

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

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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 <sup>a</sup>                                                                                                                                                     | 2 µg/L <sup>e</sup>       | EPTDS <sup>f</sup>  | 2001-2003                                        |
| 2, 6 dinitrotoluene .....                          | 606-20-2              | EPA Method 525.2 <sup>a</sup>                                                                                                                                                     | 2 µg/L <sup>e</sup>       | EPTDS <sup>f</sup>  | 2001-2003                                        |
| Acetochlor .....                                   | 34256-82-1            | EPA Method 525.2 <sup>a</sup>                                                                                                                                                     | 2 µg/L <sup>o</sup>       | EPTDS <sup>f</sup>  | 2001-2003                                        |
| DCPA mono-acid degradate <sup>h</sup> .....        | 887-54-7              | EPA Method 515.1 <sup>a</sup> , EPA Method 515.2 <sup>a</sup> , EPA Method 515.3 <sup>ij</sup> , EPA Method 515.4 <sup>k</sup> , D5317-93 <sup>b</sup> , AOAC 992.32 <sup>c</sup> | 1 µg/L <sup>e</sup>       | EPTDS <sup>f</sup>  | 2001-2003                                        |
| DCPA di-acid degradate <sup>h</sup> .....          | 2136-79-0             | EPA Method 515.1 <sup>a</sup> , EPA Method 515.2 <sup>a</sup> , EPA Method 515.3 <sup>ij</sup> , EPA Method 515.4 <sup>k</sup> , D5317-93 <sup>b</sup> , AOAC 992.32 <sup>c</sup> | 1 µg/L <sup>e</sup>       | EPTDS <sup>f</sup>  | 2001-2003                                        |
| 4,4'-DDE .....                                     | 72-55-9               | EPA Method 508 <sup>a</sup> , EPA Method 508.1 <sup>a</sup> , EPA Method 525.2 <sup>a</sup> , D5812-96 <sup>b</sup> , AOAC 990.06 <sup>c</sup>                                    | 0.8 µg/L <sup>e</sup>     | EPTDS <sup>f</sup>  | 2001-2003                                        |
| EPTC .....                                         | 759-94-4              | EPA Method 507 <sup>a</sup> , EPA Method 525.2 <sup>a</sup> , D5475-93 <sup>b</sup> , AOAC 991.07 <sup>c</sup>                                                                    | 1 µg/L <sup>e</sup>       | EPTDS <sup>f</sup>  | 2001-2003                                        |
| Molinate .....                                     | 2212-67-1             | EPA Method 507 <sup>a</sup> , EPA Method 525.2 <sup>a</sup> , D5475-93 <sup>b</sup> , AOAC 991.07 <sup>c</sup>                                                                    | 0.9 µg/L <sup>e</sup>     | EPTDS <sup>f</sup>  | 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 |
| MTBE .....                                         | 1634-04-4             | EPA Method 502.2 <sup>a,n</sup> , SM 6200C <sup>d,m</sup> , EPA Method 524.2 <sup>a</sup> , D5790-95 <sup>b</sup> , SM 6210D <sup>d</sup> , SM 6200B <sup>d</sup> | 5 µg/L <sup>g</sup>       | EPTDS <sup>f</sup>  | 2001-2003                                        |
| Nitrobenzene .....                                 | 98-95-3               | EPA Method 524.2 <sup>a</sup> , D5790-95 <sup>b</sup> , SM6210D <sup>d</sup> , SM6200B <sup>d</sup>                                                               | 10 µg/L <sup>g</sup>      | EPTDS <sup>f</sup>  | 2001-2003                                        |
| Perchlorate .....                                  | 14797-73-0            | EPA Method 314.0 <sup>1</sup>                                                                                                                                     | 4 µg/L <sup>m</sup>       | EPTDS <sup>f</sup>  | 2001-2003                                        |
| Terbacil .....                                     | 5902-51-2             | EPA Method 507 <sup>a</sup> , EPA Method 525.2 <sup>a</sup> , D5475-93 <sup>b</sup> , AOAC 991.07 <sup>c</sup>                                                    | 2 µg/L <sup>e</sup>       | EPTDS <sup>f</sup>  | 2001-2003                                        |

Column headings are:  
<sup>1</sup>—Chemical or microbiological contaminant: the name of the contaminants to be analyzed.  
<sup>2</sup>—CAS (Chemical Abstract Service Number) Registry No. or Identification Number: a unique number identifying the chemical contaminants.  
<sup>3</sup>—Analytical Methods: method numbers identifying the methods that must be used to test the contaminants.  
<sup>4</sup>—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.  
<sup>5</sup>—Sampling Location: the locations within a PWS at which samples must be collected.  
<sup>6</sup>—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 Office of Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

<sup>a</sup> The version of the EPA methods which you must follow for this Rule are listed at § 141.24 (e).  
<sup>b</sup> 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, 1996 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.

