TITLE 179 PUBLIC WATER SYSTEMS

CHAPTER 14 CONSUMER CONFIDENCE REPORTS

14-001 SCOPE AND AUTHORITY: This chapter establishes the minimum requirements for the content of annual reports that community water systems must deliver to their customers. These reports must contain information on the quality of the water delivered by the systems and characterize the risks (if any) from exposure to contaminants detected in the drinking water in an accurate and understandable manner. The authority is found in Neb. Rev. Stat. §§ 71-5301 to 71-5313.

14-002 DEFINITIONS: For this chapter:

Customers means billing units or service connections to which water is delivered by a community water system.

Detected means at or above the levels prescribed by 179 NAC 3-005.01 item 4.a for inorganic contaminants; at or above the levels prescribed by 179 NAC 3-007.02G for the contaminants listed in 179 NAC 2-002.02B1; at or above the level prescribed by 179 NAC 3-007.03 item 17 for the contaminants listed in 179 NAC 2-002.02B2; and at or above the levels prescribed by 179 NAC 3-008.01B for radioactive contaminants.

14-003 DATES REPORTS DUE

14-003.01 Existing Systems: Each existing community water system must deliver its first report by October 19, 1999, its second report by July 1, 2000, and subsequent reports by July 1 annually thereafter.

14-003.02 New Systems: A new community water system must deliver its first report by July 1 of the year after its first full calendar year in operation and annually thereafter.

14-003.03 Systems That Sell Water to Consecutive Systems: A community water system that sells water to another community water system must deliver the applicable information required in 179 NAC 14 to the buyer system:

1. No later than April 19, 1999, by April 1, 2000, and by April 1 annually thereafter or

2. On a date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties.

14-004 CONTENT OF THE REPORTS

14-004.01 Each community water system must provide to its customers an annual report that contains the information specified in 179 NAC 14-004 and 14-005.

14-004.02 Information on the source of the water delivered:

14-004.02A Each report must identify the source(s) of the water delivered by the community water system by providing information on:

1. The type of the water: e.g., surface water, ground water; and
2. The commonly used name (if any) and location of the body (or bodies) of water.

14-004.02B If a source water assessment has been completed, the report must notify consumers of the availability of this information and the means to obtain it. Systems are encouraged to highlight in the report significant sources of contamination in the source water area if they have readily available information. When a source water assessment has been completed, the report must include a brief summary of the system's susceptibility to potential sources of contamination, using language provided by the Department or written by the system.

14-004.03 Definitions

14-004.03A Each report must include the following definitions:

1. Maximum Contaminant Level Goal (MCLG) means the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

2. Maximum Contaminant Level (MCL) means the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

14-004.03B A community water system operating under a variance or an exemption must include the following definition: Variances and Exemptions means state permission not to meet an MCL or a treatment technique under certain conditions.

14-004.03C A report which contains data on contaminants that the Department regulates using any of the following terms must include the applicable definitions:

1. Treatment Technique means a required process intended to reduce the level of a contaminant in drinking water.

2. Action Level means the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

3. Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

4. Maximum residual disinfectant level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

14-004.04 Information on Detected Contaminants

14-004.04A 179 NAC 14-004.04A specifies the requirements for information to be included in each report for contaminants subject to mandatory monitoring (except *Cryptosporidium*). It applies to:

1. Contaminants subject to an MCL, action level, maximum residual disinfectant level, or treatment technique (regulated contaminants); and
2. Contaminants for which monitoring is required by 40 CFR 141.40 which is incorporated herein by reference in Attachment 1 (unregulated contaminants).

14-004.04B The data relating to these contaminants must be displayed in one table or in several adjacent tables. Any additional monitoring results which a community water system chooses to include in its report must be displayed separately.

14-004.04C The data must be derived from data collected to comply with state monitoring and analytical requirements during calendar year 1998 for the first report and subsequent calendar years thereafter except that where a system is allowed to monitor for regulated contaminants less often than once a year, the table(s) must include the date and results of the most recent sampling and the report must include a brief statement indicating that the data presented in the report are for the most recent testing done in accordance with the regulations. No data older than five years need be included.

14-004.04D For detected regulated contaminants (listed in Appendix A to this chapter), the table(s) must contain:

1. The MCL for that contaminant expressed as a number equal to or greater than 1.0 (as provided in Appendix A to 179 NAC 14).

2. The MCLG for that contaminant expressed in the same units as the MCL.

3. If there is no MCL for a detected contaminant, the table must indicate that there is a treatment technique, or specify the action level, applicable to that contaminant, and the report must include the definitions for treatment technique and/or action level, as appropriate, specified in 179 NAC 14-004.03C.

4. For contaminants subject to an MCL, except turbidity and total coliforms, the highest contaminant level used to determine compliance with a drinking water standard and the range of detected levels, as follows: (Note that when rounding of results to determine compliance with the MCL is allowed by the regulations, rounding should be done prior to multiplying the results by the factor listed in Appendix A of 179 NAC 14).

   a. When compliance with the MCL is determined annually or less frequently, use the highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL.

   b. When compliance with the MCL is determined by calculating a running annual average of all samples taken at a sampling point, use the highest average of any of the sampling points and the range of all sampling points expressed in the same units as the MCL.

   c. When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all sampling points, use the average and range of detection expressed in the same units as the MCL.

5. For Turbidity

   a. When it is reported pursuant to 40 CFR 141.13 which is incorporated herein by reference in Attachment 1, use the highest average monthly value.

   b. When it is reported pursuant to the requirements of 179 NAC 13-004, use the highest monthly value. The report should include an explanation of the reasons for measuring turbidity.

   c. When it is reported pursuant to 179 NAC 13-006 or 179 NAC 17-005 or 179 NAC19-009.02: the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 179 NAC 13-006 or 179 NAC 17-005 or 179 NAC 19-009.02 for the filtration technology being used. The report should include an explanation of the reasons for measuring turbidity.

6. For Lead and Copper, use the 90th percentile value of the most recent round of sampling and the number of sampling sites exceeding the action level.

7. For Total Coliform

   a. Use the highest monthly number of positive samples for systems collecting fewer than 40 samples per month, or

   b. Use the highest monthly percentage of positive samples for systems collecting at least 40 samples per month.

8. For Fecal Coliform, use the total number of positive samples.

9. Likely Source: Include the likely source(s) of detected contaminants to the best of the operator's knowledge. Specific information regarding contaminants may be available in sanitary surveys and source water assessments, and should be used when available to the operator. If the operator lacks specific information on the likely source, the report must include one or more of the typical sources for that contaminant listed in Appendix A to 179 NAC 14 that is most applicable to the system.

14-004.04E Multiple Independent Distribution Systems: If a community water system distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources, the table should contain a separate column for each service area and the report should identify each separate distribution system. Alternatively, systems could produce separate reports tailored to include data for each service area.

14-004.04F The table(s) must clearly identify any data indicating violations of MCLs, MRDLs, or treatment techniques, and the report must contain a clear and readily understandable explanation of the violation including: the 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 must use the relevant language of Appendix A to 179 NAC 14.

14-004.04G For detected unregulated contaminants for which monitoring is required (except *Cryptosporidium*), the table(s) must contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.

14-004.05 Information on *Cryptosporidium*, radon, and other contaminants:

14-004.05A If the system has performed any monitoring for *Cryptosporidium* which indicates that *Cryptosporidium* may be present in the source water or the finished water, the report must include:

1. A summary of the results of the monitoring, and

2. An explanation of the significance of the results.

14-004.05B If the system has performed any monitoring for radon which indicates that radon may be present in the finished water, the report must include:

1. The results of the monitoring, and
2. An explanation of the significance of the results.

14-004.06 Compliance with Drinking Water Standards: In addition to the requirements of 179 NAC 14-004.04F, the report must note any violation that occurred during the year covered by the report of a requirement listed below, and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the system has taken to correct the violation.

1. Monitoring and reporting of compliance data;

2. Filtration and disinfection prescribed by 179 NAC 13, Surface Water Treatment (for surface water and ground water under the influence of surface water systems). For systems which have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes which constitutes a violation, the report must include the following language as part of the explanation of potential adverse health effects: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches;

3. Lead and copper control requirements prescribed by 179 NAC 12. For systems that fail to take one or more actions prescribed by 179 NAC 12-003.02, 12-004, 12-005, 12-006, 12-007 the report must include the applicable language of Appendix A to 179 NAC 14 for lead, copper or both;

4. Treatment techniques for Acrylamide and Epichlorohydrin prescribed in 179 NAC 2-002.03. For systems that violate the requirements of 179 NAC 2-002.03, the report must include the relevant language from Appendix A to 179 NAC 14;

5. Recordkeeping of compliance data;

6. Special monitoring requirements for unregulated contaminants and sodium; and

7. Violation of the terms of a variance, an exemption, or an administrative or judicial order.

14-004.07 Variances and Exemptions: If a system is operating under the terms of a variance or an exemption issued under 179 NAC 6, the report must contain:

1. An explanation of the reasons for the variance or exemption,

2. The date on which the variance or exemption was issued,

3. 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, and

4. A notice of any opportunity for public input in the review, or renewal, of the variance or exemption.

14-004.08 Additional Information:

14-004.08A The report must contain a brief explanation regarding contaminants which may reasonably be expected to be found in drinking water including bottled water. This explanation may include the language of 179 NAC 14-004.08A items one to three or systems may use their own comparable language. The report also must include the language of 179 NAC 14-004.08A item 4.

1. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and ground water wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

2. Contaminants that may be present in source water include:

   a. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

   b. Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

   c. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

d. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

e. Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

3. In order to ensure that tap water is safe to drink, the Director prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

4. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791) or the Department of Health and Human Services Regulation and Licensure, Public Health Assurance Division at 402-471-2541.

14-004.08B Phone Number: The report must include the telephone number of the owner, operator, or designee of the community water system as a source of additional information concerning the report.

14-004.08C Other Languages: In communities with a large proportion of non-English speaking residents, the report must contain information in the appropriate language(s) regarding the importance of the report or contain a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language.

14-004.08D Meetings: The report must include information (e.g., time and place of regularly scheduled board meetings) about opportunities for public participation in decisions that may affect the quality of the water.

14-004.08E The systems may include such additional information as they deem necessary for public education consistent with, and not detracting from, the purpose of the report.

14-005 REQUIRED ADDITIONAL HEALTH INFORMATION

14-005.01 All reports must prominently display the following language: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791) or the Department of Health and Human Services Regulation and Licensure, Public Health Assurance Division at 402-471-2541.

