



Unregulated Contaminant Monitoring Regulation: Screening Survey for List 2 Contaminants by Selected Large Public Water Systems

Introduction

The 1996 Amendments to the Safe Drinking Water Act (SDWA) require the EPA to publish revisions to the Unregulated Contaminant Monitoring Regulation (UCMR) establishing criteria for a program to monitor unregulated contaminants in drinking water, and to publish a list of contaminants to be monitored. Under the UCMR, community water systems (CWSs) and non-transient, non-community water systems (NTNCWSs) that serve more than 10,000 persons (large systems) will monitor their water for the presence of unregulated contaminants, and report the results in electronic format to the U.S. Environmental Protection Agency (EPA or Agency). A subset of these water systems will be required to participate in a Screening Survey for the UCMR List 2 contaminants.

The purpose of UCMR monitoring is to collect contaminant occurrence data to support the U.S. EPA Administrator's decisions regarding whether or not to regulate contaminants, such as those on the Drinking Water Contaminant Candidate List, to protect public health. The Agency promulgated revisions to the UCMR, published in the *Federal Register* on September 17, 1999 and supplemented on March 2, 2000. The UCMR List 2 Rule, which was finalized and published in the *Federal Register* on January 11, 2001, also supplements the UCMR and is the focus of this fact sheet.

EPA has organized the UCMR contaminants into three lists based on the availability of analytical methods to detect their presence in drinking water and on the type of monitoring to be conducted: Assessment Monitoring, List 1, consists of contaminants for which standard analytical methods are available; Screening Survey, List 2, consists of contaminants for which new analytical methods will be used; and Pre-Screen Testing, List 3, consists of contaminants for which analytical methods are being researched. This fact sheet serves as a supplement to the initial UCMR fact sheet for large systems, entitled: "Monitoring for List 1 Contaminants by Selected Large Public Water Systems". Table 1 identifies the Screening Survey List 2 contaminants, which selected large systems are required to monitor, along with their environmental sources.

What Systems Must Monitor for List 2 Contaminants? (See §141.40(a)(1))

While all large systems must conduct UCMR Assessment Monitoring for List 1 contaminants, only a subset of these systems will be required to conduct the UCMR Screening Surveys for List 2 contaminants. For each of the two Screening Surveys, 120 large systems will be required to conduct sampling. If your system was selected to participate in one of the Screening Surveys, you should have been notified by your State drinking water agency or EPA.

When and How Often Must Monitoring Occur? (See §141.40(a)(5))

The first Screening Survey, for 13 chemical contaminants, will be conducted in 2002 by large systems. Systems that use surface water as their drinking water source will take samples for four consecutive quarters. Systems that have ground water for their source will collect samples two times six months apart. All source water types must sample once during the 'vulnerable' period of 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. Table 2 provides a summary of the first Screening Survey sampling schedules for surface water and ground water systems.

Table 1: UCMR (1999) List 2 Contaminants that are Required for Monitoring and Their Uses or Sources		
Contaminant Name	CASRN	Use or Environmental Source
Screening Survey Chemical Contaminants (2002)		
1,2-diphenylhydrazine	122-66-7	Used in the production of benzidine and anti-inflammatory drugs
2-methylphenol	95-48-7	Released in automobile and diesel exhaust, coal tar and petroleum refining, and wood pulping
2,4-dichlorophenol	120-83-2	Chemical intermediate in herbicide production
2,4-dinitrophenol	51-28-5	Released from mines, metal, petroleum, and dye plants
2,4,6-trichlorophenol	88-06-2	By-product of fossil fuel burning, used as bactericide and wood/glue preservative
Diazinon	333-41-5	Insecticide used with rice, fruit, vineyards, and corn crops
Disulfoton	298-04-4	Insecticide used with cereal, cotton, tobacco, and potato crops
Diuron	330-54-1	Herbicide used on grasses in orchards and wheat crops
Fonofos	944-22-9	Soil insecticide used on worms and centipedes
Linuron	330-55-2	Herbicide used with corn, soybean, cotton, and wheat crops
Nitrobenzene	98-95-3	Used in the production of aniline, which is used to make dyes, herbicides, and drugs
Prometon	1610-18-0	Herbicide used on annual and perennial weeds and grasses
Terbufos	13071-79-9	Insecticide used with corn, sugar beet, and grain sorghum crops
Screening Survey Microbiological Contaminant (2003)		
<i>Aeromonas</i>	N/A	Present in all freshwater and brackish water