<sup>c</sup> 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.

<sup>d</sup> 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.

<sup>e</sup> 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).

<sup>f</sup> 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.

<sup>g</sup> 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).

<sup>h</sup> 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.

<sup>i</sup> 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](http://www.epa.gov/safewater/methods/sourcalt.html).

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<sup>1</sup> 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.

<sup>2</sup> 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](http://www.epa.gov/safewater/methods/sourcalt.html).

<sup>3</sup> 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](http://www.epa.gov/safewater/methods/sourcalt.html).

<sup>4</sup> 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.

<sup>5</sup> 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 <sup>a</sup> | 0.5 µg/L .....              | EPTDS <sup>e</sup> .....    | 2001—Selected Systems serving ≤10,000 persons;<br>2002—Selected systems serving > 10,000 persons. |
| 2-methyl-phenol .....    | 95-48-7 .....               | EPA Method 528 <sup>b</sup> | 1 µg/L <sup>f</sup> .....   | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| 2,4-dichlorophenol ..... | 120-83-2 .....              | EPA Method 528 <sup>b</sup> | 1 µg/L <sup>f</sup> .....   | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| 2,4-dinitrophenol .....  | 51-28-5 .....               | EPA Method 528 <sup>b</sup> | 5 µg/L <sup>f</sup> .....   | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| 2,4,6-trichlorophenol.   | 88-06-2 .....               | EPA Method 528 <sup>b</sup> | 1 µg/L <sup>f</sup> .....   | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| Alachlor ESA .....       | Reserved <sup>d</sup> ..... | Reserved <sup>d</sup> ..... | Reserved <sup>d</sup> ..... | Reserved <sup>d</sup> ..... | Reserved <sup>d</sup>                                                                             |
| Diazinon .....           | 333-41-5 .....              | EPA Method 526 <sup>a</sup> | 0.5 µg/L <sup>f</sup> ..... | EPTDS <sup>e</sup> .....    | 2001—Selected Systems serving ≤10,000 persons;<br>2002—Selected systems serving > 10,000 persons. |
| Disulfoton .....         | 298-04-4 .....              | EPA Method 526 <sup>a</sup> | 0.5 µg/L <sup>f</sup> ..... | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| Diuron .....             | 330-54-1 .....              | EPA Method 532 <sup>c</sup> | 1 µg/L <sup>f</sup> .....   | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| Fonofos .....            | 944-22-9 .....              | EPA Method 526 <sup>a</sup> | 0.5 µg/L <sup>f</sup> ..... | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| Linuron .....            | 330-55-2 .....              | EPA Method 532 <sup>c</sup> | 1 µg/L <sup>f</sup> .....   | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| Nitrobenzene .....       | 98-95-3 .....               | EPA Method 526 <sup>a</sup> | 0.5 µg/L <sup>f</sup> ..... | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| Prometon .....           | 1610-18-0 .....             | EPA Method 526 <sup>a</sup> | 0.5 µg/L <sup>f</sup> ..... | EPTDS <sup>e</sup> .....    | Same as above.                                                                                    |
| RDX .....                | 121-82-4 .....              | Reserved <sup>d</sup> ..... | Reserved <sup>d</sup> ..... | Reserved <sup>d</sup> ..... | Reserved <sup>d</sup>                                                                             |
| Terbufos .....           | 13071-79-9 .....            | EPA Method 526 <sup>a</sup> | 0.5 µg/L <sup>f</sup> ..... | EPTDS <sup>e</sup> .....    | 2001—Selected Systems serving ≤10,000 persons;<br>2002—Selected systems serving > 10,000 persons. |

List 2—Screening Survey Microbiological Contaminants 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 |
|------------------------|-------------------------|-----------------------------|-----------------------------|------------------------------------|--------------------------------------------------|
| <i>Aeromonas</i> ..... | NA .....                | Reserved <sup>d</sup> ..... | Reserved <sup>d</sup> ..... | Distribution System <sup>g</sup> . | 2003 <sup>h</sup>                                |

Column headings are:  
<sup>1</sup>—Chemical or microbiological contaminant: the name of the contaminants to be analyzed.  
<sup>2</sup>—CAS (Chemical Abstract Service Number) Registry No. or Identification Number: a unique number identifying the chemical contaminants.  
<sup>3</sup>—Analytical Methods: method numbers identifying the methods that must be used to test the contaminants.  
<sup>4</sup>—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.  
<sup>5</sup>—Sampling Location: the locations within a PWS at which samples must be collected.  
<sup>6</sup>—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 Office of Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

<sup>a</sup>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](http://www.epa.gov/safewater/methods/sourcalt.html).

