## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Parts 9, 141 and 142

**[Docket No. OW–2004–0001; FRL–8261–7]**

**RIN 2040–AD93**

## Unregulated Contaminant Monitoring Regulation (UCMR) for Public Water Systems Revisions

**AGENCY:** Environmental Protection Agency.

**ACTION:** Final rule.

**SUMMARY:** The Safe Drinking Water Act (SDWA), as amended in 1996, requires the United States Environmental Protection Agency (EPA) to establish criteria for a program to monitor unregulated contaminants and to publish a list of contaminants to be monitored every five years. EPA published the first set of contaminants in 1999. This final regulation meets the SDWA requirement by publishing the next set of unregulated contaminants to be monitored and the requirements for such monitoring.

This final rule describes the design for the second Unregulated Contaminant Monitoring Regulation (UCMR) cycle (i.e., UCMR 2) of 2007–2011. EPA is requiring monitoring of 25 chemicals using 5 different analytical methods. UCMR 2 monitoring will occur during 2008–2010. Implementation of this final rule will benefit the environment by providing EPA and other interested parties with scientifically valid data on the occurrence of these contaminants in drinking water, thereby permitting the assessment of the population potentially being exposed and the levels of that exposure. These data are the primary source of occurrence and exposure data for the Agency to determine whether to regulate these contaminants.

**DATES:** This final rule is effective on February 5, 2007. For purposes of judicial review, this rule is promulgated as of 1 p.m. eastern time on January 4, 2007 as provided in 40 CFR 23.7. The incorporation by reference of certain publications listed in this rule is approved by the Director of the Federal Register as of February 5, 2007.

**ADDRESSES:** EPA has established a docket for this action under Docket ID No. OW–2004–0001. All documents in the docket are listed in the index at www.regulations.gov. Although listed in the index, some information is not publicly available, e.g., confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically at *http://www.regulations.gov* or in hard copy at the Water Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. This Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for this Public Reading Room is (202) 566–1744, and the telephone number for the Water Docket is (202) 566–2426.

**FOR FURTHER INFORMATION CONTACT:** David J. Munch, Technical Support Center, Office of Ground Water and Drinking Water, United States Environmental Protection Agency, Office of Water, 26 West Martin Luther King Drive (MS 140), Cincinnati, OH 45268, telephone (513) 569–7843; e-mail address *munch.dave@epa.gov*. For general information, contact the Safe Drinking Water Hotline. Callers within the United States may reach the Hotline at (800) 426–4791. The Hotline is open Monday through Friday, excluding legal holidays, from 10 a.m. to 4 p.m., eastern time.

**SUPPLEMENTARY INFORMATION:**

### I. General Information

*Does This Action Apply to Me?*

Entities regulated by this action are public water systems (PWSs). All large community and non-transient non-community water systems serving more than 10,000 people will be required to monitor. A community water system means a PWS which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Non-transient non-community water system means a PWS that is not a community water system and that regularly serves at least 25 of the same people over 6 months per year. Only a nationally representative sample of community and non-transient non-community systems serving 10,000 or fewer people will be required to monitor. Transient non-community systems (i.e., systems that do not regularly serve at least 25 of the same people over 6 months per year) will not be required to monitor. States, Territories, and Tribes that qualify for treatment as a State for purposes of this program, may participate in the implementation of the second cycle of the Unregulated Contaminant Monitoring Regulation (i.e., UCMR 2) through a Partnership Agreement. These agencies may choose to conduct analyses to measure for contaminants in water samples collected for the UCMR 2, in which case they will be regulated by this action.

Regulated categories and entities are identified in the following table.

| Category | Examples of potentially regulated entities | NAICS[a] |
|---|---|---|
| State, local, & tribal Governments | States, local and tribal governments that analyze water samples on behalf of PWSs required to conduct such analysis; States, local and tribal governments that directly operate community and non-transient non-community water systems required to monitor. | 924110 |
| Industry | Private operators of community and non-transient non-community water systems required to monitor. | 221310 |
| Municipalities | Municipal operators of community and non-transient non-community water systems required to monitor. | 924110 |

[a] NAICS = North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated by this action, you should carefully examine the definition of PWS in § 141.2 of title 40 of the Code of Federal Regulations, and applicability criteria in § 141.40(a)(1) and (2) of this final action. If you have questions regarding the applicability of this action to a particular entity, consult the person

listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

**Abbreviations and Acronyms**

HBB 2,2',4,4',5,5'-hexabromobiphenyl
µg/L Microgram per liter
ASDWA Association of State Drinking Water Administrators
BDE–47 2,2',4,4'-tetrabromodiphenyl ether
BDE–99 2,2',4,4',5-pentabromodiphenyl ether
BDE–100 2,2',4,4',6-pentabromodiphenyl ether
BDE–153 2,2',4,4',5,5'-hexabromodiphenyl ether
CCL Contaminant Candidate List
CFR Code of Federal Regulations
DBP Disinfection Byproduct
DBPR Stage 1 or Stage 2 Disinfectants and Disinfection Byproducts Rule
DSMRT Distribution system maximum residence time
DQO Data quality objective
DWSRF Drinking Water State Revolving Fund
EPA United States Environmental Protection Agency
EPTDS Entry point to the distribution system
ESA Ethane sulfonic acid
FR Federal Register
GC Gas chromatography
GWUDI Ground water under the direct influence of surface water
HAA5 Haloacetic acid 5 (5 HAAs currently regulated)
HPLC High performance liquid chromatography
$HR_{PIR}$ Half range prediction interval of results
ICR Information collection request
IDC Initial demonstration of capability
IDSE Initial distribution system evaluation
IHS Indian Health Service
LC Liquid chromatography
LCMRL Lowest concentration minimum reporting level
LFSM Laboratory fortified sample matrix
LFSMD Laboratory fortified sample matrix duplicate
MCL Maximum contaminant level
MRL Minimum reporting level
MS Mass spectrometry
NAICS National American Industry Classification System
NCOD National Drinking Water Contaminant Occurrence Database
NDBA N-nitroso-di-n-butylamine
NDEA N-nitrosodiethylamine
NDMA N-nitrosodimethylamine
NDPA N-nitroso-di-n-propylamine
NMEA N-nitrosomethylethylamine
NPDWR National Primary Drinking Water Regulation
NPYR N-nitrosopyrrolidine
NTTAA National Technology Transfer and Advancement Act
OA Oxanilic acid
OMB Office of Management and Budget
PA Partnership agreement
PIR Prediction interval of results
PT Proficiency testing
PWS Public water system
PWSID Public water system identification
QA Quality assurance
QC Quality control
RDX Hexahydro-1,3,5-trinitro-1,3,5-triazine
RFA Regulatory Flexibility Act
RSD Relative standard deviation
SBA Small Business Administration
SDWA Safe Drinking Water Act
SDWARS Safe Drinking Water Accession and Review System
SDWIS Safe Drinking Water Information System
SPE Solid phase extraction
TNT 2,4,6-trinitrotoluene
TTHM Total trihalomethanes
UCMR Unregulated Contaminant Monitoring Regulation
UMRA Unfunded Mandates Reform Act of 1995
USEPA United States Environmental Protection Agency

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**List of Exhibits**

## II. Statutory Authority and Background

*A. What Is the Statutory Authority for UCMR?*

Section 1445(a)(2) of the Safe Drinking Water Act (SDWA), as amended in 1996, requires that once every five years, beginning in August 1999, the United States Environmental Protection Agency (EPA) shall issue a list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs), and that EPA enter the monitoring data into the National Drinking Water Contaminant Occurrence Database (NCOD). EPA's UCMR program must ensure that only a nationally representative sample of PWSs serving 10,000 or fewer people will be required to monitor; however, there are no such restrictions on the number of systems serving more than 10,000 people. EPA must vary the frequency and schedule for monitoring based on the number of people a system serves, the source of supply, and the contaminants likely to be found.

*B. How Does EPA Meet These Statutory Requirements?*

To fulfill the initial SDWA requirements, EPA published ''Revisions to the Unregulated Contaminant Monitoring Regulation for Public Water Systems; Final Rule,'' on September 17, 1999 (64 FR 50556, (USEPA, 1999)). Several supplemental rules were published to establish analytical methods and to provide clarifications and refinements to the initial rule: 65 FR 11372, March 2, 2000 (USEPA, 2000); 66 FR 2273, January 11, 2001 (USEPA, 2001a); and 67 FR 65888, October 29, 2002 (USEPA, 2002b). SDWA, as amended in 1996, requires that at least once every five years EPA identify a list of no more than 30 unregulated contaminants to be monitored. This final action fulfills this statutory obligation, identifying 25 priority contaminants for monitoring using five analytical methods. EPA has developed a contaminant list (Exhibit 2, in Section III.C.1) and sampling design for UCMR 2 (2007–2011) with input from both stakeholders and an EPA working group. This list is the same as was presented in the proposed rule, with one exception: perchlorate has been removed from the UCMR 2 monitoring requirements (see Section III.C. 4 for further discussion).

## III. Summary of This Rule

*A. What Are the Major Changes Between the Proposed and Final Rule?*

EPA published ''Revisions to the Unregulated Contaminant Monitoring Regulation for Public Water Systems; Proposed Rule,'' on August 22, 2005 (70 FR 49094, (USEPA, 2005a)). EPA received comments from 36 public commenters.

In response to comments received and further consideration, EPA removed perchlorate from the list of contaminants to be monitored for under UCMR 2, and revised or clarified requirements pertaining to system applicability criteria, reporting, monitoring, and quality control. In addition, to accommodate PWS preparation for rule implementation and to provide additional assurance of sufficient laboratory capacity, this rule contains revised language that changes the start of monitoring from July 2007 to January 2008, such that the effective monitoring period is now January 2008 through December 2010. Exhibit 1 provides a summary of these changes, and a listing of the corresponding preamble section, which provides a more detailed discussion of the revisions and related public comments. Sections III.B–K summarize the different aspects of this rule and the associated major comments received in response to the August 2005 proposed rule and their impact, if any, on this rule.

This summary focuses on the changes between the proposed and final rule, and requirements with deadlines that are triggered by the publication date of this final rule. EPA has compiled a document containing all public comments and EPA's responses entitled ''UCMR 2 Categorized Public Comments,'' which can be obtained by going to *http://www.regulations.gov*, and searching for Docket ID No. OW–2004–0001 under the advanced search tab.