The second Screening Survey, for the List 2 microbiological contaminant *Aeromonas*, will be performed in 2003 by a different set of 120 large systems. *Aeromonas* samples will be taken once each quarter, with additional samples taken each month during the warmest quarter of the year, July through September (i.e., six times during the year). This means that sampling must take place in 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 otherwise.

Where Must Samples be Collected? (See §141.40(a)(5))

Sampling for Screening Survey chemical contaminants during 2002 must occur after treatment, at the entry point(s) to the distribution system representing each non-emergency water source for your system. This only includes entry points for sources that are in operation during the months in which sampling is to occur. Note that for List 2 sampling, source water samples are not permitted.

Table 2: Monitoring Frequency by Source Water Type	
Source Water Type	Monitoring Frequency
Surface Water	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 consecutive quarters ¹ to ensure that one of these sampling events occurs during the vulnerable time ²
Ground Water	Two times in a year, taken as follows: Sample during one month of the most vulnerable time ² and during one month five-to-seven months earlier or later ³
<p>1. "Select either the first, second, or third month of a quarter and sample in that same month of each of four consecutive quarters" means that you must monitor during each of four months in either: January, April, July, October; or February, May, August, November; or March, June, September, December.</p> <p>2. "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.</p> <p>3. "Sample during one month of the vulnerable time and during one month five to seven months earlier or later" means, for example, that if you select May as your "vulnerable time" month to sample, then one month five to seven months earlier would be either October, November or December of the preceding year, and one month five to seven months later would be either, October, November, or December of the same year.</p>	

Sampling for *Aeromonas* the Screening Survey microbiological contaminant in 2003 must occur at the three locations in the distribution system that represent: a midpoint location in the distribution system with typical disinfectant residual levels, a point located furthest from the entry point to the distribution system, and a location in the distribution system with the lowest disinfectant residual. EPA will provide further guidance on *Aeromonas* sampling before systems are required to begin collecting samples for this contaminant.

How Are the Samples to be Analyzed? (See §141.40(a)(5) and Appendix A)

Samples are to be analyzed by State- or primacy agency-certified laboratories, using methods according to the UCMR’s quality control (QC) specifications. (For details regarding applicable methods and QC specifications, see the *Unregulated Contaminant Monitoring Regulation Analytical Methods and Quality Control Manual* [EPA 815-R-00-006], and its supplements.) Because methods for the analysis of List 2 contaminants have been newly developed, no laboratories are currently certified for these new methods. To facilitate the approval process, EPA is allowing for automatic method certifications for laboratories that are already certified for specified EPA methods (which are similar to the newly developed List 2 methods). These automatic method certifications, as specified under §141.40(a)(5)(ii)(G)(3), include:

Public Water System (PWS) Identification Number	Analytical Method Number
PWS Facility Identification Number – Identification Number and Sampling Point Type Identification	Sample Analysis Type
Sample Collection Date	Sample Batch Identification Number
Sample Identification Number	Minimum Reporting Level
Contaminant/Parameter	Minimum Reporting Level Unit of Measure
Analytical Results – Sign	Analytical Precision
Analytical Results – Value	Analytical Accuracy
Analytical Results – Unit of Measure	Spiking Concentration

If laboratory is certified under §141.28 for EPA Method:

Then it is automatically approved for UCMR Method:

525.2	526 or 528
549.1 or 549.2	532
coliform indicator bacteria using EPA-approved membrane filtration; plus special Performance Testing	Will be certified for the method reserved for <i>Aeromonas</i>

To be approved for the Screening Survey for *Aeromonas*, laboratories must not only be certified for related coliform analysis under §141.28, but must also successfully pass the *Aeromonas* Performance Testing (PT) Program that will be administered by EPA. Further notification and guidance will be provided prior to commencement of the PT Program.