<sup>b</sup>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/nrlc/www/ordmeth.htm](http://www.epa.gov/nrlc/www/ordmeth.htm).

<sup>c</sup>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](http://www.epa.gov/safewater/methods/sourcalt.html).

<sup>d</sup>To be specified at a later time.

<sup>e</sup>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.

<sup>f</sup>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.

<sup>g</sup>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 mid-point 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.

<sup>h</sup>This monitoring period is contingent upon promulgation of the analytical method and minimum reporting level.

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 <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved. <sup>a</sup>                           |
| Polonium-210 ..... | 13981-52-7 .....      | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved. <sup>a</sup>                           |

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 <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved. <sup>a</sup>                           |
| Echoviruses .....                                                          | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved. <sup>a</sup>                           |
| Coxsackieviruses ...                                                       | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved. <sup>a</sup>                           |
| Helicobacter pylori                                                        | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved. <sup>a</sup>                           |
| Microsporidia .....                                                        | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved. <sup>a</sup>                           |
| Caliciviruses .....                                                        | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved. <sup>a</sup>                           |
| Adenoviruses .....                                                         | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved <sup>a</sup> ..... | Reserved. <sup>a</sup>                           |

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.

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6—Years During Which Monitoring to be Completed: the years during which the sampling and testing are to occur for the indicated contaminant.  
 \* 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 <sup>1</sup>                                                                                                 | Other                                                        |
| pH .....                     | Microbiological ..... | EPA Method 150.1 <sup>2</sup> ,<br>EPA Method 150.2 <sup>2</sup> , | 4500-H <sup>+</sup> B .....                                                                                                   | ASTM D1293-84 <sup>3</sup> ,<br>ASTM D1293-95 <sup>3</sup> . |
| Turbidity .....              | Microbiological ..... | EPA Method 180.1 <sup>4,5</sup> ..                                 | 2130 B <sup>4</sup> .....                                                                                                     | GLI Method 2 <sup>4,6</sup> .                                |
| Temperature .....            | Microbiological ..... | .....                                                              | 2550.                                                                                                                         |                                                              |
| Free Disinfectant Residual.  | Microbiological ..... | .....                                                              | 4500-Cl D, 4500-Cl F,<br>4500-Cl G, 4500-Cl H,<br>4500-ClO <sub>2</sub> D,<br>4500-ClO <sub>2</sub> E, 4500-O <sub>3</sub> B. | ASTM 1253-86 <sup>3</sup>                                    |
| Total Disinfectant Residual. | Microbiological ..... | .....                                                              | 4500-Cl D, 4500-Cl E, <sup>4</sup><br>4500-Cl F,<br>4500-Cl G <sup>4</sup> , 4500-Cl I.                                       | ASTM D 1253-86 <sup>3</sup>                                  |

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 Office of Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

<sup>1</sup> 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<sub>2</sub> D, E; 4500-H<sup>+</sup> B; and 4500-O<sub>3</sub> 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.

<sup>2</sup> 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.)

<sup>3</sup> *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.

<sup>4</sup> "Technical Notes on Drinking Water," EPA-600/R-94-173, October 1994. Available at NTIS, PB95-104766.

<sup>5</sup> "Methods for the Determination of Inorganic Substances in Environmental Samples," EPA-600/R-93-100, August 1993. Available at NTIS, PB94-121811.

<sup>6</sup> 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 re-

ceived 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 <sup>a</sup> to ensure that one of those sampling events occurs during the vulnerable time. <sup>b</sup> |
|                       | Ground water .....        | Twelve (12) months ..... | Two (2) times in a year taken as follows: Sample during one (1) month of the vulnerable time <sup>b</sup> and during one (1) month five (5) to seven (7) months earlier or later. <sup>c</sup>                                                                                        |
| 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. <sup>d</sup>    |

<sup>a</sup>“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.

<sup>b</sup>“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.

<sup>c</sup>“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.

<sup>d</sup>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 lo-

cation 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

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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 mon-

itor 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

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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 treat-

ment 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  $\pm 40\%$ . The mid-level standard is in the middle of the calibration range with an acceptance range of  $\pm 20\%$ .

(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  $\pm 20\%$  of the MRL for each contaminant. The mid-level SMS/MSD spike concentration must be within  $\pm 20\%$  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

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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  $\pm 50\%$  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  $\pm 50\%$  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 11382, Mar. 2, 2000; 66 FR 2302, Jan. 11, 2001; 66 FR 27215, May 16, 2001; 66 FR 46225, Sept. 4, 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