.544, 141.132(f)
11. Development of monitoring plan	N/A	N/A	3	141.132(f)
H. Other Treatment Techniques				
1. Acrylamide (TT)	2	141.111	N/A	N/A
2. Epichlorohydrin (TT)	2	141.111	N/A	N/A
II. Unregulated Contaminant Monitoring: ¹⁵				
A. Unregulated contaminants	N/A	N/A	3	141.40
B. Nickel	N/A	N/A	3	141.23(c), (k)
III. Public Notification for Variances and Exemptions:				
A. Operation under a variance or exemption	3	¹⁶ 1415, 1416,	N/A	N/A
B. Violation of conditions of a variance or exemption	2	1415, 1416, ¹⁷ 142.307	N/A	N/A

Contaminant	MCL/MRDL/TT violations ²		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
IV. Other Situations Requiring Public Notification:				
A. Fluoride secondary maximum contaminant level (SMCL) exceedance	3	143.3	N/A	N/A
B. Exceedance of nitrate MCL for non-community systems, as allowed by primacy agency	1	141.11(d)	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	141.40	N/A	N/A
D. Waterborne disease outbreak	1	141.2, 141.71(c)(2)(ii)	N/A	N/A
E. Other waterborne emergency ¹⁸	1	N/A	N/A	N/A
F. Other situations as determined by primacy agency	¹⁹ 1, 2, 3	N/A	N/A	N/A

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APPENDIX A—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 primary agency. Primacy agencies may, at their option, also 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 §141.202(a) and §141.203(a).

2. MCL—Maximum contaminant level, MRDL—Maximum residual disinfectant level, TT—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.

5. Systems that violate the turbidity MCL of 5 NTU based on an average of measurements over two consecutive days must consult with the primacy agency within 24 hours after learning of the violation. Based on this consultation, the primacy agency may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the primacy agency in the 24-hour period, the violation is automatically elevated to Tier 1.

6. Systems with treatment technique violations involving a single exceedance of a maximum turbidity limit under the Surface Water Treatment Rule (SWTR), the Interim Enhanced Surface Water Treatment Rule (IESWTR), or the Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) are required to consult with the primacy agency within 24 hours after learning of the violation. Based on this consultation, the primacy agency may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the primacy agency in the 24-hour period, the violation is automatically elevated to Tier 1.

7. Most of the requirements of the Interim Enhanced Surface Water Treatment Rule (63 FR 69477) (§§141.170–141.171, 141.173–141.174) become effective January 1, 2002 for Subpart H systems (surface water systems and ground water systems under the direct influence of surface water) serving at least 10,000 persons. However, §141.172 has some requirements that become effective as early as April 16, 1999. The Surface Water Treatment Rule 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. The arsenic MCL citations are effective January 23, 2006. Until then, the citations are §141.11(b) and §141.23(n).

9. The arsenic Tier 3 violation MCL citations are effective January 23, 2006. Until then, the citations are §141.23(a), (1).

10. 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.

11. Subpart H community and non-transient non-community systems serving ≥10,000 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. Subpart H transient non-community systems 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 H transient non-community systems serving fewer than 10,000 persons and 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.

12. §141.12 will no longer apply after January 1, 2004.

13. 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.

14. 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. Failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers Tier 1 notification.

15. Some water systems must monitor for certain unregulated contaminants listed in §141.40.

16. This citation refers to §§1415 and 1416 of the Safe Drinking Water Act. §§1415 and 1416 require that “a schedule prescribed. . . for a public water system granted a variance [or exemption] shall require compliance by the system. . .”

17. In addition to §§1415 and 1416 of the Safe Drinking Water Act, 40 CFR 142.307 specifies the items and schedule milestones that must be included in a variance for small systems.

18. Other waterborne emergencies require a Tier 1 public notice under §141.202(a) for situations that do not meet the definition of a waterborne disease outbreak given in 40 CFR 141.2 but that still have the potential to have

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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.