14-005.02 A system that detects arsenic above 0.005 mg/L and up to and including 0.010 mg/L:

1. Must include in its report a short informational statement about arsenic, using language such as: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

2. May write its own educational statement, but only in consultation with the Department.

14-005.03 A system which detects nitrate at levels above 5 mg/L, but below the MCL:

1. Must include a short informational statement about the impacts of nitrate on children using language such as: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

2. May write its own educational statement in consultation with the Department.

14-005.04 Systems which detect lead above the action level in more than 5% and up to and including 10% of homes sampled:

1. Must include a short informational statement about the special impact of lead on children using language such as: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791) or the Department of Health and Human Services Regulation and Licensure, Public Health Assurance Division at 402-471-2541.

2. May write its own educational statement in consultation with the Department.

14-005.05 Community Water Systems that detect TTHMs above 0.080 mg/L, but below the MCL in 179 NAC 2-002.02E1, as an annual average, monitored and calculated under the provisions of 179 NAC 16-005, must include health effects language for TTHMs prescribed by Appendix A to 179 NAC 14.

14-005.06 A community water system that detects arsenic above 0.010 mg/L and up to and including 0.05 mg/L must include the arsenic health effects language prescribed by Appendix A to 179 NAC 14.

14-006 REPORT DELIVERY AND RECORDKEEPING

14-006.01 Except as provided in 179 NAC 14-006.07, each community water system must mail or otherwise directly deliver one copy of the report to each customer.

14-006.02 The system must make a good faith effort to reach consumers who do not get water bills, using means recommended by the Department. An adequate good faith effort must be tailored to the consumers who are served by the system but are not bill-paying customers, such as renters or workers. A good faith effort to reach consumers would include a mix of methods appropriate to the particular system such as: Posting the reports on the internet; mailing to postal patrons in metropolitan areas; advertising the availability of the report in the news media; publication in a local newspaper; posting in public places such as cafeterias or lunch rooms of public buildings; delivery of multiple copies for distribution by single-biller customers such as apartment buildings or large private employers; delivery to community organizations.

14-006.03 No later than the date the system is required to distribute the report to its customers, each community water system must mail a copy of the report to the primacy agency, followed within three months by a certification that the report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the Department.

14-006.04 No later than the date the system is required to distribute the report to its customers, each community water system must deliver the report to any other agency or clearinghouse identified by the Department.

14-006.05 Each community water system must make its reports available to the public upon request.

14-006.06 Each community water system serving 100,000 or more persons must post its current year's report to a publicly-accessible site on the internet.

14-006.07 The Governor or his/her designee can waive the requirement of 179 NAC 14-006.01 for community water systems serving fewer than 10,000 persons.

14-006.07A Those systems receiving waivers must:

1. Publish the reports in one or more local newspapers serving the area in which the system is located;

2. Inform the customers that the reports will not be mailed, either in the newspapers in which the reports are published or by other means approved by the Department, and

3. Make the reports available to the public upon request.

14-006.07B Systems Serving 500 or Fewer Persons may forego the requirements of 179 NAC 14-006.07A, items 1 and 2 if they provide notice at least once per year to their customers by mail, door-to-door delivery or by posting in an appropriate location that the report is available upon request.

14-007 RETENTION: Any system subject to this chapter must retain copies of its consumer confidence report for no less than three years.

APPENDIX A to 179 NAC 14

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Microbiological contaminants: Total Coliform Bacteria.	MCL: (systems that collect ≥40 samples/ month) 5% of monthly samples are positive; (systems that collect <40 samples/ month) 1 positive monthly sample	.....	MCL: (systems that collect ≥40 samples/ month) 5% of monthly samples are positive; (Systems that collect <40 samples/ month) 1 positive monthly sample	0	Naturally present in the environment.	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.
Fecal coliform and *E. coli*	0	.....	0	0	Human and animal fecal waste.	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.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Total organic carbon (ppm)	TT	.....	TT	N/A	Naturally present in the environment.	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.
Turbidity (NTU)	TT	.....	TT	N/A	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Radioactive contaminants: Beta/photon emitters (mrem/yr)	4 mrem/yr .	.....	4	0	Decay of natural and man-made deposits.	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters (pCi/L)	15 pCi/L	.....	15	0	Erosion of natural deposits.	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.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Combined radium (pCi/L)	5 pCi/L	.....	5	0	Erosion of natural deposits.	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.
Uranium (µg/L)	30 µg/L.....	.....	30.....	0.....	Erosion of natural deposits.	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.
Inorganic contaminants: Antimony (ppb)	.006..... .	1000	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.	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.
Arsenic (ppb)	.05 through 01/22/06 0.010 Effective 01/23/06.....	1000	50 through 01/22/06 10 Effective 01/23/06.....	N/A through 01/22/06 0 Effective 01/23/06...	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	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.
Asbestos (MFL)	7 MFL	.....	7	7	Decay of asbestos cement water mains; Erosion of natural deposits.	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.
Barium (ppm)	2	.....	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium (ppb)	.004	1000	4	4	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries.	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Bromate (ppb)	0.010.....	1000	10	0	Byproduct of drinking water disinfection	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Cadmium (ppb)	.005	1000	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chloramines (ppm)	MRDL = 4	.....	MRDL = 4	MRDLG = 4	Water additive used to control microbes.	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.
Chlorine (ppm)	MRDL = 4	.....	MRDL = 4	MRDLG = 4	Water additive used to control microbes.	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.
Chlorine dioxide (ppm) ..	MRDL = .8	1000	MRDL = 800	MRDLG = 800	Water additive used to control microbes.	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 MCL. Some people may experience anemia.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Chlorite (ppm)	1	.....	1	0.8	Byproduct of drinking water disinfection.	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.
Chromium (ppb)	.1	1000	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Copper (ppm)	AL = 1.3 ...	.....	AL = 1.3 ...	1.3	Corrosion of household plumbing systems; Erosion of natural deposits;.	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.
Cyanide (ppb)	.2	1000	200	200	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.	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.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Fluoride (ppm)	4	.....	4	4	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.	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.
Lead (ppb)	AL = .015	1000	AL = 15	0	Corrosion of household plumbing systems; Erosion of natural deposits.	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.
Mercury (inorganic) (ppb)	.002	1000	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate (ppm)	10	.....	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	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.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Nitrite (ppm)	1.....	.....	1	1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	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.
Selenium (ppb)	.05	1000	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.	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.
Thallium (ppb)	.002	1000	2	0.5	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories.	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Synthetic organic contaminants including pesticides and herbicides: 2,4-D (ppb)	.07	1000	70	70	Runoff from herbicide used on row crops.	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.
2,4,5-TP [Silvex] (ppb)	.05	1000	50	50	Residue of banned herbicide.	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
Acrylamide	TT	.....	TT	0	Added to water during sewage/wastewater treatment.	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.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Alachlor (ppb)	.002	1000	2	0	Runoff from herbicide used on row crops.	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.
Atrazine (ppb)	.003	1000	3	3	Runoff from herbicide used on row crops.	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.
Benzo(a)pyrene [PAH] (nanograms/L)	.0002	1,000,000	200	0	Leaching from linings of water storage tanks and distribution lines.	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.
Carbofuran (ppb)	.04	1000	40	40	Leaching of soil fumigant used on rice and alfalfa.	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.
Chlordane (ppb)	.002	1000	2	0	Residue of banned termiticide.	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.
Dalapon (ppb)	.2	1000	200	200	Runoff from herbicide used on rights of way.	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
Di(2-ethylhexyl) adipate (ppb)	.4	1000	400.....	400	Discharge from chemical factories.	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement or possible reproductive difficulties.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Di(2-ethylhexyl) phthalate (ppb)	.006	1000	6	0	Discharge from rubber and chemical factories.	Some people who drink water containing di (2-ethylhexyl) phthalate well 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.
Dibromochloropropane (ppt)	.0002	1,000,000	200	0	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.
Dinoseb (ppb)	.007	1000	7	7	Runoff from herbicide used on soybeans and vegetables.	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Diquat (ppb)	.02	1000	20	20	Runoff from herbicide use.	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
Dioxin [2,3,7,8-TCDD] (ppq)	.00000003	1,000,000,000	30	0	Emissions from waste incineration and other combustion; Discharge from chemical factories.	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.
Endothall (ppb)	.1	1000	100	100	Runoff from herbicide use.	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
Endrin (ppb)	.002	1000	2	2	Residue of banned insecticide.	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Epichlorohydrin	TT	.....	TT	0	Discharge from industrial chemical factories; An impurity of some water treatment chemicals	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.
Ethylene dibromide (ppt)	.00005	1,000,000	50	0	Discharge from petroleum refineries.	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.
Glyphosate (ppb)	.7	1000	700	700	Runoff from herbicide use.	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	.0004	1,000,000	400	0	Residue of banned pesticide.	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.
Heptachlor epoxide (ppt)	.0002	1,000,000	200	0	Breakdown of heptachlor.	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.
Hexachlorobenzene (ppb)	.001	1000	1	0	Discharge from metal refineries and agricultural chemical factories.	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.
Hexachlorocyclopentadiene (ppb)	.05	1000	50	50	Discharge from chemical factories.	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Lindane (ppt)	.0002	1,000,000	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens.	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	.04	1000	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock.	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
Oxamyl [Vydate] (ppb) ..	.2	1000	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
PCBs [Polychlorinated biphenyls] (ppt)	.0005	1,000,000	500	0	Runoff from landfills; Discharge of waste chemicals.	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.
Pentachlorophenol (ppb)	.001	1000	1	0	Discharge from wood preserving factories.	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.
Picloram (ppb)	.5	1000	500	500	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Simazine (ppb)	.004	1000	4	4	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Toxaphene (ppb)	.003	1000	3	0	Runoff/leaching from insecticide used on cotton and cattle.	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
Volatile organic contaminants: Benzene (ppb)	.005	1000	5	0	Discharge from factories; Leaching from gas storage tanks and landfills.	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.
Carbon tetrachloride (ppb)	.005	1000	5	0	Discharge from chemical plants and other industrial activities.	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.
Chlorobenzene (ppb)	.1	1000	100	100	Discharge from chemical and agricultural chemical factories.	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
o-Dichlorobenzene (ppb)	.6	1000	600	600	Discharge from industrial chemical factories.	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
p-Dichlorobenzene (ppb)	.075	100	75	75	Discharge from industrial chemical factories.	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-Dichloroethane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories.	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.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
1,1-Dichloroethylene (ppb)	.007	1000	7	7	Discharge from industrial chemical factories.	Some people who drink water containing 1,1-dichlorethylene in excess of the MCL over many years could experience problems with their liver.
cis-1,2-Dichloroethylene (ppb)	.07	1000	70	70	Discharge from industrial chemical factories.	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
trans-1,2 -Dichloroethylene (ppb)	.1	1000	100	100	Discharge from industrial chemical factories.	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane (ppb)..	.005	1000	5	0	Discharge from pharmaceutical and chemical factories.	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.
1,2-Dichloropropane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories.	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.
Ethylbenzene (ppb)	.7	1000	700	700	Discharge from petroleum refineries.	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Haloacetic Acids (HAA) (ppb)	.060	1000	60	N/A	Byproduct of drinking water disinfection.	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Styrene (ppb)	.1	1000	100	100	Discharge from rubber and plastic factories; Leaching from landfills.	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.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Tetrachloroethylene (ppb)	.005	1000	5	0	Discharge from factories and dry cleaners.	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.
1,2,4-Trichlorobenzene (ppb)	.07	1000	70	70	Discharge from textile-finishing factories.	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.
1,1,1-Trichloroethane (ppb)	.2	1000	200	200	Discharge from metal degreasing sites and other factories.	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.
1,1,2-Trichloroethane (ppb)	.005	1000	5	3	Discharge from industrial chemical factories.	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.
Trichloroethylene (ppb) ..	.005	1000	5	0	Discharge from metal degreasing sites and other factories.	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.
TTHMs [Total trihalomethanes] (ppb)	0.10/.080 ..	1000	100/80	N/A	Byproduct of drinking water disinfection.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Toluene (ppm)	1	.....	1	1	Discharge from petroleum factories.	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.