EXHIBIT 1.—CHANGES TO UCMR 2 BETWEEN PROPOSED AND FINAL RULE

| Rule section | | Description of change | Corresponding preamble section |
|---|---|---|---|
| Number | Title/description | | |
| 141.35(a) | General applicability | Defines ''finished water'' to clarify the definition of ''population served''. | III.B. |
| 141.35(c)(3)(i) | Documenting ground water representative sampling locations. | Clarifies that approved representative well plans from previous UCMR cycles can be submitted to identify representative entry point(s). | III.J.1.c. |
| 141.35(c)(5) | PWS notification of EPA if sampling schedule cannot be met. | Provides exception to notification requirement for PWS with ground water sampling location that can collect second sample sets within 5–7 months of the first sample set. | III.J.1.d. |
| 141.35(e) | Data Elements | Revises Table 1 of § 141.35 to:<br>1. Clarify the definition of ''Water Source Type'' for a sampling point.<br>2. Change the name of ''Sampling Point Type Identification Code'' to ''Sampling Point Type Code'' and distinguish this data element from ''Sampling Point Identification Code''.<br>3. Clarify the definition for ''Disinfectant Residual Type''. | III.J.2. |
| 141.40(a)(3) | Analytes to be monitored and monitoring period. | Revises Table 1 of 141.40 to:<br>1. Change monitoring begin date to January 2008, and Screening Survey monitoring period to coincide with Assessment Monitoring.<br>2. Delete perchlorate from table and associated footnotes.<br>3. Revise minimum reporting levels to one significant figure. | III.G.<br>III.C.4.<br>III.F.2. |

EXHIBIT 1.—CHANGES TO UCMR 2 BETWEEN PROPOSED AND FINAL RULE—Continued

| Rule section | | Description of change | Corresponding preamble section |
|---|---|---|---|
| Number | Title/description | | |
| 141.40(a)(4)(i)(A) | Monitoring schedules | Clarifies that EPA or the State will determine PWS monitoring schedules. | III.G. and III.J.1.d. |
| 141.40(a)(4)(i)(B) | Frequency | 1. Requires PWSs with ground water sampling locations that cannot collect their second samples within 5–7 months of the first samples to contact EPA.<br>2. Changes Table 2 to indicate that ground water sample events must occur 5–7 months apart. | III.G. |
| 141.40(a)(4)(i)(D) | Sampling Instructions | 1. Clarifies that acetanilide parent and degradates must be sampled at the same time and location.<br>2. Deletes reference to collection methods for perchlorate samples | III.C.2; III.F.1; and III.C.4. |
| 141.40(a)(4)(i)(G) | Laboratory errors or sampling deviations. | Changes resampling deadline from within 14 days to within 30 days. | III. I. |
| 141.40(a)(5)(i) | Sample collection preservation | Deletes reference to preservation methods for perchlorate samples. | III.C.4. |
| 141.40(a)(5)(iii)(B)(2) | Quality control requirements | Deletes additional quality control requirements for perchlorate methods. | III.C.4. |
| 141.40(a)(5)(iv) | Laboratory accuracy and precision. | Changes method requirement to fortify the matrix at the minimum reporting level (MRL) concentration to within ;+/−50% vs. +/−20%. | III.F.4. |
| 141.40(a)(5)(v) | Detection confirmation for perchlorate. | Deletes requirements in this section; and renumbers subsequent paragraphs accordingly. | III.C.4 and III.F.1. |

*B. Which Water Systems Must Monitor?*

1. This Rule

This rule requires that Assessment Monitoring be conducted by all large community and non-transient, non-community water systems serving more than 10,000 people, and a nationally representative sample of 800 small water systems serving 10,000 or fewer people. Transient non-community water systems and those systems that purchase all of their finished water from another system are excluded from the requirements of UCMR 2. Assessment Monitoring is the largest in scope of the three UCMR 2 monitoring components (or tiers). Under Assessment Monitoring, ''List 1'' contaminants, for which standard analytical methods are available, are monitored to assess national occurrence in drinking water. These are the priority contaminants for which analytical method technologies are well established.

The second tier of UCMR 2 is referred to as ''List 2'' or Screening Survey monitoring. List 2 contaminants are those for which analytical methods have been recently developed, and for which the technologies are not widely used; laboratory capacity, therefore, may be insufficient to conduct the larger scale Assessment Monitoring. The Screening Survey will be conducted by approximately 400 PWSs serving more than 100,000 people (all systems in this largest size category), by a randomly selected sample of 320 PWSs serving between 10,001 and 100,000 people, and by 480 small PWSs.

Pre-Screen Testing, the third tier of UCMR monitoring that is designed for priority ''List 3'' contaminants, whose methods are very new or specialized, is not required in this action, although EPA is retaining the regulatory language that supports Pre-Screen Testing authority as part of the three-tiered UCMR framework. If EPA ultimately decides to include Pre-Screen Testing as part of this or a future UCMR, EPA will initiate a rulemaking action to propose List 3 contaminants (and their associated analytical methods) and to solicit public comments.

This rule also defines ''population served'' as ''the number of people served directly by the PWS'' plus those served ''by any consecutive system receiving all or part of its finished water from that PWS.'' To help clarify the definition of population served, the final regulation will also include the definition of ''finished water'' that was recently finalized as part of the ''Stage 2 Disinfectants and Disinfection Byproducts Rule'' (71 FR 388, January 4, 2006 (USEPA, 2006a)) as follows: ''Finished water is water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except the treatment necessary to maintain water quality in the distribution system (*e.g.*, booster disinfection, addition of corrosion control chemicals).'' This final regulation also specifies the PWS system's water source and population served, as of June 30, 2005, as the basis for establishing a defined list of PWSs that are subject to the rule requirements.

2. Summary of Major Comments

Comments included a recommendation for EPA to define the term ''finished water'' in EPA's definition of ''population served,'' and support for the designation of the June 30, 2005, applicability date because it would eliminate some of the confusion that occurred under UCMR 1 and avoid extra effort to keep monitoring plans accurate and current. In response to these comments, this final regulation contains the definition of ''finished water'' that was recently finalized as part of the Stage 2 Disinfection Byproducts Rule and retains the proposed applicability date. EPA agrees that the specific applicability date of June 30, 2005, will help to streamline the implementation process.

Other comments included recommendations to publish the list of systems that are subject to UCMR 2. Such a list, including preliminary schedules, is posted on the UCMR Web page: *http://www.epa.gov/safewater/ucmr/ucmr2.*

*C. What Are the UCMR 2 Priority Contaminants and Associated Methods?*

1. List Compilation

a. This Rule

This rule specifies 25 contaminants for monitoring, along with five EPA

Methods for analysis as listed in Exhibit 2. EPA began with a list of over 200 contaminants, compiled from a variety of different sources, including: UCMR 1 reserved contaminants; Candidate Contaminant List 1 (CCL 1) ''deferred pesticides''; CCL 1 suspected endocrine disruptors; and other emerging contaminants. The CCL is a list of contaminants that are not subject to any proposed or promulgated National Primary Drinking Water Regulation (NPDWR), are known or anticipated to occur at PWSs, and may require regulation under SDWA. The first CCL, published in March 1998 (referred to as ''CCL 1''), identified 60 contaminants or contaminant groups (63 FR 10274, March 2, 1998 (USEPA, 1998b)) that were divided into categories to represent research and data needs for each of the following: (1) Regulatory determination priorities; (2) health effects research priorities; (3) treatment research priorities; (4) analytical methods research priorities; and (5) occurrence priorities. Through a multi-stepped review and prioritization process (with relative health effects the top priority), the UCMR analyte list was narrowed and prioritized, as described in the August 2005 proposed rule, and 26 contaminants were identified. However, based on public comment and further consideration, EPA has removed the requirement for monitoring perchlorate under the UCMR 2 program (see Section III.C.4).

EXHIBIT 2.—ANALYTICAL METHODS APPROVED FOR UCMR 2 MONITORING

| Analytical method [1] | Contaminant | UCMR 2 ''List'' |
|---|---|---|
| EPA Method 527 (SPE/GC/MS) | 2,2′,4,4′-tetrabromodiphenyl ether (BDE–47) | List 1, Assessment Monitoring: 7 contaminants. |
| | 2,2′,4,4′,5-pentabromodiphenyl ether (BDE–99). | |
| | 2,2′,4,4′,5,5′-hexabromobiphenyl (HBB). | |
| | 2,2′,4,4′,5,5′-hexabromodiphenyl ether (BDE–153). | |
| | 2,2′,4,4′,6-pentabromodiphenyl ether (BDE–100). | |
| | Dimethoate. | |
| | Terbufos sulfone. | |
| EPA Method 529 (SPE/GC/MS) | 1,3-dinitrobenzene | List 1, Assessment Monitoring: 3 contaminants. |
| | 2,4,6-trinitrotoluene (TNT). | |
| | Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX). | |
| EPA Method 521 (SPE/GC/CI/MS/MS) | N-nitrosodiethylamine (NDEA) | List 2, Screening Survey: 6 contaminants. |
| | N-nitrosodimethylamine (NDMA). | |
| | N-nitroso-di-n-butylamine (NDBA). | |
| | N-nitroso-di-n-propylamine (NDPA). | |
| | N-nitrosomethylethylamine (NMEA). | |
| | N-nitrosopyrrolidine (NPYR). | |
| EPA Method 535 (SPE/LC/MS/MS) | Acetochlor ethane sulfonic acid (ESA) | List 2, Screening Survey: 6 contaminants. |
| | Acetochlor oxanilic acid (OA). | |
| | Alachlor ESA. | |
| | Alachlor OA. | |
| | Metolachlor ESA. | |
| | Metolachlor OA. | |
| EPA Method 525.2 (SPE/GC/MS) | Acetochlor | List 2, Screening Survey: 3 contaminants. |
| | Alachlor. | |
| | Metolachlor. | |
| Total of 25 UCMR 2 contaminants. | | |

[1] EPA Method 521: Determination of Nitrosamines in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography with Large Volume Injection and Chemical Ionization Tandem Mass Spectrometry (MS/MS) (USEPA, 2004a).
EPA Method 525.2: Determination of Organic Compounds in Drinking Water by Liquid-Solid Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (USEPA, 1995).
EPA Method 527: Determination of Selected Pesticides and Flame Retardants in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS) (USEPA, 2004b).
EPA Method 529: Determination of Explosives and Related Compounds in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS) (USEPA, 2002a).
EPA Method 535, Revision 1.1: Measurement of Chloroacetanilide and Other Acetamide Herbicide Degradates in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) (USEPA, 2004c).

b. Summary of Major Comments

Some commenters supported the contaminant selection process in general, but disagreed with EPA's criterion that pesticides must be currently registered to be considered for UCMR 2 because pesticides can persist even after they are no longer in use. EPA agrees that the issue of pesticides and their degradates is an important one and will consider, in future contaminant selection processes, the commenters' concern about the requirement that pesticides be registered. EPA did not receive comments on its health effects prioritization process.

Comments were received recommending that EPA substantially increase the number of UCMR 2 contaminants because of the large number of contaminants that are manufactured and sold in the United States. Section 1445(a)(2)(B)(i) of SDWA specifically limits the number of unregulated contaminants to 30 in each UCMR five-year cycle. The UCMR 2 list represents what EPA believes to be the highest priority drinking water contaminants for which monitoring information is needed and obtainable.

Further comments indicated that EPA needs to clarify the process for prioritization of both UCMR and CCL contaminants. In general, concern was expressed that EPA did not sufficiently explain the status of CCL research

priorities, especially with respect to the UCMR contaminant selection process.

In the August 2005 preamble to the proposed rule, as well as in other past **Federal Register** notifications, EPA has explained in detail the connections between the CCL and the UCMR programs (*http://www.epa.gov/safewater/ucmr*). The preamble to the proposed UCMR 2 regulation presented the logic behind the consideration of potential analytes for the UCMR. Section III ''Requirements of the Unregulated Contaminant Monitoring Program'' detailed all aspects of how EPA selected the contaminants proposed in this regulation with subsections describing what priority contaminants were selected for UCMR 2; a compilation of the initial list of potential UCMR 2 candidates; how EPA established priorities for UCMR 2; EPA's health effects prioritization approach; and the specific information and considerations that went into EPA's decisions on each analyte selected.

EPA has also been engaged in a multi-year process designed to create an improved CCL process. This process began after the first CCL was published in 1998 and EPA expects the next CCL (CCL 3) to reflect substantial progress in implementing this new process. Because the new CCL process was underway but not yet completed in 2005, CCL 2 carried over the previous list and did not reflect the changes EPA is expecting to make in identifying contaminants for possible regulation. EPA expects that CCL 3 will reflect a more robust, transparent, and systematic process to identify priority contaminants in drinking water that will form the primary basis for future UCMR lists.