19. Primacy agencies may place other situations in any tier they believe appropriate, based on threat to public health.

[65 FR 26035, May 4, 2000, as amended at 66 FR 7065, Jan. 22, 2001; 66 FR 31104, June 8, 2001; 67 FR 1836, Jan. 14, 2002]

EFFECTIVE DATE NOTE: At 65 FR 76750, Dec. 7, 2000, the table in appendix A to subpart Q was amended under I.F. "Radioactive contaminants" by revising entries 1, 2, and 3, and by adding entry 4; by redesignating table endnotes 9 through 17 as 11 through 19; and by adding new endnotes 9 and 10, effective Dec. 8, 2003. For the convenience of the user, the revised and added text is set forth as follows:

APPENDIX A TO SUBPART Q TO PART 141—NPDWR VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE¹

Contaminant	MCL/MRDL/TT Violations ²		Monitoring and testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
I. Violations of National Primary Drinking Water Regulations (NPDWR) ³				
F. Radioactive contaminants	*	*	*	
1. Beta/photon emitters	2	141.66(d)	3	141.25(a) 141.26(b)
2. Alpha emitters	2	141.66(c)	3	141.25(a) 141.26(a)
3. Combined radium (226 and 228)	2	141.66(b)	3	141.25(a) 141.26(a)
4. Uranium	⁹ 2	141.66(e)	¹⁰ 3	141.25(a) 141.26(a)
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APPENDIX A—ENDNOTES

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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 primary agency. Primacy agencies may, at their option, also 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 Sec. 141.202(a) and Sec. 141.203(a).

2. MCL—Maximum contaminant level, MRDL—Maximum residual disinfectant level, TT—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.

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9. The uranium MCL Tier 2 violation citations are effective December 8, 2003 for all community water systems.

10. The uranium Tier 3 violation citations are effective December 8, 2000 for all community water systems.

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APPENDIX B TO SUBPART Q OF PART 141—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) ⁶	None	TT ⁷	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.
2c. Turbidity (IESWTR TT and LT1ESWTR TT) ⁸	None	TT	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.
B. Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) and the Filter Backwash Recycling Rule (FBRR) violations			
3. Giardia lamblia (SWTR/IESWTR/LT1ESWTR)	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/LT1ESWTR).			
5. Heterotrophic plate count (HPC) bacteria ⁹ (SWTR/IESWTR/LT1ESWTR).			
6. Legionella (SWTR/IESWTR/LT1ESWTR).			
7. Cryptosporidium (IESWTR/FBRR/LT1ESWTR).			
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 ¹¹	0	0.01	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 µm)	7 MFL ¹²	7 MFL	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.
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.

Contaminant	MCLG ¹ mg/L	MCL ² mg/L	Standard health effects language for public notification
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 ¹³	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 ¹⁴	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 (DBCP)	Zero	0.0002	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.
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	3x10 ⁻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. Hexachlorocyclo-pentadiene	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.

Contaminant	MCLG ¹ mg/L	MCL ² mg/L	Standard health effects language for public notification
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 (monochloro- benzene)	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. <i>o</i> -Dichlorobenzene	0.6	0.6	Some people who drink water containing <i>o</i> -dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
59. <i>p</i> -Dichlorobenzene	0.075	0.075	Some people who drink water containing <i>p</i> -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. <i>cis</i> -1,2-Dichloroethylene	0.07	0.07	Some people who drink water containing <i>cis</i> -1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
63. <i>trans</i> -1,2-Dichloroethylene	0.1	0.1	Some people who drink water containing <i>trans</i> -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 ¹⁵	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 ¹⁶	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)¹⁷

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 ²⁰	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) ²¹	4.0 (MRDL) ²²	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	MCLG ¹ mg/L	MCL ² mg/L	Standard health effects language for public notification
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 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. <i>Add for public notification only:</i> 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. <i>Add for public notification only:</i> 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 B—ENDNOTES

1. MCLG—Maximum contaminant level goal

2. MCL—Maximum contaminant level

3. For water systems analyzing at least 40 samples per month, no more than 5.0 percent of the monthly samples may be positive for total coliforms. For systems 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 40 CFR 141.13, and the 1989 Surface Water Treatment Rule, the 1998 Interim Enhanced Surface Water Treatment Rule and the 2001 Long Term 1 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 systems that are required to filter but have not yet installed filtration (40 CFR 141.13).

5. NTU—Nephelometric turbidity unit

6. There are various regulations that set turbidity standards for different types of systems, including 40 CFR 141.13, and the 1989 Surface Water Treatment Rule, the 1998 Interim Enhanced Surface Water Treatment Rule and the 2001 Long Term 1 Enhanced Surface Water Treatment Rule. Systems 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 primacy agency.