Contaminants (units)	Tradition-al MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Vinyl Chloride (ppb)	.002	1000	2	0	Leaching from PVC piping; Discharge from plastics factories.	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes (ppm)	10	.....	10	10	Discharge from petroleum factories; Discharge from chemical factories.	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Key:

AL = Action Level
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
MFL = million fibers per liter
MRDL = Maximum Residual Disinfectant Level
MRDLG = Maximum Residual Disinfectant Level Goal
mrem/year = millirems per year (a measure of radiation absorbed by the body)
N/A = Not Applicable
NTU = Nephelometric Turbidity Units (a measure of water clarity)
pCi/L = picocuries per liter (a measure of radioactivity)
ppm = parts per million, or milligrams per liter (mg/L)
ppb = parts per billion, or micrograms per liter (µg/L)
ppt = parts per trillion, or nanograms per liter
ppq = parts per quadrillion, or picograms per liter
TT = Treatment Technique

Attachment 1 to 179 NAC 14

are effective for the purpose of compliance on January 23, 2006. However, the consumer confidence rule reporting requirements relating to arsenic listed in §141.154(b) and (f) are effective for the purpose of compliance on February 22, 2002.

(k) Regulations set forth in §§141.23(i)(1), 141.23(i)(2), 141.24(f)(15), 141.24(f)(22), 141.24(h)(11), 141.24(h)(20), 142.16(e), 142.16(j), and 142.16(k) are effective for the purpose of compliance on January 22, 2004.

[44 FR 68641, Nov. 29, 1979, as amended at 45 FR 57342, Aug. 27, 1980; 47 FR 10998, Mar. 12, 1982; 51 FR 11410, Apr. 3, 1986; 56 FR 30274, July 1, 1991; 57 FR 22178, May 27, 1992; 57 FR 31838, July 17, 1992; 59 FR 34322, July 1, 1994; 61 FR 24368, May 14, 1996; 66 FR 7061, Jan. 22, 2001; 66 FR 28350, May 22, 2001]

Subpart B—Maximum Contaminant Levels

§141.11 Maximum contaminant levels for inorganic chemicals.

(a) The maximum contaminant level for arsenic applies only to community water systems. The analyses and determination of compliance with the 0.05 milligrams per liter maximum contaminant level for arsenic use the requirements of §141.23.

(b) The maximum contaminant level for arsenic is 0.05 milligrams per liter for community water systems until January 23, 2006.

(c) [Reserved]

(d) At the discretion of the State, nitrate levels not to exceed 20 mg/l may be allowed in a non-community water system if the supplier of water demonstrates to the satisfaction of the State that:

(1) Such water will not be available to children under 6 months of age; and

(2) The non-community water system is meeting the public notification requirements under §141.200, including continuous posting of the fact that nitrate levels exceed 10 mg/l and the potential health effects of exposure; and

(3) Local and State public health authorities will be notified annually of nitrate levels that exceed 10 mg/l; and

(4) No adverse health effects shall result.

[40 FR 59570, Dec. 24, 1975, as amended at 45 FR 57342, Aug. 27, 1980; 47 FR 10998, Mar. 12, 1982; 51 FR 11410, Apr. 3, 1986; 56 FR 3578, Jan. 30, 1991; 56 FR 26548, June 7, 1991; 56 FR 30274, July 1, 1991; 56 FR 32113, July 15, 1991; 60 FR 33932, June 29, 1995; 65 FR 26022, May 4, 2000; 66 FR 7061, Jan. 22, 2001]

§141.12 Maximum contaminant levels for total trihalomethanes.

The maximum contaminant level of 0.10 mg/L for total trihalomethanes (the sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform), and trichloromethane (chloroform)) applies to subpart H community water systems which serve a population of 10,000 people or more until December 31, 2001. This level applies to community water systems that use only ground water not under the direct influence of surface water and serve a population of 10,000 people or more until December 31, 2003. Compliance with the maximum contaminant level for total trihalomethanes is calculated pursuant to §141.30. After December 31, 2003, this section is no longer applicable.

[63 FR 69463, Dec. 16, 1998, as amended at 66 FR 3776, Jan. 16, 2001]

§141.13 Maximum contaminant levels for turbidity.

The maximum contaminant levels for turbidity are applicable to both community water systems and non-community water systems using surface water sources in whole or in part. The maximum contaminant levels for turbidity in drinking water, measured at a representative entry point(s) to the distribution system, are:

EDITORIAL NOTE: At 54 FR 27527, June 29, 1989, §141.13 was amended by adding introductory text, effective December 31, 1990. However, introductory text already exists. The added text follows.

The requirements in this section apply to unfiltered systems until December 30, 1991, unless the State has determined prior to that date, in writing pursuant to §1412(b)(7)(C)(iii), that filtration is required. The requirements

in this section apply to filtered systems until June 29, 1993. The requirements in this section apply to unfiltered systems that the State has determined, in writing pursuant to §1412(b)(7)(C)(iii), must install filtration, until June 29, 1993, or until filtration is installed, whichever is later.

(a) One turbidity unit (TU), as determined by a monthly average pursuant to §141.22, except that five or fewer turbidity units may be allowed if the supplier of water can demonstrate to the State that the higher turbidity does not do any of the following:

(1) Interfere with disinfection;

(2) Prevent maintenance of an effective disinfectant agent throughout the distribution system; or

(3) Interfere with microbiological determinations.

(b) Five turbidity units based on an average for two consecutive days pursuant to §141.22.

[40 FR 59570, Dec. 24, 1975]

Subpart C—Monitoring and Analytical Requirements

§ 141.21 Coliform sampling.

(a) *Routine monitoring.* (1) Public water systems must collect total coliform samples at sites which are representative of water throughout the distribution system according to a written sample siting plan. These plans are subject to State review and revision.

(2) The monitoring frequency for total coliforms for community water systems is based on the population served by the system, as follows:

TOTAL COLIFORM MONITORING FREQUENCY FOR COMMUNITY WATER SYSTEMS

Population served	Minimum number of samples per month
25 to 1,000[1]	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15

TOTAL COLIFORM MONITORING FREQUENCY FOR COMMUNITY WATER SYSTEMS—Continued

Population served	Minimum number of samples per month
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
96,001 to 130,000	100
130,001 to 220,000	120
220,001 to 320,000	150
320,001 to 450,000	180
450,001 to 600,000	210
600,001 to 780,000	240
780,001 to 970,000	270
970,001 to 1,230,000	300
1,230,001 to 1,520,000	330
1,520,001 to 1,850,000	360
1,850,001 to 2,270,000	390
2,270,001 to 3,020,000	420
3,020,001 to 3,960,000	450
3,960,001 or more	480

[1] Includes public water systems which have at least 15 service connections, but serve fewer than 25 persons.

If a community water system serving 25 to 1,000 persons has no history of total coliform contamination in its current configuration and a sanitary survey conducted in the past five years shows that the system is supplied solely by a protected groundwater source and is free of sanitary defects, the State may reduce the monitoring frequency specified above, except that in no case may the State reduce the monitoring frequency to less than one sample per quarter. The State must approve the reduced monitoring frequency in writing.

(3) The monitoring frequency for total coliforms for non-community water systems is as follows:

(i) A non-community water system using only ground water (except ground water under the direct influence of surface water, as defined in §141.2) and serving 1,000 persons or fewer must monitor each calendar quarter that the system provides water to the public, except that the State may reduce this monitoring frequency, in writing, if a sanitary survey shows that the system is free of sanitary defects. Beginning June 29, 1994, the State cannot reduce the monitoring frequency for a non-community water

TABLE 1—UNREGULATED CONTAMINANT MONITORING REPORTING REQUIREMENTS—Continued

Data Element	Definition
15. Analytical Accuracy	X_1 is the concentration observed in spiked field sample minus the concentration observed in unspiked field sample. X_2 is the concentration observed in duplicate spiked field sample minus the concentration observed in unspiked field sample. Accuracy describes how close a result is to the true value measured through the use of spiked field samples. For purposes of unregulated contaminant monitoring, accuracy is defined as the percent recovery of the contaminant in the spiked/matrix sample analyzed in the same analytical batch as the sample result being reported and calculated using: % recovery = [(amt. found in spiked sample—amt. found in sample)/amt. spiked] × 100%.
16. Spiking Concentration	The concentration of method analyte(s) added to a sample to be analyzed for calculating analytical precision and accuracy where the value reported use the same unit of measure reported for Analytical Results.
17. Presence/Absence	Reserved.

(e) *How must I report this information?* (1) You must report results from monitoring under this rule using EPA's electronic reporting system. For quality control purposes, you must instruct the organization(s) responsible for the analysis of unregulated contaminant samples taken under §141.40 to *enter* the results into the reporting system, in the format specified by EPA. You are responsible for *reviewing* those results and *approving* the reporting (via the electronic system) of the results to EPA. You must also provide a copy of the results to the State, as directed by the State.

(2) If you report more than one set of valid results for the same sampling point and the same sampling event (for example, because you have had more than one organization (e.g., a laboratory) analyze replicate samples collected under §141.40, or because you have collected multiple samples during a single monitoring event at the same sampling point), EPA will use the highest of the reported values as the official result.

(f) *Does the laboratory to which I send samples report the results for me?* While you must instruct the organization conducting unregulated contaminant analysis (e.g., a laboratory) to enter the results into EPA's electronic reporting system, you are responsible for reviewing and approving the submission of the results to EPA. If the analytical organization or laboratory cannot enter these data for you using EPA's electronic reporting system, then you may explain to EPA in writing the reasons why alternate reporting is necessary and must receive EPA's approval to use an alternate reporting procedure.

(g) *Can I report previously collected data to meet the testing and reporting requirements for the contaminants listed in §141.40(a)(3)?* Yes, as long as the data meet the specific requirements of §141.40(a)(3), (4), (5), and Appendix A of §141.40 and you report the data with the information specified in paragraph (d) of this section.