Before EPA can list a chemical compound or microbiological parameter on UCMR, adequate analytical methods must be available. For some of the chemicals (*i.e.*, organotins, triazines and algal toxins) and for all the microbiological parameters listed on the CCL, adequate analytical methods have not yet been developed. EPA is actively engaged in analytical method development research for these parameters both in-house and through its various contracts and grant mechanisms. EPA regularly publishes journal articles and other reports on the progress of all of these research activities that are available for the public to review.

2. Acetanilide Pesticides, Degradation Products, and Related Methods

a. This Rule

Under this rule, the three highest-use parent acetanilide compounds, acetochlor, alachlor, and metolachlor, and their ESA and OA degradation products are specified as List 2, Screening Survey contaminants. The final rule also specifies EPA Method 525.2 for analysis of the parent compounds and EPA Method 535 for analysis of the acetanilide degradates. There were no changes between the proposed and final rule language regarding these priority contaminants and their associated methods. However, this rule contains revised language to clarify that acetanilide parent and degradation product sampling must be conducted at the same time and same location.

b. Summary of Major Comments

Some commenters did not agree with EPA's proposal to monitor the three parent acetanilide compounds because some water systems include these as part of their regulated volatile organic compound analyses using EPA Method 525.2. Another recommendation was that no special certification for Method 525.2 be required, since many laboratories are already approved to conduct this analysis for regulated contaminants. EPA is requiring monitoring of these three parent pesticides because it is essential that the acetanilide parent and the degradation products analysis be conducted using samples collected in the same location and at the same time to provide data on their relative concentrations (*i.e.*, to establish relationships, if any, between the two). In addition, because UCMR requires only a sample of PWSs to conduct monitoring, and the resulting occurrence data is used to support EPA decisions about whether to regulate a contaminant to protect public health, the quality of data collected, at minimum reporting levels that are considerably lower than those used for compliance monitoring, is very important. Therefore, the analyses must meet even more stringent quality control procedures than those used for other national drinking water analyses, and special approval of laboratories is warranted for both EPA Method 535 and 525.2. These analyses are required as part of the Screening Survey, and therefore analytical costs to PWSs are limited to approximately 720 large systems (EPA is paying for the analytical costs of small system monitoring).

EPA agreed with recommendations in public comment to require monitoring for acetanilide parents and their degradation products at the same location and time to provide data on their relative concentrations. The final regulation contains revised language to include this requirement.

Finally, concern was expressed in public comments that EPA may develop a single maximum contaminant level (MCL) for the parents plus their degradates; commenters specifically pointed out that different toxicity endpoints may exist for parents and degradates, and that a single MCL could conflict with some state standards. EPA has made no decision regarding whether or how to regulate these compounds. Such decisions are beyond the scope of this rule.

3. Explosives and Related Methods

a. This Rule

Under this rule, EPA is requiring that three explosives: Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX), 1,3-dinitrobenzene, and, 2,4,6-trinitrotoluene (TNT) be monitored as part of List 1, Assessment Monitoring. The final rule also specifies EPA Method 529 for analysis of these compounds. There were no changes between the proposed and final rule language regarding these priority contaminants and their associated method.

b. Summary of Major Comments

Some commenters thought that other contaminants may be more widespread and should take priority over explosives for testing. However, if monitoring for explosives was required, the commenters recommended that it be limited to areas near munitions facilities. The explosives have not yet undergone a sufficiently widespread occurrence study for EPA to be confident that these contaminants are only a concern near munitions facilities. The decision to monitor for these contaminants, versus others considered, was driven by their potential health effects through the process described previously.

4. Perchlorate and Related Methods

a. This Rule

Under this rule, EPA has removed the requirement for monitoring perchlorate under the UCMR 2 program. All references to perchlorate, its associated methods, and specific quality control requirements have been removed from the final rule. As a result, the requirements of § 141.40(a)(5)(v), Detection Confirmation, were deleted, and all subsequent sections have been renumbered accordingly. The other rule sections that were impacted by this decision (with reference to perchlorate or relevant analytical methods being removed) are: § 141.40(a)(3)—Analytes

to be monitored; § 141.40(a)(4)(i)(D)—Sampling Instructions; § 141.40(a)(5)(i)—Sample collection/preservation; and § 141.40(a)(5)(iii)(B)(2)—Quality control requirements for validation of laboratory performance at or below the MRL.

b. Summary of Major Comments

Approximately 75 percent of commenters submitted comments on the topic of perchlorate. The majority of the commenters did not support an additional round of perchlorate monitoring, the most common reason being the added cost of monitoring, without the perceived potential for gaining sufficient, new information.

Monitoring for perchlorate was conducted during UCMR 1 in over 3,800 PWSs, with a minimum reporting level of 4.0 micrograms per liter (µg/L). The data collected during this survey represents a statistically valid set of high quality data that will inform EPA on the occurrence and potential exposure to perchlorate from public drinking water supplies. EPA will continue to evaluate these exposure data along with other available information (*e.g.*, health effects) as the Agency makes its regulatory determination. Until that evaluation is complete, EPA agrees with the commenters that it is not clear that the Agency needs additional information on the occurrence of perchlorate in drinking water. As a result, imposing additional perchlorate monitoring costs on water systems is not warranted at this time. Therefore, EPA has removed the requirement for monitoring perchlorate under the UCMR 2 program. If EPA later decides that additional perchlorate monitoring is warranted, the Agency will undertake an appropriate rulemaking action.

5. Nitrosamines/NDMA and Related Methods

a. This Rule

This rule requires systems to monitor for six nitrosamines as part of the List 2, Screening Survey. The final rule also specifies EPA Method 521 for analysis of these compounds. There were no changes between the proposed and final rule language regarding these priority contaminants and their associated method.

b. Summary of Major Comments

Some commenters thought that nitrosamine sampling would be more appropriately conducted as part of the Stage 1 and Stage 2 DBPRs. EPA disagrees with these comments for several reasons. While in fact, to date, the scientific literature identifies only N-nitroso-dimethylamine (NDMA) and N-nitrosodiethylamine (NDEA) as disinfection byproducts, the Screening Survey for nitrosamines is designed to aid in understanding the proportion of nitrosamines, particularly NDMA, that results from source water contamination versus that which results from disinfection. Also, the nitrosamines in this regulation are all compounds projected to have significant adverse health effects. All of these compounds are probable human carcinogens with $10^{-6}$ cancer risk levels that are in the low nanogram per liter range. These compounds would be high priorities for monitoring whether their occurrence is the result of source water contamination or disinfection.

Several commenters disagreed with the use of Method 521, mostly because of questions on the scope and extent of interlaboratory testing and validation. Commenters thought that methods that are already being used by laboratories should be allowed under UCMR. Several commenters gave specific suggestions as to which methods were commonly in use that could be used for UCMR monitoring.

The methods developed by EPA, for this and other chemical methods needs for the analysis of drinking water, were subjected to a rigorous process that included a series of testing, validation studies and peer review, which went beyond the proficiency testing or round robin study of the alternative draft unpublished methods suggested by the commenters. Each individual procedure of every method proposed by EPA was subjected to rigorous testing for a minimum of two years using scientifically sound procedures. EPA's review of the suggested alternative draft methods also identified technical deficiencies that preclude their approval for monitoring under UCMR 2.

6. Flame Retardants, Other Priority Contaminants, and Related Methods

a. This Rule

Under this rule, EPA is requiring monitoring for five flame retardants, as well as terbufos sulfone and dimethoate, as part of List 1, Assessment Monitoring. The final rule also specifies EPA Method 527 for analysis of these compounds. There were no changes between the proposed and final rule language regarding these priority contaminants and their associated method.

b. Summary of Major Comments

Concern was raised through public comment that only one citation was provided in the proposed rule preamble supporting the rationale for choosing this group of contaminants. Public comment suggestions were made that there may be other groups of contaminants, such as endocrine disruptors, that would be a better choice than the flame retardants. EPA notes that both Darnerud, 2001 and Hites, 2004 were cited in the preamble of the proposed regulation as sources of the statements concerning flame retardants. There are however, many additional articles in the scientific literature which could have also been cited. In an article entitled ''An overview of brominated flame retardants in the environment'' by Cynthia A. deWit, which was published in *Chemosphere*, 46 (2002), the author cites over 180 published articles on flame retardants. In addition, three published articles; T.E. Stoker, ''Toxicology and Applied Pharmacology'', 207 (2005); T.A. McDonald, ''Chemosphere'', 46 (2002); and I.A.T.M. Meerts, ''Environmental Health Perspectives'', 109 Vol. 4 (2001) concern tests that have been performed which support that the flame retardants specified for monitoring in UCMR 2 are endocrine disruptors.

7. Triazines Chlorodegradates and Parent Compounds

a. This Rule

In the proposed rule preamble, EPA solicited public comment regarding three triazine chlorodegradates and three of their parent compounds because the Agency is conducting a cumulative risk assessment for the chlorodegradates as a group with atrazine, simazine, and propazine. While atrazine and simazine are already regulated under NPDWRs, EPA was considering UCMR monitoring for these parent compounds concurrent with the collection of UCMR data for their degradation products to determine the degree of correlation between the occurrence of the parents and their degrades. Though public comment was requested, triazines were not officially proposed for inclusion under UCMR 2 monitoring. There were no changes between the proposed and final rule language, and thus, the triazines are not part of the UCMR 2 monitoring requirements.

b. Summary of Major Comments

Commenter opinion varied regarding inclusion of triazines in UCMR 2 monitoring. For those that supported their inclusion, the primary reason was health effects. One of these commenters also recommended that cyanizine be included in this contaminant group. Of those who opposed including this group, the following reasons were given:

concern about laboratory capacity if two similar analyses using liquid chromatography/tandem mass spectrometry (LC/MS/MS) were required to be conducted in the same time frame; concern regarding the status of method development; the belief that the manufacturer should pay for occurrence testing; and the fact that information on the parent compounds is already available.

Although validation of a new triazine method has been completed, EPA agrees that requiring the use of two LC/MS/MS methods in the same UCMR cycle could present a laboratory capacity problem. Due to these concerns, EPA has concluded that triazine monitoring should be postponed until a future cycle of the UCMR.

8. Other Compounds That Were Considered

a. This Rule

In identifying the target contaminants for this rule, EPA began with a list of over 200 contaminants, compiled from a variety of different sources, including: UCMR 1 reserved contaminants; CCL 1 deferred pesticides; CCL 1 suspected endocrine disruptors; and other emerging contaminants. Through a multi-stepped review and prioritization process, the list was narrowed and prioritized. EPA's final prioritization was based on the available relative health effects information for each compound.

b. Summary of Major Comments

EPA received comment encouraging the Agency to include some endocrine disruptors on the UCMR 2 contaminant list. The initial list that EPA compiled included several contaminants that were identified as suspected endocrine disruptors during CCL 1 development, as well as others that are widely suspected to be endocrine disruptors. EPA used a multi-stepped review and prioritization process to select 25 contaminants for monitoring from the broader pool of 200 contaminants. Several different health effects criteria were used to prioritize contaminants in addition to endocrine disruption, such as cancer classification and toxicity. Although some contaminants that are considered endocrine disruptors are not part of the final monitoring list, all five flame retardants that are part of UCMR 2 are suspected endocrine disruptors. In addition, EPA will consider these other contaminants for monitoring in future rounds of UCMR monitoring.