7. TT—Treatment technique

8. There are various regulations that set turbidity standards for different types of systems, including 40 CFR 141.13, the 1989 Surface Water Treatment Rule (SWTR), the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR) and the 2001 Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR). For systems 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. Systems subject to the IESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the primacy agency. For systems subject to the LT1ESWTR (systems serving fewer than 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 14, 2005 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. Systems subject to the LT1ESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the primacy 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, IESWTR, and LT1ESWTR treatment technique violations that involve turbidity exceedances may use the health effects language for turbidity instead.

11. These arsenic values are effective January 23, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG.

12. Millions fibers per liter.

13. Action Level = 0.015 mg/L

14. Action Level = 1.3 mg/L

15. Millirems per years

16. Picocuries per liter

17. Surface water systems and ground water systems under the direct influence of surface water are regulated under Subpart H of 40 CFR 141. Subpart H community and non-transient non-community systems serving $\geq 10,000$ must comply with DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs) beginning January 1, 2002. All other community and non-transient non-community systems must meet the MCLs and MRDLs beginning January 1, 2004. Subpart H transient non-community systems 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 H transient non-community systems 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.

18. The MCL of 0.10 mg/l for TTHMs is in effect until January 1, 2002 for Subpart H community water systems serving 10,000 or more. 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, all systems serving less than 10,000 will have to comply with the new MCL as well.

Subpt. Q, App. B, Note

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19. The MCL for total trihalomethanes is the sum of the concentrations of the individual trihalomethanes.

20. The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.

21. MRDLG—Maximum residual disinfectant level goal.

22. MRDL—Maximum residual disinfectant level.

[65 FR 26043, May 4, 2000; 65 FR 38629, June 21, 2000; 65 FR 40521, 40522, June 30, 2000, as amended at 66 FR 7065, Jan. 22, 2001; 66 FR 31104, June 8, 2001; 67 FR 1838, Jan. 14, 2002]

EFFECTIVE DATE NOTE: At 65 FR 76751, Dec. 7, 2000, appendix B to subpart Q of part 141 was amended by redesignating table entries 79 through 84 and 86 through 88 as 80 through 85 and 87 through 89, respectively, and entries 85a and 85b as 86a and 86b, respectively; by adding a new entry 79 for uranium under “G. Radioactive contaminants”; by redesignating table endnote entries 16 through 21 as 17 through 22; and by adding a new endnote 16, effective Dec. 8, 2003. For the convenience of the user, the added text is set forth as follows:

APPENDIX B TO SUBPART Q OF PART 141—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)			
*	*	*	* * * *
G. Radioactive contaminants			
*	*	*	* * * *
79. Uranium ¹⁶	Zero	30 µg/L	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
*	*	*	* * * *

APPENDIX B—ENDNOTES

1. MCLG—Maximum contaminant level goal.
2. MCL—Maximum contaminant level.

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16. The uranium MCL is effective December 8, 2003 for all community water systems.

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APPENDIX C TO SUBPART Q OF PART 141—LIST OF 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

Subparts R–S [Reserved]

Subpart T—Enhanced Filtration and Disinfection—Systems Serving Fewer Than 10,000 People

SOURCE: 67 FR 1839, Jan. 14, 2002, unless otherwise noted.

GENERAL REQUIREMENTS

§ 141.500 General requirements.

The requirements of this subpart constitute national primary drinking water regulations. These regulations establish requirements for filtration and disinfection that are in addition to criteria under which filtration and disinfection are required under subpart H of this part. The regulations in this subpart establish or extend treatment technique requirements in lieu of maximum contaminant levels for the following contaminants: *Giardia lamblia*, viruses, heterotrophic plate count bacteria, *Legionella*, *Cryptosporidium* and turbidity. The treatment technique requirements consist of installing and properly operating water treatment processes which reliably achieve:

(a) At least 99 percent (2 log) removal of *Cryptosporidium* between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer for filtered systems, or *Cryptosporidium* control under the watershed control plan for unfiltered systems; and

(b) Compliance with the profiling and benchmark requirements in §§141.530 through 141.544.

§ 141.501 Who is subject to the requirements of subpart T?

You are subject to these requirements if your system:

- (a) Is a public water system;
- (b) Uses surface water or GWUDI as a source; and
- (c) Serves fewer than 10,000 persons.

§ 141.502 When must my system comply with these requirements?

You must comply with these requirements in this subpart beginning January 14, 2005 except where otherwise noted.

§ 141.503 What does subpart T require?

There are seven requirements of this subpart, and you must comply with all requirements that are applicable to your system. These requirements are:

- (a) You must cover any finished water reservoir that you began to construct on or after March 15, 2002 as described in §§141.510 and 141.511;