[64 FR 50611, Sept. 17, 1999, as amended at 66 FR 2300, Jan. 11, 2001; 66 FR 27215, May 16, 2001; 67 FR 11046, Mar. 12, 2002]

Subpart E—Special Regulations, Including Monitoring Regulations and Prohibition on Lead Use

§141.40 Monitoring requirements for unregulated contaminants.

(a) *Requirements for owners and operators of public water systems.* (1) *Do I have to monitor for unregulated contaminants?*

(i) *Transient systems.* If you own or operate a transient non-community water system, you do not have to monitor for unregulated contaminants.

(ii) *Large systems not purchasing their entire water supply from another system.* If you own or operate a wholesale or retail public water system (other than a transient system) that serves more than 10,000 persons, as determined by the State, and do not purchase your entire water supply from another public water system, you must monitor as follows:

(A) You must monitor for the unregulated contaminants on List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section.

(B) You must monitor for the unregulated contaminants on List 2 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, if notified by your State or EPA that you are part of the Screening Surveys.

(C) You must monitor for the unregulated contaminants on List 3 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, if notified by your State or EPA that you are part of the Pre-Screen Testing.

(iii) *Large systems purchasing their entire water supply from another system.* If you own or operate a public water system (other than a transient system) that serves more than 10,000 persons and purchase your entire water supply from a wholesale or retail public water system, you must monitor as follows:

(A) You must monitor for the unregulated contaminants on List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, that have a "sampling location" indicated as "distribution system".

(B) You must monitor for the unregulated contaminants on List 2 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, that have a "sampling location" indicated as "distribution system" if notified by your State or EPA that you are part of the Screening Surveys.

(C) You must monitor for the unregulated contaminants on List 3 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, that have a "sampling location" indicated as "distribution system" if notified by your State or EPA that you are part of the Pre-Screen Testing.

(iv) *Small systems not purchasing their entire water supply from another system.* If you own or operate a public water system (other than a transient system) that serves 10,000 or fewer persons and do not purchase your entire water supply from another public water system, you must monitor as follows:

(A) You must monitor for the unregulated contaminants on List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, if you are notified by your State or EPA that you are part of the State Monitoring Plan for small systems.

(B) You must monitor for the unregulated contaminants on List 2 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, if you are notified by your State or EPA that you are part of the Screening Surveys.

(C) You must monitor for the unregulated contaminants on List 3 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, if you are notified by your State or EPA that you are part of the Pre-Screen Testing.

(v) *Small systems purchasing their entire water supply from another system.* If you own or operate a public water system (other than a transient system) that serves 10,000 or fewer persons and purchase your entire water supply from another public water system, you must monitor as follows:

(A) You must monitor for the unregulated contaminants on List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, that have a "sampling location" indicated as "distribution system" if you are notified by your State or EPA that you are part of the State Monitoring Plan for small systems.

(B) You must monitor for the unregulated contaminants on List 2 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, that have a "sampling location" indicated as "distribution system" if you are notified by your State or EPA that you are part of the Screening Surveys.

(C) You must monitor for the unregulated contaminants on List 3 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, that have a "sampling location" indicated as "distribution system" if you are notified by

your State or EPA that you are part of the Pre-Screen Testing.

(2) *How would I be selected for the monitoring under the State Monitoring Plan, the Screening Surveys, or the Pre-Screen Testing?* (i) State Monitoring Plan. Only a representative sample of small systems must monitor for unregulated contaminants. EPA will select a national representative sample of small public water systems in each State through the use of a random number generator. Selection will be weighted by population served within each system water source type (surface or ground water) and system size category (systems serving 25–500, 501–3,300, and 3,301–10,000 persons). EPA may allocate additional systems to water source types or system size categories to increase the statistical inferential ability for those categories. EPA will also select a small group of systems to be "Index systems." Systems selected as Index systems are required to provide information about their site and operation that will serve to allow extrapolation of their results to other systems of similar size, rather than collecting detailed information at every small system. Each State will have the opportunity to make some modifications to the list of small systems that EPA selects. You will be notified by the State or EPA if your system is part of the final State Monitoring Plan.

(ii) *Screening Surveys.* The purpose of the Screening Surveys is to determine the occurrence of contaminants in drinking water or sources of drinking water for which analytical methods have recently been developed for unregulated contaminant monitoring. EPA will select up to 300 systems to participate in each survey by using a random number generator. You will be notified by the State or EPA if your system is selected for monitoring under the Screening Surveys.

(iii) *Pre-screen Testing.* The purpose of Pre-Screen Testing is to determine the occurrence of contaminants for which EPA needs to evaluate new analytical methods in locations where the contaminants are most likely to be found. EPA will select up to 200 systems to participate in this testing after considering the characteristics of the contaminants, precipitation, system operation, and environmental conditions. You will be notified by the State or EPA that your system has been selected for monitoring under the Pre-Screen Testing program.

(3) *For which contaminants must I monitor?* Lists 1, 2 and 3 of unregulated contaminants are listed in the following table:

TABLE 1—UNREGULATED CONTAMINANT MONITORING REGULATION (1999) LIST

List 1—Assessment Monitoring Chemical Contaminants					
1-Contaminant	2-CAS registry number	3-Analytical methods	4-Minimum reporting level	5-Sampling location	6-Period during which monitoring to be completed
2, 4-dinitrotoluene	121-14-2	EPA Method 525.2 [a]	2 µg/L [e]	EPTDS [f]	2001–2003
2, 6 dinitrotoluene	606-20-2	EPA Method 525.2 [a]	2 µg/L [e]	EPTDS [f]	2001–2003
Acetochlor	34256-82-1	EPA Method 525.2 [a]	2 µg/L [e]	EPTDS [f]	2001–2003
DCPA mono-acid degradate [b]	887-54-7	EPA Method 515.1 [d], EPA Method 515.2 [a], EPA Method 515.3 [d], EPA Method 515.4 [k], D5317-93 [h], AOAC 992.32 [c]	1 µg/L [e]	EPTDS [f]	2001–2003

TABLE 1—UNREGULATED CONTAMINANT MONITORING REGULATION (1999) LIST—Continued

List 1—Assessment Monitoring Chemical Contaminants					
1-Contaminant	2-CAS registry number	3-Analytical methods	4-Minimum reporting level	5-Sampling location	6-Period during which monitoring to be completed
DCPA di-acid degradate[h]	2136–79–0	EPA Method 515.1[a], EPA Method 515.2[a], EPA Method 515.3[i], EPA Method 515.4[k], D5317–93[b], AOAC 992.32[c]	1 µg/L[e]	EPTDS[f]	2001–2003
4,4'-DDE	72–55–9	EPA Method 508[a], EPA Method 508.1[a], EPA Method 525.2[a], D5812–96[b], AOAC 990.06[c]	0.8 µg/L[e]	EPTDS[f]	2001–2003
EPTC	759–94–4	EPA Method 507[a], EPA Method 525.2[a], D5475–93[b], AOAC 991.07[c]	1 µg/L[e]	EPTDS[f]	2001–2003
Molinate	2212–67–1	EPA Method 507[a], EPA Method 525.2[a], D5475–93[b], AOAC 991.07[c]	0.9 µg/L[e]	EPTDS[f]	2001–2003
MTBE	1634–04–4	EPA Method 502.2[a,n], SM 6200C[d,n], EPA Method 524.2[a], D5790–95[b], SM 6210D[d], SM 6200B[d]	5 µg/L[g]	EPTDS[f]	2001–2003
Nitrobenzene	98–95–3	EPA Method 524.2[a], D5790–95[b], SM6210D[d], SM6200B[d]	10 µg/L[g]	EPTDS[f]	2001–2003
Perchlorate	14797–73–0	EPA Method 314.0[l]	4 µg/L[m]	EPTDS[f]	2001–2003
Terbacil	5902–51–2	EPA Method 507[a], EPA Method 525.2[a], D5475–93[b], AOAC 991.07[c]	2 µg/L[e]	EPTDS[f]	2001–2003

Column headings are:

1—Chemical or microbiological contaminant: the name of the contaminants to be analyzed.

2—CAS (Chemical Abstract Service Number) Registry No. or Identification Number: a unique number identifying the chemical contaminants.

3—Analytical Methods: method numbers identifying the methods that must be used to test the contaminants.

4—Minimum Reporting Level: the value and unit of measure at or above which the concentration or density of the contaminant must be measured using the Approved Analytical Methods.

5—Sampling Location: the locations within a PWS at which samples must be collected.

6—Years During Which Monitoring to be Completed: The years during which the sampling and testing are to occur for the indicated contaminant.

The procedures shall be done in accordance with the documents listed next in these footnotes. The incorporation by reference of the following documents listed in footnotes b-d, i, k and l was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the documents may be obtained from the following sources. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 800–426–4791. Documents may be inspected at EPA's Drinking Water Docket, 401 M Street, SW., Washington, DC 20460 (Telephone: 202–260–3027); or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

[a] The version of the EPA methods which you must follow for this Rule are listed at § 141.24 (e).

[b]Annual Book of ASTM Standards, 1996, 1998 and 1999, Vol. 11.02, American Society for Testing and Materials. Method D5812–96, "Standard Test Method for Determination of Organochlorine Pesticides in Water by Capillary Column Gas Chromatography", is located in the Annual Book of ASTM Standards, 1998 and 1999, Vol. 11.02. Methods D5790–95, "Standard Test Method for Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry"; D5475–93, "Standard Test Method for Nitrogen- and Phosphorus-Containing Pesticides in Water by Gas Chromatography with a Nitrogen-Phosphorus Detector"; and D5317–93, "Standard Test Method for Determination of Chlorinated Organic Acid Compounds in Water by Gas Chromatography with an Electron Capture Detector" are located in the Annual Book of ASTM Standards, 1998 and 1998, Vol 11.02. Copies may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

[c]Official Methods of Analysis of AOAC (Association of Official Analytical Chemist) International, Sixteenth Edition, 4th Revision, 1998, Volume I, AOAC International, First Union National Bank Lockbox, PO Box 75198, Baltimore, MD 21275–5198. 800–379–2622.

[d]SM 6210 D is only found in the 18th and 19th editions of Standard Methods for the Examination of Water and Wastewater, 1992 and 1995, American Public Health Association; either edition may be used. SM 6200 B and 6200 C are only found in the 20th edition of Standard Methods for the Examination of Water and Wastewater, 1998. Copies may be obtained from the American Public Health Association, 1015 Fifteenth Street NW, Washington, DC 20005.

[e]Minimum Reporting Level determined by multiplying by 10 the least sensitive method's detection limit (detection limit =standard deviation times the Student's t value for 99% confidence level with n-1 degrees of freedom), or when available, multiplying by 5 the least sensitive method's estimated detection limit (where the estimated detection limit equals the concentration of compound yielding approximately a 5 to 1 signal to noise ratio or the calculated detection limit, whichever is greater).