*D. How Are Laboratories Approved for UCMR 2 Monitoring?*

1. This Rule

The UCMR 2 laboratory approval process is designed to assess whether laboratories meet the required equipment, laboratory performance, and data reporting criteria. Laboratories wishing to participate in UCMR 2 must contact EPA to be considered. This rule requires laboratories to complete and submit their registration to EPA by April 4, 2007 (*i.e.*, within 90 days of final rule publication). To be approved to conduct UCMR testing, this rule requires that the laboratory be certified under § 141.28 for one or more compliance analyses; demonstrate, for each analytical method it plans to use for UCMR testing, that it can meet the Initial Demonstration of Capability (IDC) requirements and successfully participate in the UCMR Proficiency Testing (PT) Program; and has the capability to post monitoring data to EPA's electronic reporting system. Laboratories are encouraged to apply for UCMR 2 approval as early as possible. The steps for the laboratory approval process are as follows:

a. Request To Participate

The laboratory must contact EPA requesting to participate in the UCMR 2 laboratory approval process. Laboratories must send this request to: UCMR 2 Laboratory Approval Coordinator, USEPA, Technical Support Center, 26 West Martin Luther King Drive (MS 140), Cincinnati, OH 45268; or e-mail at: *UCMR_Sampling_Coordinator@epa.gov*. EPA began accepting participation requests for the methods associated with UCMR 2 (including List 1, Assessment Monitoring, and List 2, Screening Survey) following publication of the proposed rule on August 22, 2005. The laboratory must complete and submit the necessary registration by April 4, 2007.

b. Registration

EPA will send each laboratory that requests a registration package a list of information that EPA will need to process that application. This registration information will provide EPA with the basic information about the candidate laboratory including: Laboratory name; mailing address; shipping address; contact name; phone number; fax number; e-mail address; and UCMR 2 methods for which the laboratory is seeking approval. Thus, the purpose of the registration step is to ensure that EPA has all of the necessary contact information and that each laboratory receives a customized application package, which will include materials and instructions for the methods that it plans to use.

c. Application Package

When EPA receives the registration information, an application package will be sent to the laboratory for completion. This application package will be customized to address only those EPA methods selected in the laboratory's registration. EPA may provide analytical standards to be used when conducting monitoring; however, laboratories will be required to procure their own standards, where commercially available, to be used to complete the application process. Information requested in the application will include:

- IDC data, including precision, accuracy, and MRL studies;
- Information regarding analytical equipment;
- Proof of current drinking water laboratory certification; and
- Example chromatograms for each method under review.

The laboratory must also confirm that it will post UCMR 2 monitoring results (on behalf of its PWS clients) to EPA's UCMR electronic data reporting system.

d. EPA Review of Application Package

EPA will review the application package and, if necessary, request follow-up information. Satisfactory completion of this portion of the process will allow the laboratory to participate in the UCMR 2 PT program.

e. Proficiency Testing

A PT sample is a synthetic sample containing a concentration of an analyte that is known to EPA, but unknown to the laboratory being tested. To complete the initial laboratory approval process, a laboratory must successfully analyze UCMR 2 PT sample(s) for each method for which the laboratory is seeking approval. A laboratory must pass only one PT for each of the UCMR 2 methods. Laboratories applying for UCMR 2 approval, and laboratories conducting UCMR 2 analyses, may be subject to on-site laboratory audits. No PT studies will be conducted after the start of monitoring. Laboratories will not be approved if they did not successfully complete a PT study.

f. Written EPA Approval

After the first five steps (a–e, above) have been successfully completed, EPA will send the laboratory a letter listing the methods for which approval is granted. These letters will also include a reminder that the laboratory may be subject to on-site audits. A list of

laboratories approved for UCMR 2 will be posted to EPA's UCMR Web site: *http://www.epa.gov/safewater/ucmr/ucmr2/labs.html.*

2. Summary of Major Comments

Several comments recommended that EPA continue to oversee the laboratory approval process and offer PTs throughout the UCMR 2 period to ensure that approved laboratories are maintaining data quality. EPA notes that the laboratory approval process is meant to establish a list of laboratories that have demonstrated their ability to perform the Quality Assurance/Quality Control (QA/QC) requirements for UCMR 2 methods. EPA and its supporting contractor will be assisting candidate laboratories to achieve the required proficiency during the laboratory approval process. Once the approvals are completed, EPA does not intend to invest the resources to maintain an ongoing laboratory monitoring program. However, EPA will continue to provide technical assistance to laboratories that request it. In addition, EPA will conduct a limited number of on-site laboratory audits. PWSs also have a role to play in data quality. In selecting a laboratory for conducting UCMR 2 analyses, the PWS should consider the laboratory's commitment to data quality. As a partner in the commitment to quality data, the PWS should request and review the QC data associated with their UCMR 2 occurrence samples.

Public comments also expressed concern that there may not be adequate time for laboratories to receive certification, resulting in reduced laboratory capacity at the onset of monitoring. Recommendations included: Adjusting monitoring schedules in instances of inadequate laboratory capacity; conducting the laboratory approval process prior to rule promulgation; and extending the deadline for laboratories to report monitoring results. EPA began offering the first round of preliminary laboratory PTs in mid-2006. Additional rounds were conducted before and are scheduled to be conducted after promulgation of the final regulation. EPA is confident that sufficient laboratory capacity will be available, but will also closely evaluate the results of these preliminary PTs.

In addition, this rule contains language that revises the Screening Survey and Assessment Monitoring time frame to January 2008 through December 2010. This revision extends the start date of UCMR 2 monitoring by 6 months from the proposed July 2007 start date and allows the Screening Survey to be conducted across three years as opposed to the two-year time frame that was proposed. This will allow PWSs more time for UCMR 2 planning and budgeting and provide additional assurance of sufficient laboratory capacity.

*E. What Is A System's Responsibility Regarding the Use of Laboratories?*

1. This Rule

Under this rule, systems selected to participate in monitoring will be required to use laboratories that are approved by EPA for UCMR 2 monitoring (see Section III.D, above). Large systems must ensure that the laboratories conducting their analyses meet UCMR 2 QC requirements and post the data in EPA's electronic data reporting system within 120 days of the sample collection date.

2. Summary of Major Comments

Several comments were received regarding PWSs' responsibility for laboratory compliance with QC and reporting requirements, indicating that EPA should be responsible for ensuring laboratory compliance, as a condition of certification.

PWSs have always been responsible for the quality of the results produced by the laboratory they employ, whether that monitoring was conducted in support of UCMR 1 or compliance monitoring under SDWA. Large PWSs (serving greater than 10,000 people) must ensure that their laboratories have received appropriate EPA approvals to conduct UCMR 2 methods and must ensure that laboratories follow the specific UCMR 2 QC requirements. EPA recommends that laboratory requirements be addressed in the contractual language between the PWS and laboratory. EPA's UCMR Web site at: *http://www.epa.gov/safewater/ucmr/ucmr2* provides informational materials that PWSs can use to help them evaluate their data. These materials include: a laboratory approval manual, the analytical methods (each of which contain a table summarizing QC requirements of that method), and a general reference guide designed to help PWSs develop laboratory contracts.

*F. What Specific Quality Control Requirements Must Be Followed?*

1. Method Development Approach and Method Defined Quality Control

a. This Rule

Under this rule, UCMR 2 analyses will be conducted using five EPA methods. This final rule revises several aspects of the methods QC requirements compared to those that were established under UCMR 1, including: revising the definition of and procedures for MRL detection limits (see Section III.F.2. for more detail); and no longer requiring QC samples because standards are generally not available. The final rule language also contains other revisions to QC requirements that were necessary because of the removal of perchlorate from the final UCMR 2 monitoring list. See Section III.C.4 for a listing of those changes.

b. Summary of Major Comments

A few commenters were concerned that the methods have not been properly validated, potentially increasing costs if repeat sampling is needed. These commenters also believe that laboratory capacity would be insufficient to conduct all required monitoring.

As noted elsewhere, EPA is confident that the analytical method validation procedures that it has followed provide the appropriate evaluation of analytical methods and that the design of the Assessment Monitoring and Screening Surveys ensures that adequate laboratory capacity will be available. Moreover, as noted elsewhere, the final rule extends the time frame for Screening Survey monitoring from two years (as originally proposed) to three years, coinciding with Assessment Monitoring. This extended timeframe will further enable approved laboratories to handle the analyses associated with UCMR 2 monitoring.

EPA received comments disagreeing with its proposal to no longer require QC samples, arguing that this will diminish the quality of the analyses, and that companies that manufacture QC standards will have them available in 2006. A quality control sample, in this context, is a primary dilution standard of methods analytes that is obtained from a source external to the laboratory and different from the source of calibration standards. Although EPA agrees that the periodic measurement of a QC sample is an important element of standard laboratory quality control, it is not feasible to require the use of QC samples that do not currently exist and may or may not exist in the future. In addition, all laboratories will be required to pass an EPA performance study, which will help to assure the quality of the calibration standards being used. However, EPA is strongly encouraging all UCMR laboratories to analyze an independently prepared quantitative standard on a quarterly basis. If commercially prepared QC standards are available, they should be used. If not, laboratories should have a second analyst prepare a separate set of quantitative standards to serve as

independent quality control checks of the calibration standards being used by the laboratory. EPA will continue to require that UCMR laboratories analyze a variety of other samples (i.e., duplicate samples, laboratory fortified reagent and matrix samples, etc.) designed to assess the quality of their analyses, as specified in each analytical method and in the ''UCMR 2 Laboratory Approval Manual'' (USEPA, 2004d).

2. Minimum Reporting Level

a. This Rule

Under this rule, all laboratories certified to conduct UCMR analysis must be able to demonstrate their ability to detect each UCMR contaminant at the specified MRL. MRLs represent an estimate of the lowest concentration of a compound that can be quantitatively measured by a group of experienced drinking water laboratories. Previously, MRLs had been determined by analytical laboratories using expert professional judgment, but standard criteria for MRL determinations had not been established. For this rule, EPA has revised the process for developing MRLs as follows. The MRLs are now based on Lowest Concentration Minimum Reporting Levels (LCMRLs) which were determined by each laboratory that developed or subsequently tested the methods. LCMRLs represent the lowest concentration of a compound that can be quantitatively determined in each individual laboratory. In the interest of greater consistency, EPA has developed a statistical protocol for single-laboratory determinations of LCMRLs, using linear regression and prediction intervals.

b. Summary of Major Comments

Several comments were received regarding the number of significant figures associated with the MRLs. These commenters wanted the number of significant figures reduced. In considering public comments, EPA agrees that the MRLs should be reported to one significant figure. The final regulation contains revised language reflecting that MRLs are rounded to one significant figure.

Commenters also thought that having a different MRL for each analyte may lead to calibration errors. They suggested revising the MRLs within each method to achieve some proportional relationship among the MRLs. EPA does not agree with this comment. The MRLs are based upon a statistical analysis of the quantitation levels achieved at multiple laboratories. To adjust those to some proportional level would be arbitrary.

3. Lowest Concentration Minimum Reporting Level

a. This Rule

EPA has developed a protocol for developing MRLs based on LCMRLs determined by each laboratory that developed or subsequently tested the methods listed in this action. For UCMR 1, EPA specified MRLs and a requirement for recovery at the MRL so that data quality was documented daily. In the interest of greater consistency, EPA developed a statistical protocol for single-laboratory determinations of LCMRLs using linear regression and prediction intervals. This approach has been evaluated through expert peer review conducted in accordance with the Agency's formal peer review process and through the performance of a pilot-scale interlaboratory study. A free tool for calculating the LCMRL was developed and is available for download on the Web: *http://www.epa.gov/safewater/methods/sourcalt.html#Mlcmrl.*

b. Summary of Major Comments

Some public commenters disagreed with the 50–150 percent acceptance criteria for MRLs, arguing that it exceeds routinely accepted criteria, and suggested instead to use ± 10–20 percent. EPA believes that these commenters are referring to ± 10–20% relative standard deviation (RSD) and notes that the MRL verification requirement is based on the *three sigma prediction interval* being within 50–150 percent. EPA believes that the 50–150 percent criteria is in fact, a very stringent requirement comparable to that advocated by the commenters. As an example, to meet the 50–150 percent criteria for the 99 percent prediction interval, as specified in § 141.40(a)(5)(iii), and assuming 100 percent accuracy, would require an RSD of 13.5 percent. Since both precision and accuracy are measured by this criterion, any errors in accuracy would serve to reduce the required RSD even further, and make the precision criteria more stringent.