What Data Must be Reported to EPA? (See §141.35(d))

Analytical results that are reported must include the UCMR Data Elements listed in Table 3, above. Many of these are QC measures, and should be provided by the laboratory.

How Will the Monitoring Data be Reported to EPA? (See §141.35(e))

Large public water systems have a few options by which to report the Screening Survey data to EPA:

- Systems can instruct their laboratories to electronically report to EPA on their behalf. After the data are submitted by the lab, the system can review its results on-line and electronically indicate its approval, or
- Systems can require their laboratories to receive their approval before the laboratories report results to EPA.

If a system determines that its laboratory does not have the capability to report data electronically, the system may submit a request to EPA to use an alternate reporting format. Under any circumstances, the results must be submitted to EPA within 30 days following the month the PWS receives the results. EPA will wait for an additional 60 days before placing the data in the National Drinking Water Contaminant Occurrence Database to allow for quality control review by the system and the State. Large systems are responsible for ensuring that a copy of the monitoring results is sent to the State.

Are There Requirements for Notifying the Public? (See §141.153(d) and §141.207)

Yes. Under the Consumer Confidence Report (CCR) Rule (40 CFR 141.153(d)), published on August 19, 1998 (63 FR 44511), CWSs must report the monitoring results whenever unregulated contaminants are detected. CCRs are to be sent to all billing customers each year by July 1. (The CCR Rule does not apply to non-community water systems.) For NTNCWSs, UCMR results will be made available to the public through the requirements of the revised Public Notification (PN) Rule (65 FR 25982), under 40 CFR 141.207. As required by the PN Rule, NTNCWSs must notify persons served by the system of the availability of UCMR results within 12 months after the results are known. Because the revised PN Rule goes into effect at different times in different States, owners and operators should check with their State drinking water agency to determine which public notice requirements apply. Details on these reporting requirements can be found in the documents: *Preparing Your Drinking Water Consumer Confidence Report* (EPA 816-R-99-002) and *Public Notification Handbook* (EPA 816-R-00-010). Both are available on the Web at www.epa.gov/safewater.

Where Can I Get More Information?

More information on the UCMR is available from the following sources:

- *Federal Register* notices of September 17, 1999 (64 FR 50556), March 2, 2000 (65 FR 11372), and January 11, 2001 (66 FR 2273).
- The EPA Office of Ground Water and Drinking Water Web Site (www.epa.gov/safewater/ucmr.html).
- *Unregulated Contaminant Monitoring Regulation Analytical Methods and Quality Control Manual* (EPA 815-R-00-006).
- *Supplement A to the Unregulated Contaminant Monitoring Regulation Analytical Methods and Quality Control Manual* (EPA 815-R-00-002).
- The Safe Drinking Water Hotline (800 426-4791).

EPA is developing additional guidance materials, so check the Office of Ground Water and Drinking Water UCMR Web Site often for the latest information about them.

Table 4, at right, lists UCMR contacts in the EPA regional offices and the Agency's Technical Support Center in Cincinnati, OH.

EPA	Contact	Telephone
Region 1	Chris Ryan	617 918-1567
Region 2	Robert Poon	212 637-3821
Region 3	Michelle Hoover	215 814-5258
Region 4	Janine Morris	404 562-9480
Region 5	Janet Kuefler	312 886-0123
Region 6	Andrew J. Waite	214 665-7332
Region 7	Stan Calow	913 551-7410
Region 8	Rod Glebe	303 312-6627
Region 9	Jill Korte	415 744-1853
Region 10	Gene Taylor	206 553-1389
Technical Support Center	Dan Hautman	513 569-7948