[f]Entry Points to the Distribution System (EPTDS), after treatment, representing each non-emergency water source in use over the twelve-month period of monitoring: this only includes entry points for sources in operation during the months in which sampling is to occur. Sampling must occur at the EPTDS, unless the State has specified other sampling points that are used for compliance monitoring under 40 CFR 141.24 (f)(1), (2), and (3). See 40 CFR 141.40(a)(5)(ii)(C) for a complete explanation of requirements, including the use of source (raw) water sampling points.

[g]Minimum Reporting Levels (MRL) for Volatile Organic Compounds (VOC) determined by multiplying either the published detection limit or 0.5 µg/L times 10, whichever is greater. The detection limit of 0.5 µg/L (0.0005 mg/L) was selected to conform to VOC detection limit requirements of 40 CFR 141.24(f)(17)(E).

[h]The approved methods do not allow for the identification and quantitation of the individual acids. The single analytical result obtained should be reported as total DCPA mono- and di-acid degradates.

[i]EPA Method 515.3, "Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Extraction, Derivatization and Gas Chromatography with Electron Capture Detection," Revision 1.0 July 1996. EPA 815-R-00-014, "Methods for the Determination of Organic and Inorganic compounds in Drinking Water, Volume 1," August 2000. Available from the National Technical Information Service, NTIS PB2000-106981, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll free number is 800–553–6847. Alternatively, the method can be assessed and downloaded directly on-line at www.epa.gov/safewater/methods/sourcalt.html.

[j]Since EPA Method 515.3 does not include a solvent wash step following hydrolysis, the parent DCPA is not removed prior to analysis, therefore, only non-detect data may be reported using EPA Method 515.3. All samples with results above the MRL must be analyzed by one of the other approved methods.

[k]EPA Method 515.4, "Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Microextraction, Derivatization and Fast Gas Chromatography with Electron Capture Detection," Revision 1.0, April 2000, EPA #815/B–00/001. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at 800–426–4791 (Hours are Monday through Friday, excluding federal holidays, from 9 a.m. to 5:30 p.m. Eastern Time). Alternatively, the method can be assessed and downloaded directly on-line at www.epa.gov/safewater/methods/sourcalt.html.

[l]EPA Method 314.0, "Determination of Perchlorate in Drinking Water Using Ion Chromatography," Revision 1.0, EPA 815-B–99–003, November 1999. EPA 815-R–00–014, "Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1," August 2000. Available from the National Technical Information Service, NTIS PB2000-106981, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll free number is 800–553–6847. Alternatively, the method can be assessed and downloaded directly on-line at www.epa.gov/safewater/methods/sourcalt.html.

[m]MRL was established at a concentration, which is at least 1/4th the lowest known adverse health concentration, at which acceptable precision and accuracy has been demonstrated in spiked matrix samples.

[n]Sample preservation techniques and holding times specified in EPA Method 524.2 must be used by laboratories using either EPA Method 502.2 or Standard Methods 6200C.

List 2—Screening Survey Chemical Contaminants

1-Contaminant	2-CAS registry number	3-Analytical methods	4-Minimum reporting level	5-Sampling location	6-Period during which monitoring to be completed
1,2-diphenylhydrazine.	122–66–7	EPA Method 526 [a]	0.5 µg/L	EPTDS [e]	2001—Selected Systems serving ≤10,000 persons; 2002—Selected systems serving > 10,000 persons.
2-methyl-phenol	95–48–7	EPA Method 528 [b]	1 µg/L [f]	EPTDS [e]	Same as above.
2,4-dichlorophenol	120–83–2	EPA Method 528 [b]	1 µg/L [f]	EPTDS [e]	Same as above.
2,4-dinitrophenol	51–28–5	EPA Method 528 [b]	5 µg/L [f]	EPTDS [e]	Same as above.
2,4,6-trichlorophenol.	88–06–2	EPA Method 528 [b]	1 µg/L [f]	EPTDS [e]	Same as above.
Alachlor ESA	Reserved [d]	Reserved [d]	Reserved [d]	Reserved [d]	Reserved [d]
Diazinon	333–41–5	EPA Method 526 [a]	0.5 µg/L [f]	EPTDS [e]	2001—Selected Systems serving ≤10,000 persons; 2002—Selected systems serving > 10,000 persons.
Disulfoton	298–04–4	EPA Method 526 [a]	0.5 µg/L [f]	EPTDS [e]	Same as above.

List 2—Screening Survey Chemical Contaminants

1-Contaminant	2-CAS registry number	3-Analytical methods	4-Minimum reporting level	5-Sampling location	6-Period during which monitoring to be completed
Diuron	330–54–1	EPA Method 532 [c]	1 µg/L [f]	EPTDS [e]	Same as above.
Fonofos	944–22–9	EPA Method 526 [a]	0.5 µg/L [f]	EPTDS [e]	Same as above.
Linuron	330–55–2	EPA Method 532 [c]	1 µg/L [f]	EPTDS [e]	Same as above.
Nitrobenzene	98–95–3	EPA Method 526 [a]	0.5 µg/L [f]	EPTDS [e]	Same as above.
Prometon	1610–18–0	EPA Method 526 [a]	0.5 µg/L [f]	EPTDS [e]	Same as above.
RDX	121–82–4	Reserved [d]	Reserved [d]	Reserved [d]	Reserved [d].
Terbufos	13071–79–9	EPA Method 526 [a]	0.5 µg/L [f]	EPTDS [e]	2001—Selected Systems serving ≤10,000 persons; 2002-Selected systems serving > 10,000 persons.

LIST 2—SCREENING SURVEY MICROBIOLOGICAL CONTAMINANTS TO BE SAMPLED

1—Contaminant	2—Identification number	3—Analytical methods	4—Minimum reporting level	5—Sampling location	6—Period during which monitoring to be completed
Aeromonas	NA	EPA Method 1605 [b].	0.2—CFU/100mL [f]	Distribution System.	2003

Column headings are:

[1]—Chemical or microbiological contaminant: the name of the contaminants to be analyzed.

[2]—CAS (Chemical Abstract Service Number) Registry No. or Identification Number: a unique number identifying the chemical contaminants.

[3]—Analytical Methods: method numbers identifying the methods that must be used to test the contaminants.

[4]—Minimum Reporting Level: the value and unit of measure at or above which the concentration or density of the contaminant must be measured using the Approved Analytical Methods.

[5]—Sampling Location: the locations within a PWS at which samples must be collected.

[6]—Years During Which Monitoring to be Completed: the years during which the sampling and testing are to occur for the indicated contaminant.

The procedures shall be done in accordance with the documents listed next in these footnotes. The incorporation by reference of the following documents listed in footnotes a–c, was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the documents may be obtained from the following sources. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 800–426–4791. Copies of the documents may be obtained from the sources listed in these footnotes. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 800–426–4791. Documents may be inspected at EPA's Drinking Water Docket, 401 M Street, SW., Washington, DC 20460 (Telephone: 202–260–3027); or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

[a]EPA Method 526, "Determination of Selected Semivolatile Organic Compounds in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS)," Revision 1.0, June 2000. EPA 815–R–00–014, "Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1," August 2000. Available from the National Technical Information Service, NTIS PB2000–106981, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll free number is 800–553–6847. Alternatively, the method can be assessed and downloaded directly on-line at www.epa.gov/safewater/methods/sourcalt.html.

[b]EPA Method 528, "Determination of Phenols in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS)," Revision 1.0, April 2000. EPA 815–R–00–014, "Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1," August 2000. Available from the National Technical Information Service, NTIS PB2000–106981, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll free number is 800–553–6847. Alternatively, the method can be assessed and downloaded directly on-line at www.epa.gov/nerlcwww/ordmeth.htm.

[c]EPA Method 532, "Determination of Phenylurea Compounds in Drinking Water by Solid Phase Extraction and High Performance Liquid Chromatography with UV Detection," Revision 1.0, June 2000. EPA 815–R–00–014, "Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1," August 2000. Available from the National Technical Information Service, NTIS PB2000–106981, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll free number is 800–553–6847. Alternatively, the method can be assessed and downloaded directly on-line at www.epa.gov/safewater/methods/sourcalt.html.

[d]To be specified at a later time.

[e]Entry Points to the Distribution System (EPTDS), after treatment, representing each non-emergency water source in use over the twelve-month period of monitoring: this only includes entry points for sources in operation during the months in which sampling is to occur. Sampling must occur at the EPTDS, source water sampling points are not permitted for List 2 contaminant monitoring.

[f]Minimum Reporting Level represents the value of the lowest concentration precision and accuracy determination made during methods development and documented in the method. If method options are permitted, the concentration used was for the least sensitive option.

[5]Three samples must be taken from the distribution system, which is owned or controlled by the selected PWS. The sample locations must include one sample from a point (MD from § 141.35(d)(3), Table 1) where the disinfectant residual is representative of the distribution system. This sample location may be selected from sample locations which have been previously identified for samples to be analyzed for coliform indicator bacteria. Coliform sample locations encompass a variety of sites including midpoint samples which may contain a disinfectant residual that is typical of the system. Coliform sample locations are described in 40 CFR 141.21. This same approach must be used for the *Aeromonas* midpoint sample where the disinfectant residual would not have declined and would be typical for the distribution system. Additionally, two samples must be taken from two different locations: the distal or dead-end location in the distribution system (MR from § 141.35(d)(3), Table 1), avoiding disinfectant booster stations, and from a location where previous determinations have indicated the lowest disinfectant residual in the distribution system (LD from § 141.35(d)(3), Table 1). If these two locations of distal and low disinfectant residual sites coincide, then the second sample must be taken at a location between the MD and MR sites. Locations in the distribution system where the disinfectant residual is expected to be low are similar to TTHM sampling points. Sampling locations for TTHMs are described in 63 FR 69468.

[6]EPA Method 1605 "*Aeromonas* in Finished Water by Membrane Filtration using Ampicillin-Dextrin Agar with Vancomycin (ADA-V)", October 2001, EPA # 821-R-01-034. The method can be accessed and downloaded directly on-line at *www.epa.gov/microbes*.

List 3—Pre-screen Testing Radionuclides To Be Sampled After Notice of Analytical Methods Availability

1-Contaminant	2-CAS registry number	3-Analytical methods	4-Minimum reporting level	5-Sampling location	6-Period during which monitoring to be completed
Lead-210	14255-04-0	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]
Polonium-210	13981-52-7	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]

List 3—Pre-screen Testing Microorganisms To Be Sampled After Notice of Analytical Methods Availability

1-Contaminant	2-Identification number	3-Analytical methods	4-Minimum reporting level	5-Sampling location	6-Period during which monitoring to be completed
Cyanobacteria (blue-green algae, other freshwater algae and their toxins).	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]
Echoviruses	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]
Coxsackieviruses	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]
Helicobacter pylori	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]
Microsporidia	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]
Calciviruses	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]
Adenoviruses	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]	Reserved[a]

Column headings are:
1–Chemical or microbiological contaminant: the name of the contaminants to be analyzed.
2–CAS (Chemical Abstract Service Number) Registry No. or Identification Number: a unique number identifying the chemical contaminants.
3–Analytical Methods: method numbers identifying the methods that must be used to test the contaminants.
4–Minimum Reporting Level: the value and unit of measure at or above which the concentration or density of the contaminant must be measured using the Approved Analytical Methods.
5–Sampling Location: the locations within a PWS at which samples must be collected.
6–Years During Which Monitoring to be Completed: the years during which the sampling and testing are to occur for the indicated contaminant.
[a] To be determined at a later time.