Other comments expressed concern that acceptance criteria were not consistently applied, possibly leading to inconsistencies in the precision and accuracy of reported values. EPA agrees that the LCMRL process, as specified in the proposed regulation, does not apply consistent acceptance criteria over the analytical range of the test method. EPA has always recognized that precision and accuracy of analytical methods are a function of concentration, and has generally published differing acceptance criteria for its methods in recognition of this fact. These concentration-based criteria do not in any way represent a change in policy, rather, recognition of the reality of analytical measurements.

4. Laboratory Fortified Sample Matrix and Laboratory Fortified Sample Matrix Duplicate

a. This Rule

Under this rule, all participating laboratories will be required to analyze Laboratory Fortified Sample Matrix (LFSM) samples for accuracy, and Laboratory Fortified Sample Matrix Duplicate (LFSMD) samples for precision, for all UCMR 2 contaminants. LFSM/LFSMD samples must be prepared using a sample collected and analyzed in accordance with UCMR 2 requirements and analyzed at a frequency of 5 percent (or one LFSM/LFSMD set per every 20 samples) or with each sample batch, whichever is more frequent. In addition, the LFSM/LFSMD fortification concentrations must be alternated between a low-level fortification and mid-level fortification approximately 50 percent of the time. The low-level LFSM/LFSMD fortification concentration must be within ± 50 percent of the MRL for each contaminant, and the mid-level LFSM/LFSMD fortification concentration must be within ± 20 percent of the mid-level calibration standard for each contaminant. The low-level method fortification level requirement of ± 50 percent represents a revision to the proposed rule language based on public comments that ± 20 percent was too restrictive.

b. Summary of Major Comments

Some commenters expressed concerned about the added expense of extra bottles and the time needed to coordinate with laboratories and other utilities to ensure that the proper number of LFSM/LFSMD samples will be submitted. Although EPA has changed the way that QC data will be tracked, EPA has not changed the number of sample bottles which need to be collected. The requirement to fortify at least one UCMR field sample per analytical batch, and to report these data to EPA, has not changed from UCMR 1. The only change compared to UCMR 1 is in how the data are to be reported. Previously, laboratories were required to report the percent recoveries of each analyte in the fortified field samples; in UCMR 2 they are required to report the analytical result and EPA will compute the recoveries.

Other commenters suggested using the same sample for duplicates instead of a second sample and using more

laboratory blanks to decrease cost. EPA notes that data from laboratory blanks and fortified matrix samples provide very different information. Data from fortified reagent water samples help the data user understand how well the laboratory is performing the analysis. Fortified matrix samples are used to determine if there are interfering compounds in the matrix that preclude accurate analysis and to assess the precision and accuracy of the database of field results. Since fortified reagent water samples are not subject to the same type of matrix interferences that field samples are, data from reagent water samples are not a scientifically valid way to determine the precision and accuracy of field data.

*G. When Are Samples Collected?*

1. This Rule

To accommodate PWS preparation for rule implementation and to provide additional assurance of sufficient laboratory capacity, this rule contains revised language that changes the start of monitoring from July 2007 to January 2008, such that the effective monitoring period is now January 2008 through December 2010. This rule also contains language that revises the Screening Survey time frame to match that of Assessment Monitoring. Thus, Screening Survey systems will be scheduled to monitor during a continuous 12-month period during January 2008 through December 2010.

In addition, as under UCMR 1, ground water sampling points must be monitored twice in a consecutive 12-month period. However, to provide PWSs with more flexibility, the final rule contains revised language to allow the second sampling event for ground water sampling points to occur within 5–7 months of the first sampling event instead of within 6 months, as proposed. EPA will establish schedules for all systems to ensure adequate laboratory capacity for the analysis of UCMR contaminants and to improve the oversight of monitoring and data reporting. EPA will use the State Monitoring Plans to identify all systems that will participate in the UCMR 2 program, and to identify the monitoring schedule for each system.

This action also contains language that clarifies the definition of a sampling location's source type. The final rule language specifies that if any percentage of the total water associated with a sampling point originates either from surface water or ground water under the direct influence of surface water (GWUDI) during the 12-month monitoring period, then that source should be reported as ''SW'' or ''GU'' as appropriate. These sampling points must be monitored for four consecutive quarters, with sample events occurring three months apart (*e.g.*, a system could conduct monitoring in either: (1) January, April, July, October; (2) February, May, August, November; or (3) March, June, September, December).

2. Summary of Major Comments

Many commenters did not support EPA's proposal to designate each PWS's month and year of monitoring, expressing concern for budget and scheduling, and some specific concerns that the assigned schedule could conflict with the Initial Distribution System Evaluation (IDSE) that is required under the Stage 2 DBPR. Alternatives recommended by commenters included: setting a ''window'' in which monitoring must be completed; allowing systems to conduct monitoring over the entire monitoring period; and allowing systems to set their own schedules. Some commenters recommended that EPA change the Screening Survey time frame to match that of Assessment Monitoring; others recommended delaying the start of the Screening Survey by one year. Based on its experience with UCMR 1, EPA has determined that establishing a defined schedule (month and year) for each PWS is necessary. Under UCMR 1, EPA did not establish Assessment Monitoring schedules for large systems. This resulted in delayed or incomplete monitoring for a number of large systems, leading to enforcement actions that may have been avoided had schedules been established. To help PWSs with scheduling and to provide additional assurance of laboratory capacity, the final regulation contains revised language that: (1) Changes the monitoring period for UCMR 2 from July 2007 through June 2010 to January 2008 through December 2010; and (2) extends the two-year monitoring period for the List 2 Screening Survey contaminants to three years, such that the Screening Survey will coincide with the three-year Assessment Monitoring period of January 2008 through December 2010. In addition, systems will have the opportunity to change their sampling schedules either through EPA's electronic data reporting system by August 2, 2007, or after this date by fax, mail, or e-mail request to EPA.

Some commenters indicated that wells may not be operating continually and therefore, some systems with ground water sources will be unable to meet EPA's schedule. Some recommended that EPA allow systems to conduct the second sampling event within 5–7 months of the first sample, as was done under UCMR 1. In response to this recommendation, the final regulation contains revised language that extends the time frame for collecting the second ground water sample to 5–7 months following the collection of the first round of samples. For planning purposes, EPA will initially schedule these sampling events 6 months apart. However, systems will have the flexibility to sample within a 5–7 month window. Systems will be required to notify EPA if they cannot monitor within this 3-month window. Refer to Section III.J.1.c for more detail on the requirement for a water system to notify EPA if it is unable to monitor according to its assigned schedule.

*H. Where Are Samples Collected?*

1. Entry Points to the Distribution System

a. This Rule

This rule establishes that all UCMR 2 samples will be collected at entry points to the distribution system (EPTDSs), and for nitrosamines, within the distribution system, and eliminates the option of source water monitoring (except for source water that leaves the EPTDS untreated).

b. Summary of Major Comments

Several commenters disagreed with EPA's proposal to eliminate monitoring from ''raw source water'' samples. Several reasons were given, including: Cost savings through coordination with compliance monitoring; raw water samples would provide useful information for determining which water treatment technologies are needed and potential human exposure; and EPA allowed systems the option of sampling raw water or EPTDS locations under UCMR 1. Other alternatives suggested were to allow systems with multiple source water sampling locations to collect a sample from the highest risk source based on their Source Water Assessments, and to require a portion of large systems with surface water sources to conduct raw water sampling under Assessment Monitoring.

In response to these comments, EPA notes that the UCMR design was established in fulfillment of the 1996 SDWA Amendments (Section 1445(a)(2)), which states: ''The regulations shall require monitoring of drinking water supplied by public water systems * * *'' The UCMR program was designed to collect data that would provide information for human exposure study. This is best achieved by conducting monitoring at the EPTDS as opposed to a pre-treatment sampling

site. However, to provide flexibility during UCMR 1, systems were allowed to collect ''raw source water'' samples in those States where samples for regulated contaminants were collected prior to treatment. If a system detected any contaminants above the MRL (and treatment was subsequently applied), monitoring at EPTDSs was subsequently required. This created substantial confusion and errant reporting during UCMR 1; many systems did not fully understand or comply with the requirement to conduct the required EPTDS monitoring following a raw water detection. EPA anticipates that this confusion would be even more likely during UCMR 2 if raw water monitoring was allowed because of the anticipated occurrence rates for some UCMR 2 analytes. Moreover, since UCMR 2 methods are not used to support regulated contaminant monitoring, UCMR 2 samples cannot be used to meet compliance monitoring requirements.

2. Distribution System Maximum Residence Time

a. This Rule

This rule requires systems that are participating in the Screening Survey to collect nitrosamine samples both at EPTDSs and in the distribution system to capture the occurrence of nitrosamines as disinfection byproducts. This rule requires systems to collect their nitrosamine samples at their distribution system maximum residence time (DSMRT) location(s) for each treatment plant/water source as defined in the Stage 1 DBPR. Water systems that do not have defined DSMRT sampling points in the distribution system (*e.g.*, systems that do not apply a chemical disinfectant, wholesalers without retail customers) will be required to collect nitrosamine samples at EPTDSs only.

b. Summary of Major Comments

EPA requested comment on whether nitrosamines should be collected at both EPTDSs and at the DSMRT for each treatment plant/water source as defined in Stage 1 DBPR. A few commenters agreed that this monitoring should occur at both sampling locations. Some commenters disagreed with sampling finished water, saying that EPA will be unable to determine whether NDMA occurs in the source or is formed as a disinfection byproduct (DBP) without raw water data or information on the disinfection level at the time of sample collection. In addition, commenters pointed out that treatment can reduce the concentration of some contaminants.

EPA is requiring that nitrosamine samples be collected at two locations to allow the Agency to evaluate whether exposure to nitrosamines is influenced by the distribution system. Since the nitrosamines may occur as source water contaminants and/or DBPs, monitoring at both the EPTDSs and DSMRTs will provide EPA with the range of human exposures to these contaminants in drinking water. In addition, if a nitrosamine is present as a result of reactions with the disinfectant, the concentration may increase the longer the water is in contact with that disinfectant. EPA plans to compare the aggregated concentration data from the two sample points to determine if there is a significant difference in the concentrations. This information will assist EPA in determining an appropriate sampling strategy if a decision to regulate nitrosamines is made after the UCMR 2 exposure information is available. EPA will also evaluate differences between systems using free chlorine versus chloramines to determine if the type of residual disinfectant is associated with nitrosamine levels.

EPA agrees that the UCMR 2 data will not establish the source of nitrosamines, if they are present in finished water. However, the Agency does not agree that raw water data would necessarily establish the source of nitrosamine contamination. Some coagulant aid polymers used in drinking water treatment have been implicated as precursors of nitrosamines. The inability to identify the source of the contaminant is not limited to nitrosamines; it extends to all UCMR 2 contaminants. The UCMR program was designed to collect data that would provide information for human exposure study. This is best achieved by conducting monitoring at the EPTDS as opposed to a pre-treatment sampling site because the treatment process can influence the concentration present in drinking water.