(4) *What general requirements must I follow for monitoring List 1 contaminants?* (i) *All systems.* You must:

(A) Collect samples of the listed contaminants in accordance with paragraph (a)(5) of this section and Appendix A of this section and any other specific instructions provided to you by the State or EPA,

(B) Analyze the additional parameters specified below in Table 2, "Water Quality Parameters to be Monitored with UCMR Contaminants" for each relevant contaminant type. You must analyze the parameters for each sampling event of each sampling point, using the method indicated, and report using the data elements 1 through 10 in Table 1, §141.35(d), Unregulated Contaminant Monitoring Reporting Requirements;

(C) Review the laboratory testing results to ensure reliability; and

(D) Report the results as specified in § 141.35.

TABLE 2—WATER QUALITY PARAMETERS TO BE MONITORED WITH UCMR CONTAMINANTS

Parameter	Contaminant type	Analytical methods		
		EPA method	Standard methods [1]	Other
pH	Microbiological	EPA Method 150.1[2], EPA Method 150.2[2].	4500–H^+ B	ASTM D1293–84[3], ASTM D1293–95[3].
Turbidity	Microbiological	EPA Method 180.1 [4,5]	2130 B [4]	GLI Method 2[4,6].
Temperature	Microbiological		2550.	
Free Disinfectant Residual	Microbiological		4500–Cl D, 4500–Cl F, 4500–Cl G, 4500–Cl H, 4500–ClO_2 D, 4500–ClO_2 E, 4500–O_3 B.	ASTM 1253–86[3]
Total Disinfectant Residual	Microbiological		4500–Cl D, 4500–Cl E,[4] 4500–Cl F, 4500–Cl G[4], 4500–Cl I.	ASTM D 1253–86[3]

The procedures shall be done in accordance with the documents listed in these footnotes. The incorporation by reference of the following documents was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the documents may be obtained from the sources listed in these footnotes. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 800–426–4791. Documents may be inspected at EPA's Drinking Water Docket, 401 M Street, SW., Washington, DC 20460 (Telephone: 202–260–3027); or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

[1] The 18th and 19th Editions of *Standard Methods for the Examination of Water and Wastewater*, 1992 and 1995. Methods 2130 B; 2550; 4500–Cl D, E, F, G, H, I; 4500–ClO_2 D, E; 4500–H^+ B; and 4500–O_3 B in the 20th edition *Standard Methods for the Examination of Water and Wastewater*, 1998, American Public Health Association, 1015 Fifteenth St. NW, Washington D.C., 20005.

[2] EPA Methods 150.1 and 150.2 are available from US EPA, NERL, 26 W. Martin Luther King Dr., Cincinnati, Ohio 45268. The identical methods are also in "Methods for Chemical Analysis of Water and Wastes," EPA–600/4–79–020, March 1983, available from the National Technical Information Service (NTIS), U.S. Department of Commerce, 5285 Port Royal Rd., Springfield, Virginia 22161, PB84–128677. (Note: NTIS toll-free number is 800–553–6847.)

[3] *Annual Book of ASTM Standards*, Editions 1994, 1996, 1998 and 1999, Volumes 11.01, American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428. Version D1293–84, "Standard Test Methods for pH of Water" is located in the *Annual Book of ASTM Standards*, 1994, Volumes 11.01. Version D1293–95, "Standard Test Methods for pH of Water" is located in the Annual Book of ASTM Standards, 1996, 1998 and 1999, Volumes 11.01.

[4] "Technical Notes on Drinking Water," EPA–600/R–94–173, October 1994, Available at NTIS, PB95–104766.

[5] "Methods for the Determination of Inorganic Substances in Environmental Samples," EPA–600/R–93–100, August 1993. Available at NTIS, PB94–121811

[6] GLI Method 2, "Turbidity," November 2, 1992, Great Lakes Instruments Inc., 8855 North 55th St., Milwaukee, Wisconsin 53223.

(ii) *Large systems.* In addition to paragraph (a)(4)(i) of this section, you must arrange for testing of the samples according to the methods specified for each contaminant in Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, and in Appendix A of this section.

(iii) *Small systems.* Unless directed otherwise by the State or EPA, in addition to paragraph (a)(4)(i) of this section , you must:

(A) Properly receive, store, maintain and use the sampling equipment sent to you from the laboratory designated by EPA;

(B) Sample at the times specified by the State or the EPA;

(C) Collect and pack samples in accordance with the instructions sent to you by the laboratory designated by EPA; and

(D) Send the samples to the laboratory designated by EPA.

(5) What specific sampling and quality control requirements must I follow for monitoring of List 1 contaminants?

(i) All systems. Unless the State or EPA informs you of other sampling arrangements, you must comply with the following requirements:

(A) *Sample collection and shipping time.* If you must ship the samples for testing, you must collect the samples early enough in the day to allow adequate time to send the samples for overnight delivery to the laboratory since some samples must be processed at the laboratory within 30 hours of collection. You must not collect samples on Friday, Saturday or Sunday because sampling on these days would not allow samples to be shipped and received at the laboratory within 30 hours.

(B) *No compositing of samples.* You must not composite (that is, combine, mix or blend) the samples. You must collect, preserve and test each sample separately.

(C) *Review and reporting of results.* After you have received the laboratory results, you must review and confirm the system information and data regarding sample collection and test results. You must report the results as provided in §141.35.

(ii) *Large systems.* In addition to paragraph (a)(5)(i) of this section, you must comply with the following:

(A) *Timeframe.* You must collect the samples in one twelve-month period during the years indicated in column 6 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List.

(B) *Frequency.* You must collect the samples within the timeframe and according to the following frequency specified by contaminant type and water source type:

TABLE 3—MONITORING FREQUENCY BY CONTAMINANT AND WATER SOURCE TYPES

Contaminant type	Water source type	Timeframe	Frequency
Chemical	Surface water	Twelve (12) months	Four quarterly samples taken as follows: Select either the first, second, or third month of a quarter and sample in that same month of each of four (4) consecutive quarters[a] to ensure that one of those sampling events occurs during the vulnerable time.[b]
	Ground water	Twelve (12) months	Two (2) times in a year taken as follows: Sample during one (1) month of the vulnerable time[b] and during one (1) month five (5) to seven (7) months earlier or later.[c]
Microbiological	Surface and ground water.	Twelve (12) months	Six (6) times in a year taken as follows: Select either the first, second, or third month of a quarter and sample in that same month of each of four (4) consecutive quarters, and sample an additional 2 months during the warmest (vulnerable) quarter of the year.[d]

[a] "Select either the first, second, or third month of a quarter and sample in that same month of each of four (4) consecutive quarters" means that you must monitor during each of the four (4) months of either: January, April, July, October; or February, May, August, November; or March, June, September, December.

[b] "Vulnerable time" means May 1 through July 31, unless the State or EPA informs you that it has selected a different time period for sampling as your system's vulnerable time.

[c] "Sample during one (1) month of the vulnerable time and during one (1) month five (5) to seven (7) months earlier or later" means, for example, that if you select May as your "vulnerable time" month to sample, then one (1) month five (5) to seven (7) months earlier would be either October, November or December of the preceding year, and one (1) month five (5) to seven (7) months later would be either, October, November, or December of the same year.

[d] This means that you must monitor during each of the six (6) months of either: January, April, July, August, September, October; or February, May, July, August, September, November; or March, June, July, August, September, December; unless the State or EPA informs you that a different vulnerable quarter has been selected for your system.

(C) *Location.* You must collect samples at the location specified for each listed contaminant in column 5 of the Table 1, UCMR (1999) List, in paragraph (a)(3) of this section. The sampling location for chemical contaminants must be the entry point to the distribution system or the compliance monitoring point specified by the State or EPA under 40 CFR 141.24 (f)(1), (2), and (3). Except as provided in this paragraph (a)(5)(ii)(C), if the compliance monitoring point as specified by the State is for source (raw) water and any of the contaminants in paragraph (a)(3) of this section are detected, then you must complete the source water monitoring for the indicated timeframe and also sample at the entry point to the distribution system representative of the affected source water only for the contaminant(s) found in the source water over the next twelve month timeframe, beginning in the next required monitoring period as indicated in paragraph (a)(5)(ii)(B), Table 3 of this section, even though monitoring might extend beyond the last year indicated in column 6, Period during which monitoring to be completed, in Table 1 of paragraph (a)(3). Exception: If the State or EPA determines that sampling at the entry point to the distribution system is unnecessary because no treatment was instituted between the source water and the distribution system that would affect measurement of the contaminants listed in paragraph (a)(3) of this section, then you do not have to sample at the entry point to the distribution system. Note: The sampling for List 2 chemical contaminants must be at the entry point to the

distribution system, as specified in Table 1, List 2.

(D) *Sampling instructions.* You must follow the sampling procedure for the method specified in column 3 of List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, for each contaminant.

(E) *Testing and analytical methods.* For each listed contaminant, you must use the analytical method specified in column 3 of List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, the minimum reporting levels in column 4 of List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, and the quality control procedures specified in Appendix A of this section.

(F) *Sampling deviations.* If you do not collect a sample according to the procedures specified for a listed contaminant, you must resample within 14 days of observing the occurrence of the error (which may include notification from the laboratory that you must resample) following the procedures specified for the method. (This resampling is not for confirmation sampling but to correct the sampling error.)

(G) *Testing.* (*1*) Except as provided in paragraph (a)(5)(ii)(G)(*2*) and (*3*) of this section, you must arrange for the testing of the contaminants identified in List 1 of Table 1 by a laboratory certified under §141.28 for compliance analysis using any of the analytical methods listed in column 3 for each contaminant in List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, whether you use the EPA analytical methods or non-EPA methods listed in List 1 of Table 1. Laboratories are automatically certified for the analysis of UCMR contaminants in List 1 of Table 1 if they are already certified to conduct compliance monitoring for a contaminant included in the same method being approved for UCMR analysis. Laboratories certified under §141.28 for compliance analysis using EPA Method 515.3 are automatically approved to conduct UCMR analysis using EPA Method 515.4.

(*2*) You must arrange for the testing of Perchlorate as identified in List 1 of Table 1 by a laboratory certified under §141.28 for compliance analysis using an approved ion chromatographic method as listed in §141.28 and that has analyzed and successfully passed the Performance Testing (PT) Program administered by EPA.

(*3*) You must arrange for the testing of the chemical contaminants identified in List 2 of Table 1 by a laboratory certified under §141.28 for compliance analysis using EPA Method 525.2 if performing UCMR analysis using EPA Methods 526 or 528, or a laboratory certified under §141.28 for compliance analysis using EPA Methods 549.1 or 549.2 if performing UCMR analysis using EPA Method 532. You must arrange for the testing for *Aeromonas* using the approved method as identified in List 2 of Table 1 by a laboratory which is both certified under §141.28 for compliance analysis for coliform indicator bacteria using an EPA approved membrane filtration procedure and which also has been granted approval for UCMR monitoring of *Aeromonas* by successfully passing the *Aeromonas* Performance Testing (PT) Program administered by EPA.

(iii) *Small systems that are part of the State Monitoring Plan.* Unless directed otherwise by the State or EPA, in addition to paragraph (a)(5)(i) of this section, you must comply with the following:

(A) *Timeframe and frequency.* You must collect samples at the times specified for you by the State or EPA, within the timeframe specified in paragraph (a)(5)(ii)(A) of this section and according to the frequency specified in paragraph (a)(5)(ii)(B) of this section for the contaminant type and water source type.

(B) *Location.* You must collect samples at the locations specified for you by the State or EPA.

(C) *Sampling deviations.* If you do not collect a sample according to the instructions provided to you for a listed contaminant, then you must report the deviation on the sample reporting form that you send to the laboratory with the samples. You must resample following instructions that you will be

sent from EPA's designated laboratory or the State.

(D) *Sample kits.* You must store and maintain the sample collection kits sent to you by EPA's designated laboratory in a secure place until used for sampling. You should read the instructions for each kit when you receive it. If indicated in the kit's instructions, you must freeze the cold packs. The sample kit will include all necessary containers, packing materials and cold packs, instructions for collecting the sample and sample treatment (such as dechlorination or preservation), report forms for each sample, contact name and telephone number for the laboratory, and a prepaid return shipping docket and return address label. If any of the materials listed in the kit's instructions are not included or arrive damaged, you must notify EPA's designated laboratory which sent you the sample collection kits.

(E) *Sampling instructions.* You must comply with the instructions sent to you by the State or EPA concerning the use of containers, collection (how to fill the sample bottle), dechlorination and/or preservation, and sealing and preparing the sample and shipping containers for shipment. You must also comply with the instructions sent to you by EPA's designated laboratory concerning the handling of sample containers for specific contaminants.

(F) *Duplicate samples.* EPA will select systems in the State Monitoring Plan that must collect duplicate samples for quality control. If your system is selected, you will receive two sample kits that you must use. You must use the same sampling protocols for both sets of samples, following the instructions in the duplicate sample kit.

(G) *Sampling forms.* You must completely fill out the sampling forms sent to you by the laboratory, including the data elements 1 through 4 listed in §141.35(d) for each sample. If EPA requests that you conduct field analysis of water quality parameters specified in paragraph (a)(4)(i)(B) of this section, you must also complete the sampling form to include the information for data elements 5 through 10 listed in §141.35(d) for each sample. You must sign and date the sampling forms.

(H) *Sample submission.* Once you have collected the samples and completely filled in the sampling forms, you must send the samples and the sampling forms to the laboratory designated in your instructions.

(6) *What additional requirements must I follow if my system is selected as an Index system?* If your system is selected as an Index system in the State Monitoring Plan, you must assist the State or EPA in identifying appropriate sampling locations and provide information on which wells and intakes are in use at the time of sampling, well casing and screen depths (if known) for those wells, and the pumping rate of each well or intake at the time of sampling.

(7) *What must I do if my system is selected for the Screening Surveys or Pre-Screen Testing?* (i) *All systems.* You must:

(A) Analyze the additional parameters specified in paragraph §141.40(a)(4)(i), Table 2, "Water Quality Parameters to be Monitored with UCMR Contaminants" for each relevant contaminant type. You must analyze the parameters for each sampling event of each sampling point, using the method indicated, and report the results using the data elements 1 through 10 in Table 1, §141.35(d), Unregulated Contaminant Monitoring Reporting requirements;

(B) Review the laboratory results to ensure reliability; and

(C) Report the results as specified in §141.35.

(ii) *Large systems.* If your system serves over 10,000 persons, you must collect and arrange for testing of the contaminants in List 2 and List 3 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, in accordance with the requirements set out in paragraphs (a)(4) and (5) of this section, with one exception: you must sample only at sampling locations specified in Table 1. You must send the samples to one of the laboratories approved under paragraph (G), this section. You are also responsible for reporting these results as required in §141.35.

(iii) *Small systems.* If your system serves 10,000 or fewer persons, you must collect samples in accordance with the

instructions sent to you by the EPA or State, or, if informed by the EPA or State that the EPA or State will collect the sample, you must assist the State or EPA in identifying the appropriate sampling locations and in taking the samples. EPA will report the results to you and the State.

(8) *What is a violation of this Rule?* (i) Any failure to monitor in accordance with §141.40(a)(3) through (7) and Appendix A is a monitoring violation. (ii) Any failure to report in accordance with §141.35 is a reporting violation.

(b) *Requirements for State and Tribal Participation.* (1) How can I, as the director of a State or Tribal drinking water program, participate in unregulated contaminant monitoring, including Assessment Monitoring (which includes the State Monitoring Plan for small systems), the Screening Surveys, and Pre-Screen Testing of all systems? You can enter into a Memorandum of Agreement (MOA) with the EPA that describes your State's or Tribe's activities to:

(i) *Accept or modify the initial plan.* EPA will first specify the systems serving 10,000 or fewer persons by water source and size in an initial State Monitoring Plan for each State using a random number generator. EPA will also generate a replacement list of systems for systems that may not have been correctly specified on the initial plan. This initial State Monitoring Plan will also indicate the year and day, plus or minus two (2) weeks from the day, that each system must monitor for the contaminants in List 1 of Table 1 of this section, Unregulated Contaminant Monitoring Regulation (1999) List. EPA will provide you with the initial monitoring plan for your State or Tribe, including systems to be Index systems and those systems to be part of the Screening Surveys. Within sixty (60) days of receiving your State's initial plan, you may notify EPA that you either accept it as your State Monitoring Plan or request to modify the initial plan by removing systems that have closed, merged or are purchasing water from another system and replacing them with other systems. Any purchased water system associated with a non-purchased water system must be added to the State Monitoring Plan if the State determines that its distribution system is the location of the maximum residence time or lowest disinfectant residual of the combined distribution system. In this case, the purchased water system must monitor for the contaminants for which the "distribution system" is identified as the point of "maximum residence time" or "lowest disinfectant residual," depending on the contaminant, and not the community water system selling water to it. You must replace any systems you removed from the initial plan with systems from the replacement list in the order they are listed. Your request to modify the initial plan must include the modified plan and the reasons for the removal and replacement of systems. If you believe that there are reasons other than those previously listed for removing and replacing one or more other systems from the initial plan, you may include those systems and their replacement systems in your request to modify the initial plan. EPA will review your request to modify your State's initial plan. Please note that information about the actual or potential occurrence or non-occurrence of contaminants at a system or a system's vulnerability to contamination is not a basis for removal from or addition to the plan.

(ii) *Determine an alternate vulnerable time.* Within 60 days of receiving the initial State Monitoring Plan, you may also determine that the most vulnerable time of the year for any or all of the systems in the plan, and for any of the large systems that must monitor, is some period other than May 1 through July 31. If you make this determination, you must modify the initial plan to indicate the alternate vulnerable time and to which systems the alternate vulnerable time applies. EPA will review these determinations when you submit your request to modify your State's initial monitoring plan to the EPA. You must notify the small system(s) in your final State Monitoring Plan and the large system(s) of the most vulnerable time(s) of the year that you have specified for them to sample for one of their sampling events. You must notify them at least 90 days before their first unregulated contaminant sampling is to occur. You

may need to consider the timing of monitoring in paragraph (b)(1)(iii) of this section.

(iii) *Modify the timing of monitoring.* Within sixty (60) days of receiving the initial plan, you may also modify the plan by selecting an alternative year and day, plus or minus two (2) weeks, within the years specified in column 6, List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, for monitoring for each system in the initial plan as long as approximately one-third of the systems in the State Plan monitor in each of the three (3) years listed. This monitoring may be coordinated with regulated contaminant compliance monitoring at your discretion. You must send the modified plan to EPA.

(iv) *Identify alternate sampling points for small systems in the State Monitoring Plan.* All systems are required to monitor for the contaminants at the sampling locations specified in column 5, List 1 of Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, unless the State specifies an alternate compliance sampling point as the sampling location. If the compliance sampling points for the small systems in the State Monitoring Plan are different than those specified in paragraph (a)(3) of this section, then you must indicate these sampling points in the plan. These alternative sampling points must allow proper sampling and testing for the unregulated contaminants.

(v) *Notify small and large systems of their monitoring responsibilities.* You must provide notification to systems in the plan and, where appropriate, the large systems, at least ninety (90) days before sampling must occur.

(vi) *Provide instructions to systems that are part of the final State Monitoring Plan.* You must send a monitoring schedule to each system listed in the State Monitoring Plan and instructions on location, frequency, timing of sampling, use of sampling equipment, and handling and shipment of samples based on these regulations. EPA will provide you with guidance for these instructions. If you perform the sampling or make alternative arrangements for the sampling at the systems in the plan, you must inform EPA at least six (6) months before the first monitoring is to occur and address the alternative monitoring arrangements in the MOA.

(vii) *Participate in monitoring for the Screening Surveys for small and large systems.* Within 120 days prior to sampling, EPA will notify you which systems have been selected to participate in the Screening Surveys, the sampling dates, the designated laboratory for testing, and instructions for sampling. You must review the small systems that EPA selected for the State Monitoring Plan to ensure that the systems are not closed, merged or purchasing water from another system (unless the system is to conduct monitoring for a contaminant with the sampling location specified as "distribution system"), and then make any replacements in the plan, as described in paragraph (b)(1)(i) of this section. You must notify the selected systems in your State of these Screening Surveys requirements. You must provide the necessary Screening Surveys information to the selected systems at least ninety (90) days prior to the sampling date.

(viii) *Participate in monitoring for Pre-Screen Testing for small and large systems.* You can participate in Pre-Screen Testing in two ways.

(A) First, within ninety (90) days of EPA's letter to you concerning initiation of Pre-Screen Testing for specific contaminants, you can identify from five (5) up to twenty-five (25) systems in your State that you determine to be representative of the most vulnerable systems to these contaminants, modify your State Monitoring Plan to include these most vulnerable systems if any serve 10,000 or fewer persons, and notify EPA of the addition of these systems to the State Plan. These systems must be selected from all community and non-transient noncommunity water systems. EPA will use the State-identified vulnerable systems to select up to 200 systems nationally to be monitored considering the characteristics of the contaminants, precipitation, system operation, and environmental conditions.