Several public comments were received regarding the timing of UCMR 2 monitoring and the completion of IDSEs. Commenters were concerned that most systems have not begun their IDSEs to identify the longest residence time in their system, and thus, DSMRT locations may not be available for nitrosamine occurrence testing. During UCMR 2 implementation, disinfecting systems will conduct monitoring at the Stage 1 DBPR distribution system sampling locations. These locations reflect the water system's and Primary Agency's judgment concerning areas in the distribution system that have the ''oldest'' water (*i.e.*, those locations with the greatest distribution system maximum residence times or DSMRT). Under the Stage 2 DBPR, systems will be required to conduct IDSEs to determine locations with representative high total trihalomethanes (TTHM) and haloacetic acids (HAA5) concentrations. EPA agrees that new information collected during the IDSE study may result in the water system no longer using the Stage 1 DSMRT sampling locations because other areas of the distribution system may have higher concentrations of TTHM or HAA5. However, EPA believes it is still appropriate to use the Stage 1 DSMRT sample locations for the UCMR 2 monitoring because it is premature to link nitrosamine occurrence levels to TTHM and HAA5 levels. In addition, no water system is required to conduct Stage 2 compliance monitoring until 2012, long after UCMR 2 monitoring is complete.

*I. How Should Samples Be Collected?*

1. This Rule

This rule includes clarifying language that acetanilide parent compounds and their degradates must be collected at the same time and sampling location (§ 141.40(a)(4)(i)(D)). Refer to Section III.C.2 for a more detailed discussion of comments pertaining to acetanilides. This rule also revises system resampling requirements related to laboratory errors or sampling deviations (§ 141.40(a)(4)(i)(G)). Previously, systems were required to resample within 14 days of becoming aware of a sampling or laboratory error. Systems will now have 30 days to collect the resample. This rule also retains the instruction that sample collection and shipping take place Monday–Thursday to ensure that samples arrive at the laboratory at the required temperature.

2. Summary of Major Comments

EPA agreed with comments that recommended acetanilide parent and the degradation products analysis be conducted using samples collected in the same location, and at the same time, to provide data on their relative concentrations. The final regulation contains revised language to specify that acetanilide parent and degradation product sampling be conducted at the same time and at the same site.

Several public comments were received indicating that a resampling period of 14 days is too short. Some made recommendations for extending the period to within 30 days of receiving written notification that a laboratory error had occurred or after the system determines that a sampling error has

occurred. Others recommended up to two months. In response to these comments, EPA has included revisions to the final regulation requiring resampling to occur within 30 days of being informed or becoming aware of the sampling or laboratory error. Extending the resampling period beyond 30 days would result in a large number of resamples being collected in the next quarterly monitoring period.

*J. What Are the UCMR 2 Reporting Requirements?*

1. Information Required Prior to Monitoring

a. Contact Information

This rule finalizes the proposed requirement for water systems to report contact information (*i.e.*, the name, affiliation, mailing address, phone number, fax number, and e-mail address of the PWS Technical Contact and PWS Official) to EPA. Large systems (those serving 10,000 or more people) must submit this information by April 4, 2007 using EPA's electronic data reporting system. Small systems, or States (if acting on their behalf) must submit this information within 90 days of receiving a letter from EPA that requests contact information. EPA did not receive any comments regarding these requirements.

b. Sampling Location and Inventory Information

i. This Rule

This rule finalizes the proposed requirement for large PWSs to provide inventory information for each of their required sampling locations by August 2, 2007 (*i.e.*, within 210 days of final rule publication) using EPA's electronic reporting system. For each sampling location, or for each approved representative sampling location, large systems must submit the following: public water system identification (PWSID) code; PWS facility identification code; sampling point identification code; sampling point type code; and sampling location water type. Any changes to these data must be reported to EPA's electronic reporting system within 30 days of the change. Section III.J.3.b of this action includes a more detailed discussion of EPA's electronic reporting system.

ii. Summary of major comments

Some commenters recommended that existing inventory information from the Safe Drinking Water Accession and Review System (SDWARS) or other databases, such as EPA's Safe Drinking Water Information System (SDWIS), be used to pre-populate the database for UCMR 2 to reduce some of the burden on water systems. EPA will use the large system inventory that is currently stored in SDWARS 1 as much as possible, and supplement that with new entry point facilities from SDWIS, as well as new information provided by the State. PWSs will be responsible for verifying, correcting, and updating inventory information. PWSs will identify the facilities/sample points that are required to be sampled (*i.e.*, all EPTDSs or approved representative EPTDSs sampling points, as well as applicable DSMRT sampling points). PWSs that are required to monitor in the distribution system will have the opportunity in SDWARS to associate the distribution system sample point with an entry point.

c. Proposals for Representative Sampling Locations

i. This Rule

Under this action, some large systems that have multiple ground water EPTDSs can request approval to monitor at representative entry point(s) rather than at each EPTDS. Large PWSs can submit either documentation of alternate EPTDS sampling locations that were approved by the State or EPA for UCMR 1 or Phase II/V monitoring, or a proposal for sampling at representative EPTDS(s), with supporting documentation to demonstrate that any EPTDS selected as representative of the ground water supplied from multiple wells is associated with an individual well that draws from the same aquifer as the multiple wells (*i.e.*, those being represented).

ii. Summary of Major Comments

Many commenters agreed with EPA's proposal to allow ground water systems to use representative entry points. Some indicated that EPA should allow more flexibility in the type of data used to support the selection of representative EPTDSs. In particular, some commenters suggested that EPA allow any previously approved representative monitoring plans used for UCMR 1 (including those approved by EPA) as appropriate documentation. Commenters also indicated that some systems may need more than 210 days after the publication date to prepare a representative well proposal and that EPA should extend this deadline.

In response to comments, the final regulation contains revised language to allow PWSs to submit documentation of a representative well plan approved in previous UCMR cycles (§ 141.35(c)(3)(i)). However, EPA is not revising the rule language that lists examples of the types of information a PWS may submit to demonstrate the representativeness of a well (§ 141.35(c)(3)(ii)). The situation and available data will vary too widely from PWS to PWS for EPA to specify the exact data that are necessary. Further, EPA believes that the time frame for submitting representative proposals is reasonable and notes that systems were made aware of this opportunity shortly after the publication of the proposed rule.

d. Reporting/Coordination of Monitoring Schedules for Large Systems

i. This Rule

Under UCMR 2, EPA will establish monitoring schedules for all participating systems. Large systems have until August 2, 2007 (*i.e.*, 210 days from the publication of this final rule) to revise their schedule using the EPA electronic data reporting system. After August 2, 2007, if a large PWS cannot sample according to the required schedule, the PWS Official must fax, mail, or e-mail a request to EPA explaining the reason samples cannot be taken according to the assigned schedule and requesting an alternative schedule. This rule also contains revised language clarifying that the second set of samples from ground water sources may be collected any time within 5–7 months of the first sampling event without the PWS being required to notify EPA.

ii. Summary of Major Comments

Some commenters recommended that the 210-day deadline for submitting a revised monitoring schedule be removed and systems be allowed to conduct monitoring at any time during the entire three-year time frame. Commenters indicated that the deadline would limit a water system's ability to coordinate its monitoring schedule with a contract laboratory's analytical capacity, and would result in an increased likelihood of monitoring and reporting violations due to operational failures beyond the water system's control. As discussed in Section III.J.1.d of this preamble, EPA will establish a defined schedule (month and year) for each PWS. During the 210-day period following publication of the final regulation (*i.e.*, August 2, 2007), a PWS can simply revise its schedule using the EPA electronic data reporting system. Barring a serious problem with large numbers of PWSs wanting to change their scheduled monitoring to the same time frame, EPA will honor all of these requests. After August 2, 2007, a PWS may request that its schedule be changed; however, unlike the first 210-day period, the PWS will need to

explain its rationale for the requested change. Budgetary issues or well closings are examples of problems that will be considered legitimate reasons for schedule changes. A system is subject to its original assigned sampling schedule or its modified schedule established prior to August 2, 2007 via EPA's electronic data reporting system, unless and until it receives notification from EPA specifying a new schedule.

To help PWSs with scheduling and to provide additional assurance of laboratory capacity, the final regulation contains revised language that: (1)Changes the monitoring period for UCMR 2 from July 2007 through June 2010 to January 2008 through December 2010; and (2) extends the two-year monitoring period for the List 2 Screening Survey contaminants to three years, such that the Screening Survey will coincide with the three-year Assessment Monitoring period of January 2008 through December 2010. In addition, because of the logistical issues associated with sampling for UCMR 2 (*e.g.*, seasonal operation of some wells), the final regulation also contains revised language that extends the time frame for collecting the second ground water sample to 5–7 months following the collection of the first round of samples. This will allow systems that have multiple sampling points to schedule the second sampling event across the 5–7 month window. However, for planning purposes, EPA will preliminarily schedule these sampling events 6 months apart.

e. Notice regarding applicability or inability to meet sampling schedule

i. This Rule

This rule includes system reporting requirements to ensure communication between PWSs and EPA regarding rule applicability and compliance. These requirements include: reporting changes in system status or other factors that affect a system's requirements under the rule (e.g., a system believes it does not meet the applicability criteria for UCMR); notifying EPA if a system believes it is subject to UCMR requirements but has not been notified by either EPA or the State regarding requirements; and reporting to EPA if a system cannot sample according to its assigned schedule. The final regulation at § 141.35(c)(5) contains revised language to clarify that systems collecting samples from ground water sources can collect their second set of samples within the 5–7 months of the first sampling event.

ii. Summary of Major Comments

Some commenters suggested that EPA develop a list of acceptable reasons for not monitoring from a source to eliminate the need for systems to notify EPA. EPA believes that it is impractical to develop an exhaustive list. It is important that EPA be notified of any reason that a scheduled sampling event will be missed to allow for effective coordination of compliance assistance and enforcement actions.

2. Reporting of Required Data Elements

a. This Rule

This rule specifies 15 data elements in § 141.35(e), Table 1, to be reported with UCMR 2 sample test results. In this table, EPA is providing clarifying language to the following four data elements: Water Source Type (data element #3); Sampling Point Identification Code (data element #4); Sampling Point Type Code (data element #5); and Disinfectant Residual Type (data element #6). EPA received comments on Sample Analysis Type (data element #11) and Sample Event Code (data element #15) but did not revise these data elements in this action.

b. Summary of Major Comments

Comments were received questioning whether systems would be required to report source water changes that occur throughout the 12-month monitoring period or only those that occur between sampling events. To simplify UCMR 2 reporting, the definition of ''Water Source Type'' (data element #3) contains revised language specifying that if any percentage of the total water associated with that sampling point originates either from surface water or GWUDI source during the 12-month monitoring period, then that source should be reported as ''SW'' or ''GU'' as appropriate. If a sampling point is served by both a surface water and GWUDI source during the 12-month monitoring period, then that source should be reported as SW (i.e., SW takes precedence over GU in the hierarchy of source water reporting). The only time that a source is to be considered ground water is if 100 percent of the water associated with that sampling point is from a ground water source during the entire 12-month monitoring period. By defining a sampling point source over the entire 12-month monitoring period, many instances where a system would otherwise need to report a change in its source to EPA will be eliminated.

Some commenters indicated that definitions for Sampling Point Identification Code (data element #4), and Sampling Point Type Identification Code (data element #5), seem redundant. In response to comments, the final regulation contains revised language changing the name of data element #5 to ''Sampling Point Type Code'' and clarifying the definitions of these two data elements.

Some commenters recommended that EPA clarify the definition of ''Disinfectant Residual Type'' (data element #6) because some systems may periodically use an alternate disinfectant. EPA's intent in the proposed rule language was that PWSs would report the type of disinfectant used at the time of each specific sampling event. In response to this comment, the final rule contains revised language to Table 1 of § 141.35(e) to clarify this point.