(B) Second, within 120 days prior to sampling, EPA will notify you which systems have been selected, sampling dates, the designated laboratory for

testing of samples for systems serving 10,000 or fewer persons and approved laboratories for systems serving more than 10,000 persons, and instructions for sampling. You must notify the owners or operators of the selected systems in your State of these Pre-Screen Testing requirements. At least ninety (90) days prior to the sampling date, you must provide the necessary Pre-Screen Testing information to the owners or operators of the selected systems and then inform EPA that you took this action to allow sufficient time for EPA to ensure laboratory readiness.

(ix) *Revise system's treatment plant location(s) to include latitude and longitude.* For reporting to the Safe Drinking Water Information System, EPA already requires reporting of either the latitude and longitude or the street address for the treatment plant location. If the State enters into an MOA, the State must report each system's treatment plant location(s) as latitude and longitude (in addition to street address, if previously reported) by the time of the system's reporting of Assessment Monitoring results to the National Drinking Water Contaminant Occurrence Database. The State may use the latitude and longitude of facilities related to the public water system on the same site, or closely adjacent to the same site as the treatment plant, such as the latitude and longitude of the intake or wellhead/field or the entry point to the distribution system, if such measurements are available.

(2) What if I decide not to participate in an MOA? If you decide not to enter into an MOA with EPA to develop the State Monitoring Plan for small systems, the initial monitoring plan that EPA sent you will become the final State Monitoring Plan for your State or Tribe. In that case, you may still notify each public water system of its selection for the plan and instructions for monitoring as long as you notify EPA that you will be undertaking this responsibility at least six (6) months prior to the first unregulated contaminant monitoring.

(3) Can I add contaminants to the Unregulated Contaminant Monitoring List? Yes, the SDWA allows Governors of seven (7) or more States to petition the EPA Administrator to add one or more contaminants to the Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section. The petition must clearly identify the reason(s) for adding the contaminant(s) to the monitoring list in paragraph (a)(3) of this section, including the potential risk to public health, particularly any information that might be available regarding disproportional risks to the health and safety of children, the expected occurrence documented by any available data, any analytical methods known or proposed to be used to test for the contaminant(s), and any other information that could assist the Administrator in determining which contaminants present the greatest public health concern and should, therefore, be included on the Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section.

(4) Can I waive monitoring requirements? Only with EPA approval and under very limited conditions. Conditions and procedures for obtaining the only type of waiver available under these regulations are as follows:

(i) Application. You may apply to EPA for a State-wide waiver from the unregulated contaminant monitoring requirements for public water systems serving more than 10,000 persons. To apply for such a waiver, you must submit an application to EPA that includes the following information:

(A) the list of contaminants on the Unregulated Contaminant Monitoring List for which you request a waiver, and

(B) documentation for each contaminant in your request demonstrating that the contaminants have not been used, applied, stored, disposed of, released, naturally present or detected in the source waters or distribution systems in your State during the past 15 years, and that it does not occur naturally in your State.

(ii) Approval. EPA will notify you if EPA agrees to waive monitoring requirements.

APPENDIX A TO § 141.40—QUALITY CONTROL REQUIREMENTS FOR TESTING ALL SAMPLES COLLECTED

Your system must ensure that the quality control requirements listed below for testing

of samples collected and submitted under §141.40 are followed:

(1) Sample Collection/Preservation. Follow the sample collection and preservation requirements for the specified method for each of the contaminants in Table 1, UCMR (1999) List, in paragraph (a)(3) of this section. These requirements specify sample containers, collection, dechlorination, preservation, storage, sample holding time, and extract storage and/or holding time that the laboratory must follow.

(2) Detection Limit. Calculate the laboratory detection limit for each contaminant in Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, of paragraph (a)(3) of this section using the appropriate procedure in the specified method with the exception that the contaminant concentration used to fortify reagent water must be less than or equal to the minimum reporting level (MRL) for the contaminants as specified in column 4, Table 1, UCMR (1999) List, in paragraph (a)(3) of this section. The calculated detection limit is equal to the standard deviation times the Student's t value for 99% confidence level with n-1 degrees of freedom. (The detection limit must be less than or equal to one-half of the MRL.)

(3) Calibration. Follow the initial calibration requirements as specified in the method utilized. Calibration must be verified initially with a low-level standard at a concentration at or below the MRL for each contaminant. Perform a continuing calibration verification following every 10th sample. The calibration verification must be performed by alternating low-level and mid-level calibration standards. The low-level standard is defined as a concentration at or below the MRL with an acceptance range of ±40%. The mid-level standard is in the middle of the calibration range with an acceptance range of ±20%.

(4) Reagent Blank Analysis. Analyze one laboratory reagent (method) blank per sample set/batch that is treated exactly as a sample. The maximum allowable background concentration is one-half of the MRL for all contaminants. A field reagent blank is required only for EPA Method 524.2 (or equivalent listed methods, D5790.95, SM6210D, and SM6200B).

(5) Quality Control Sample. Obtain a quality control sample from an external source to check laboratory performance at least once each quarter.

(6) Matrix Spike and Duplicate. Prepare and analyze the sample matrix spike (SMS) for accuracy and matrix spike duplicate (MSD) samples for precision to determine method accuracy and precision for all contaminants in Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section. SMS/MSD samples must be prepared and analyzed at a frequency of 5% (or one SMS/MSD set per every 20 samples) or with each sample batch whichever is more frequent. In addition, the SMS/MSD spike concentrations must be alternated between a low-level spike and mid-level spike approximately 50% of the time. (For example: a set of 40 samples will require preparation and analysis of two SMS/MSD sets. The first set must be spiked at either the low-level or mid level, and the second set must be spiked with the other standard, either the low-level or mid-level, whichever was not used for the initial SMS/MSD set). The low-level SMS/MSD spike concentration must be within ±20% of the MRL for each contaminant. The mid-level SMS/MSD spike concentration must be within ±20% of the mid-level calibration standard for each contaminant, and should represent, where possible, an approximate average concentration observed in previous analyses of that analyte. The spiking concentrations must be reported in the same units of measure as the analytical results.

(7) Internal Standard Calibration. As appropriate to a method's requirements to be used, test and obtain an internal standard for the methods for each chemical contaminant in Table 1, Unregulated Contaminant Monitoring Regulation (1999) List, in paragraph (a)(3) of this section, a pure contaminant of known concentration, for calibration and quantitation purposes. The methods specify the percent recovery or response that you must obtain for acceptance.

(8) Method Performance Test. As appropriate to a method's requirements, test for surrogate compounds, a pure contaminant unlikely to be found in any sample, to be used to monitor method performance. The methods specify the percent recovery that you must obtain for acceptance.

(9) Detection Confirmation. Confirm any chemical contaminant analyzed using a gas chromatographic method and detected above the MRL, by gas chromatographic/mass spectrometric (GC/MS) methods. If testing resulted in first analyzing the sample extracts via specified gas chromatographic methods, an initial confirmation by a second column dissimilar to the primary column may be performed. If the contaminant detection is confirmed by the secondary column, then the contaminant must be reconfirmed by GC/MS using three (3) specified ion peaks for contaminant identification. Use one of the following confirming techniques: perform single point calibration of the GC/MS system for confirmation purposes only as long as the calibration standard is at a concentration within ± 50% of the concentration determined by the initial analysis; or perform a three (3) point calibration with single point daily calibration verification of the GC/MS system regardless of whether that verification standard concentration is within ± 50% of sample response. If GC/MS analysis confirms the initial contaminant detection,

report results determined from the initial analysis.

(10) Reporting. Report the analytical results and other data, with the required data listed in 40 CFR 141.35, Table 1. Report this data electronically to EPA, unless EPA specifies otherwise, and provide a copy to the State. Systems must coordinate with their laboratories for electronic reporting to EPA to ensure proper formatting and timely data submission.

(11) Method Defined Quality Control. As appropriate to the method's requirements, perform analysis of Laboratory Fortified Blanks and Laboratory Performance Checks as specified in the method. Each method specifies acceptance criteria for these quality control checks.

[64 FR 50612, Sept. 17, 1999, as amended at 65 FR 11383, Mar. 3, 2000; 66 FR 2303, Jan. 11, 2001; 66 FR 27315, May 16, 2001; 66 FR 46225, Sept. 4, 2002; 67 FR 65900, Oct. 29, 2002]

§ 141.41 Special monitoring for sodium.

(a) Suppliers of water for community public water systems shall collect and analyze one sample per plant at the entry point of the distribution system for the determination of sodium concentration levels; samples must be collected and analyzed annually for systems utilizing surface water sources in whole or in part, and at least every three years for systems utilizing solely ground water sources. The minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may, with the State approval, be considered one treatment plant for determining the minimum number of samples. The supplier of water may be required by the State to collect and analyze water samples for sodium more frequently in locations where the sodium content is variable.

(b) The supplier of water shall report to EPA and/or the State the results of the analyses for sodium within the first 10 days of the month following the month in which the sample results were received or within the first 10 days following the end of the required monitoring period as stipulated by the State, whichever of these is first. If more than annual sampling is required the supplier shall report the average sodium concentration within 10 days of the month following the month in which the analytical results of the last sample used for the annual average was received. The supplier of water shall not be required to report the results to EPA where the State has adopted this regulation and results are reported to the State. The supplier shall report the results to EPA where the State has not adopted this regulation.

(c) The supplier of water shall notify appropriate local and State public health officials of the sodium levels by written notice by direct mail within three months. A copy of each notice required to be provided by this paragraph shall be sent to EPA and/or the State within 10 days of its issuance. The supplier of water is not required to notify appropriate local and State public health officials of the sodium levels where the State provides such notices in lieu of the supplier.

(d) Analyses for sodium shall be conducted as directed in § 141.23(k)(1).

[45 FR 57345, Aug. 27, 1980, as amended at 59 FR 62470, Dec. 5, 1994]

§ 141.42 Special monitoring for corrosivity characteristics.

(a)–(c) [Reserved]

(d) Community water supply systems shall identify whether the following construction materials are present in their distribution system and report to the State:

Lead from piping, solder, caulking, interior lining of distribution mains, alloys and home plumbing.

Copper from piping and alloys, service lines, and home plumbing.

Galvanized piping, service lines, and home plumbing.

Ferrous piping materials such as cast iron and steel.

Asbestos cement pipe.

In addition, States may require identification and reporting of other materials of construction present in distribution systems that may contribute contaminants to the drinking water, such as:

Vinyl lined asbestos cement pipe.

Coal tar lined pipes and tanks.

[45 FR 57346, Aug. 27, 1980; 47 FR 10999, Mar. 12, 1982, as amended at 59 FR 62470, Dec. 5, 1994]