Some commenters expressed concern that EPA will create inconsistencies in water system and laboratory databases by retaining the name ''Sample Analyses Type'' from UCMR 1 but changing the codes associated with it. EPA revised the codes associated with this data element (#11) to better reflect the type of sample collected. The values that laboratories used previously proved to be problematic, since laboratories did not have enough information about the PWS's treatment systems or sample locations to assign the correct sample analysis type. Instead, EPA proposed and is finalizing in this rule codes that will provide EPA with QC information at the field sample level and with information about which UCMR field sample was fortified.

3. Reporting Process

a. Where to Report

This rule specifies in § 141.35(b)(1) the Web address for information that must be submitted electronically as: *http://www.epa.gov/safewater/ucmr/ucmr2/reporting.html.* This paragraph of the final rule also specifies that supporting documentation can be submitted to: UCMR Sampling Coordinator, USEPA, Technical Support Center, 26 West Martin Luther King Drive (MS 140), Cincinnati, OH 45268; or by e-mail at *UCMR_Sampling_Coordinator@epa.gov*; or by fax at (513) 569–7191. EPA did not receive any comments related to this aspect of the rule.

b. Electronic Reporting System

i. This Rule

EPA's electronic data reporting system—called SDWARS, which can be accessed on the Web at: *http://www.epa.gov/safewater/ucmr/ucmr2/reporting.html*—is the primary portal for PWSs and laboratories to submit contact

and inventory information to EPA. The UCMR program requires that all monitoring results and associated data elements be reported using this system. There were no changes between the proposed and final rule language regarding this data reporting system. The data review and approval process is discussed in Section III.J.3.c.

ii. Summary of Major Comments

EPA received several recommendations to provide more information and guidance related to PWS and laboratory use of its electronic data reporting system. In addition, several commenters requested that EPA pre-populate the UCMR 2 database with contact and inventory information that was collected under UCMR 1, or that it be easily accessible through EPA's SDWIS database.

EPA is not pre-populating the SDWARS 2 database with PWS contact information for two reasons. First, the data that EPA currently has on file are several years old and EPA is aware that many changes in contact information are necessary. Second, EPA will use a PWS's entry of this information into SDWARS to confirm that the system has successfully set up its SDWARS account. However, EPA will upload all inventory information that it has available (i.e., PWS identification code; PWS facility identification code; sampling point identification code; sampling point type code; and sampling location water type). PWSs will be responsible for verifying, correcting, and updating inventory information, as needed. In addition, EPA is finalizing the specific process for the upload of monitoring results and will release the details of the process and upload files as far ahead of the start of monitoring as possible.

Some comments were received expressing concern about the stability of the UCMR 1/SDWARS 1 database, claiming that data was lost which caused unnecessary notices of violation to be issued. Comments suggested that reminder letters/notices for compliance assistance would be more effective. Other comments were received suggesting that, to minimize confusion, PWSs have the option to report using the process they already use to report to their States, and States would then report to EPA.

EPA is not aware of any cases in which SDWARS lost data. In general, where data appeared to be lost, closer review revealed other reasons for the problem, including various situations that resulted in data that was not officially ''approved'' or data transfer errors by laboratories that caused SDWARS to reject all or parts of files. When developing UCMR 1 and the overall UCMR program, EPA was concerned about the problem of transcription errors in data reporting. Therefore, EPA designed SDWARS such that the originator (i.e., the laboratory that performed the analysis) was responsible for entering the data into the database.

c. Data Review and Approval Process/ Timeline

i. This Rule

This rule requires large systems to ensure that their laboratory posts the data in EPA's electronic data reporting system (*http://www.epa.gov/safewater/ucmr/ucmr2/reporting.html*) within 120 days from the sample collection date. Large systems then have 60 days from when the laboratory posts the data in EPA's electronic data reporting system to review, approve, and submit the data to the State and EPA via the EPA electronic reporting system. If systems do not take action on the data within 60 days of the laboratory's posting to the electronic reporting system, the data will be considered approved by the system, and available for EPA review, and subsequent public release.

Because EPA pays for and organizes the small system testing program, the review and approval steps for small systems differ. Small systems are only required to record system and sample location information on the sampling forms and bottles that are sent to them by the UCMR Sampling Coordinator. Procedures for submitting this information will be specified in the instructions sent to the system. Small systems are not required to review monitoring results, although they will be given a 60-day opportunity to review such results prior to their results being posted to the publicly available Web site.

ii. Summary of Major Comments

Several commenters expressed that PWSs could not be held responsible for laboratory compliance with the UCMR 2 reporting requirements. Section 141.35(c)(6)(ii) specifies that PWSs must ensure that their laboratories post the required data to the electronic database within 120 days of sampling. PWSs have the responsibility to require that their laboratory meets this reporting deadline and PWSs are ultimately responsible for ensuring the quality of their data.

Regarding compliance with review and approval timelines, commenters also were concerned that unnecessary enforcement notices were issued during UCMR 1 often because PWSs had not correctly processed and approved data through SDWARS. Several commenters recommended that reminder notices would help to ensure reporting compliance during UCMR 2 and reduce the need for enforcement actions. Other commenters were concerned about laboratory capacity and the ability of a limited number of approved laboratories to successfully conduct analyses and reporting within the required time frames.

EPA is currently in the final stages of developing the SDWARS electronic data entry system for entry of UCMR 2 monitoring results and is including an automatic e-mail system that will alert PWSs that data was entered by the laboratory, thereby reminding PWSs that they need to review and approve their monitoring data.

4. Cross-Media Reporting and Data Availability

a. Cross-Media Electronic Reporting

The reporting required under this final rule is consistent with the requirements of the October 13, 2005, regulation, ''Cross-Media Electronic Reporting'' (70 FR 59847, (USEPA, 2005b)).

b. Data Availability

The data collected through the UCMR program is being stored in NCOD to facilitate analysis and review of contaminant occurrence; to guide the conduct of the CCL process; and to support the Administrator's determination to regulate a contaminant in the interest of protecting public health, as required under SDWA Section 1412(b)(1). Results of the UCMR 1 monitoring can be viewed by the public at EPA's UCMR Web site: *http://www.epa.gov/safewater/ucmr/data.html.*

*K. What Constitutes a Violation Under UCMR 2?*

Under this rule, EPA will finalize the definitions for monitoring and reporting violations as proposed. A monitoring violation under UCMR 2 is defined as: ''Any failure to monitor in accordance with §§ 141.40(a)(3)–(5) is a monitoring violation.'' A reporting violation is defined as: ''Any failure to report in accordance with § 141.35 is a reporting violation.'' EPA did not receive any comments related to these violation definitions.

*L. Technical Correction Rule Changes in This Rule*

This rule includes two technical corrections pertaining to: Aldicarb monitoring and State primacy.

1. Changes Pertaining to Aldicarb Monitoring

When EPA published ''Revisions to the Unregulated Contaminant Monitoring Regulation for Public Water Systems; Final Rule,'' on September 17, 1999 (64 FR 50556, (USEPA, 1999)), two references to § 141.40 in § 141.24 became obsolete, but were not corrected in the 1999 rule. EPA is correcting this technical error by revising the references to requirements for monitoring for aldicarb, aldicarb sulfone, and aldicarb sulfoxide in § 141.24(h) and § 141.24(h)(7)(v). EPA suspended monitoring for these regulated contaminants in a 1992 **Federal Register** notice (57 FR 22178, May 27, 1992 (USEPA, 1992)), and there are no monitoring requirements for these contaminants under UCMR.

2. Changes Pertaining to State Primacy

Section 553 of the Administrative Procedure Act, 5 U.S.C. 553(b)(B), provides that, when an agency for good cause finds that notice and public procedure are impracticable, unnecessary or contrary to the public interest, the agency may issue a rule without providing prior notice and an opportunity for public comment. In today's final rule, EPA is removing the reference to § 141.40 in § 142.16(e), a portion in the Code of Federal Regulations (CFR) that enumerates the sections of the CRF subject to State primacy. The reference was first removed on September 17, 1999 (64 FR 50556, (USEPA, 1999)), when EPA published ''Revisions to the Unregulated Contaminant Monitoring Regulation for Public Water Systems; Final Rule.'' However, in EPA's subsequent publication of the ''Arsenic and Clarifications to Compliance and New Source Contaminants Monitoring Final Rule'' (66 FR 6975, January 22, 2001, (USEPA, 2001b)), the Agency inadvertently reinserted the reference to § 141.40 in § 142.16(e). EPA has determined that there is good cause for making this rule change final without prior proposal and opportunity for comment because removal of this reference was the product of a prior notice-and-comment rulemaking, (see 64 FR 50556, (USEPA, 1999)) and because the reference to UCMR monitoring is erroneous and no longer has any substantive effect. Thus, notice and public procedure are unnecessary. EPA finds that this constitutes ''good cause'' under 5 U.S.C. 553(b)(B). For the same reasons, EPA is making this rule change effective upon publication.

## IV. State and Tribal Participation

*A. Partnership Agreements*

1. This Rule

Under UCMR 2, States may continue to have a role in rule implementation through Partnership Agreements (PAs). Because specific activities for individual States are identified and established through the PAs, not through rule language, this rule does not contain reference to PAs.

2. Summary of Major Comments

Comments received regarding State participation in UCMR 2 included:Recommendations that non-partnering States have an opportunity to review State Monitoring Plans; concerns regarding State resources to help implement UCMR 2; and the need for more guidance from EPA regarding PAs, including the need for a template for the sampling protocols for States to use as the basis for their water system notification. EPA sent the draft State Monitoring Plans to all States prior to the negotiation of PAs. All States that agreed to partner with EPA were asked to review and provide any needed revisions to the draft plan. Each State could agree to accept additional responsibilities as documented through each State's final PA with EPA. In addition, EPA will provide States with guidance and templates for small system instructions.

*B. Governors' Petition and State-Wide Waivers*

This rule retains the UCMR 1 language that, consistent with SDWA, allows a minimum of seven State Governors to petition EPA to add contaminants to the UCMR Contaminant list. This rule also retains the UCMR 1 language that allows States to waive monitoring requirements with EPA approval and under very limited conditions. EPA did not receive any comments on either of these topics.

## V. Cost and Benefits of This Rule

In this rule, EPA finalized a new set of contaminants for monitoring in the second five-year UCMR cycle of 2007—2011. UCMR 2 Assessment Monitoring (for List 1 contaminants) will be conducted from January 2008 through December 2010 by 800 systems serving 10,000 or fewer, and by all systems serving more than 10,000 people. The Screening Survey for List 2 contaminants will also be conducted from January 2008 through December 2010 by 800 systems serving 100,000 or fewer, and all systems serving more than 100,000 (approximately 400 systems). Small systems (those serving 10,000 or fewer people) will not be subject to more than one component of UCMR 2 monitoring. For cost estimation purposes, EPA assumes that one-third of systems will monitor during each of the three monitoring years (2008–2010).

Labor costs pertain to systems, States, and EPA. They include activities such as reading the regulation, notifying systems selected to participate, sample collection, data review, reporting, and recordkeeping. Non-labor costs will be incurred primarily by EPA and by large PWSs. They include the cost of shipping samples to laboratories for testing and the cost of the actual laboratory analyses.

In this rule, EPA specified five analytical methods to monitor for 25 new UCMR contaminants. Estimated system and EPA costs are based on the projected analytical costs for these methods. With the exception of Method 525.2, these methods are comparatively new and will not coincide with other compliance monitoring (e.g., no cost savings for coincident monitoring can be realized). Laboratory analysis and shipping of samples account for approximately 71 percent of the national cost for UCMR 2 implementation. These costs are calculated as follows: The number of systems, multiplied by the number of sampling locations, multiplied by the sampling frequency, multiplied by the cost of laboratory analysis. Under UCMR 2, surface water (and GWUDI) sampling points will be monitored four times during the applicable year of monitoring, and ground water sampling points will be monitored twice during the applicable year of monitoring. Screening Survey systems that are required to monitor for DBPs will be required to sample for nitrosamines at one distribution system sampling point per treatment plant (i.e., at the DSMRT), as well as their EPTDS sampling locations.

Following publication of the proposed rule, and EPA's initial cost and burden estimates, EPA received several cost-related public comments. Several public commenters felt that EPA's estimates of cost and burden (e.g., laboratory, shipping fees and estimated labor burden) to PWSs were too low.

During the proposed rule and Information Collection Requirement (ICR) development, EPA estimated laboratory fees based on consultations with several national drinking water laboratories and based on costs of similar analytical methods. In response to comments, EPA revisited the estimates of UCMR 2 method pricing. EPA approached three additional national drinking water laboratories

(different than those consulted previously) and requested pricing estimates for UCMR 2 methods. EPA averaged the pricing estimates from the laboratories that were consulted into the cost estimates. EPA also revisited key shipping company pricing lists to ensure that shipping cost assumptions were as accurate as possible.

With respect to per system burden estimates, EPA notes that all burden estimates represent average burden hours, which include surface water systems that may have very few sampling points, and thus lower sampling burden, as well as those systems with higher numbers of sampling points that would therefore have greater sampling activity labor burden. Moreover, a system's burden is primarily incurred during its one year of required UCMR monitoring (between January 2008 and December 2010). However, in compliance with the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), these cost and burden estimates are presented as an average over the applicable three-year ICR period (2007–2009). Small systems (those serving 10,000 or fewer people) will have the lowest burden not only because of the relative smaller size of their infrastructure, but also because these systems will receive a great deal of direct assistance from EPA and/or their State.

EPA estimates of laboratory fees are based on the average cost determined through consultations with national drinking water laboratories, unit costs are as follows:

| | |
|---|---|
| Assessment Monitoring (List 1): | |
| EPA Method 527 (for 7 contaminants) | $220 |
| EPA Method 529 (for 3 contaminants) | 215 |
| Total List 1 | 435 |
| Screening Survey (List 2): | |
| EPA Method 521 (for 6 contaminants) | 310 |
| EPA Method 535 (for 6 contaminants) | 370 |
| EPA Method 525.2 (for 3 contaminants) | 190 |
| Total List 2 | 870 |

Shipping is added to the calculated costs to derive the total direct analytical non-labor costs. Estimated shipping costs were based on the average cost of shipping a 15-pound package overnight, plus a ground shipment cost of the empty package which is sent to the PWSs prior to their required sampling.

In preparing the UCMR 2 ICR, EPA relied on standard assumptions and data sources used in the preparation of other drinking water program ICRs. These include the PWS inventory, number of sampling points per system, and labor rates. EPA expects that States will incur only labor costs associated with UCMR 2 implementation. State costs were estimated using the relevant modules of the State Resource Model that was recently developed by the Association of State Drinking Water Administrators (ASDWA) in conjunction with EPA (ASDWA, 2003) to help States forecast resource needs. Model estimates were adjusted to account for actual levels of State participation under UCMR 1. Because State participation is determined through the PAs, level of effort will vary across States and depend on their individual agreements with EPA.

Over the UCMR 2 cycle of 2007–2011, EPA estimates that nationwide, the average annual cost of UCMR 2 is approximately $8.87 million. These total estimated annual costs and total estimated costs (labor and non-labor) are incurred as follows:

| Respondent | Average annual cost for all respondents (2007–2011) | Total estimated costs for all respondents (2007–2011) |
|---|---|---|
| Small Systems serving 25—10,000, including labor only (non-labor costs are paid for by EPA) | $0.06 m | $0.30 |
| Large Systems serving 10,001—100,000, including labor and non-labor costs | 3.84 m | 19.20 |
| Large Systems serving 100,001 and greater, including labor and non-labor costs | 1.91 m | 9.55 |
| States, including labor costs related to implementation coordination | 0.49 m | 2.45 |
| EPA, including labor for implementation coordination and non-labor for small system testing | 2.57 m | 12.85 |
| National Total | 8.87 m | 44.35 |

Additional details regarding EPA's cost assumptions and estimates can be found in the ICR Number 2192.01 amendment prepared for the final rule (OMB number 2040–0270), which presents estimated cost and burden for the 2007–2009 monitoring period. Estimates of costs over the entire second five-year UCMR cycle of 2007–2011 are attached as an appendix to the ICR. Copies of the ICR and its amendment may be obtained from the EPA public docket for this rule, which includes this ICR, under Docket ID Number OW–2004–0001.

## VI. Statutory and Executive Order Reviews

### *A. Executive Order 12866: Regulatory Planning and Review*

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), this action is a ''significant regulatory action.'' Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under EO 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

### *B. Paperwork Reduction Act*

OMB has approved the information collection requirements contained in this rule under the provisions of the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2040–0270.

The information to be collected under this rule fulfills the statutory requirements of Section 1445(a)(2) of SDWA, as amended in 1996. The data to be collected will describe the source of the water, location, and test results for samples taken from PWSs. The concentrations of any identified UCMR contaminants will be evaluated with respect to health effects and those contaminants will be considered for future regulation accordingly. Reporting is mandatory. The data are not subject to confidentiality protection.

The annual burden and cost estimates described below are for the implementation assumptions described in Section V, Cost and Benefits of the Rule, of this action. Respondents to the

UCMR 2 will include 1,280 small water systems (those serving 10,000 or fewer people; 800 for Assessment Monitoring and 480 for Screening Survey monitoring), the 3,633 large PWSs (those serving more than 10,000 people), and the 56 States and primacy agencies (4,969 total respondents). The frequency of response varies across respondents and years. System costs (particularly laboratory analytical costs) vary depending on the number of sampling locations. Cost estimates assumes that most Assessment Monitoring and Screening Survey systems will conduct sampling evenly across the January 2008–December 2010 monitoring period (*i.e.*, one-third in each of the three consecutive 12-month periods). Because the applicable ICR period is 2007–2009, only two years of core monitoring activity are captured in the ICR estimates. Some rule preparation, including reporting of contact and inventory information, will occur during 2007.

Small systems (those serving 10,000 or fewer) that are selected for UCMR 2 monitoring will sample an average of 1.8 times per system (*i.e.*, number of responses per system) across the three-year ICR period of 2007–2009. The average burden per response for small systems is estimated to be 3.5 hours. Large systems serving 10,001 to 100,000 people and large systems serving more than 100,000 people will sample and report an average of 2.0 and 2.4 times per system, respectively, across the three-year ICR period of 2007–2009. The average burdens per response for these two categories of large systems are estimated to be 9.8 and 15.2 hours, respectively. The larger burden per response for the largest systems reflects the fact that these systems typically have more sampling locations. States are assumed to have an average of 1.0 response per year, related to coordination with EPA and systems, with an average burden per response of 203.2 hours. In aggregate, during the ICR period of 2007–2009, the average response (including responses from both systems and States) is associated with a burden of 12.1 hours, with a labor plus non-labor cost of $2,170 per response.

The annual average per respondent burden hours and costs for the ICR period of 2007–2009 are: small systems—2.1 hour burden at $57 for labor; large systems serving 10,001 to 100,000—6.6 hours at $197 for labor, and $1,651 for analytical costs; large systems serving more than 100,000—12.1 hours at $431 for labor, and $4,840 for analytical costs; and States—203.2 hours at $11,107 for labor. Annual average burden and cost per respondent (including both systems and States) is estimated to be 8.1 hours, with a labor plus non-labor cost of $1,456 per respondent. Note that small systems do not pay for testing costs, so they only incur labor costs. The total annual burden for the ICR reporting period of 2007–2009 is 40,386 hours (with a labor cost of $1.51 million); the total annual analytical cost is $5.73 million.

The Agency estimates the annual burden to EPA for UCMR program activities during the ICR years of 2007–2009 to be approximately 9,533 hours, at an annual labor cost of $0.66 million. EPA's annual non-labor costs are estimated to be $2.3 million. EPA's non-labor costs are primarily attributed to the cost of sample analysis for small systems (analysis is just under 90 percent of non-labor cost).

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. In addition, EPA is amending the table in 40 CFR part 9 of currently approved OMB control numbers for various regulations to list the regulatory citations for the information requirements contained in this final rule.

### *C. Regulatory Flexibility Act*

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

The RFA provides default definitions for each type of small entity. Small entities are defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any ''not-for-profit enterprise which is independently owned and operated and is not dominant in its field.'' However, the RFA also authorizes an agency to use alternative definitions for each category of small entity, ''which are appropriate to the activities of the agency'' after proposing the alternative definition(s) in the **Federal Register** and taking comment (5 U.S.C. 601(3)–(5)). In addition, to establish an alternative small business definition, agencies must consult with SBA's Chief Counsel for Advocacy.

For purposes of assessing the impacts of this final rule on small entities, EPA considered small entities to be PWSs serving 10,000 or fewer people, because this is the system size specified in SDWA as requiring special consideration with respect to small system flexibility. As required by the RFA, EPA proposed using this alternative definition in the **Federal Register** (63 FR 7605, February 13, 1998 (USEPA, 1998a)), requested public comment, consulted with the SBA, and finalized the alternative definition in the Consumer Confidence Reports rulemaking (63 FR 44511, August 19, 1998 (USEPA, 1998c)). As stated in that Final Rule, the alternative definition is applied to this regulation as well.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The small entities directly regulated by this final rule are a subset of small community and non-transient non-community PWSs serving 10,000 or fewer people. We have determined that the 1,280 small PWSs required to participate in either the Assessment Monitoring or Screening Survey components of UCMR 2 will experience an average cost of $43 per year; the remainder of small systems are not subject to this final rule.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. As required by SDWA, the Agency

specifically structured the rule to avoid significantly affecting small entities by assuming all costs for laboratory analyses, shipping, and QC for small entities. As a result, EPA incurs the entirety of the non-labor costs associated with UCMR 2 small system monitoring. With its authority to use monies from the Drinking Water State Revolving Fund (DWSRF) for the purposes of implementing this provision of SDWA, EPA has set aside $2.0 million each year to apply towards these costs. Small system costs are limited to the additional labor required for reading about their requirements, monitoring, reporting, and recordkeeping. The estimated average annual burden across the five-year UCMR 2 cycle of 2007–2011 is estimated to be 1.5 hours at $43 per small system. These costs for small systems are discussed in Section 6(a)(i) of the ICR document, available on the EPA public docket for this rule, under Docket ID Number OW–2004–0001 at *http://www.regulations.gov.*

*D. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. Total annual costs of this final rule (across the UCMR 2 cycle of 2007–2011), for State, local, and Tribal governments and the private sector, are estimated to be $8.86 million, of which EPA will pay $2.57 million, or approximately 29 percent. Thus, this rule is not subject to the requirements of sections 202 and 205 of the UMRA.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. The Agency will pay for the reasonable costs of sample analysis for the small PWSs required to monitor for unregulated contaminants under this final rule, including those owned and operated by small governments. The only costs that small systems will incur are those attributed to collecting the UCMR samples and packing them for shipping to the laboratory (EPA will pay for shipping). These costs are minimal. They are not significant or unique. Thus, this rule is not subject to the requirements of UMRA section 203.

*E. Executive Order 13132: Federalism*

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

This final rule does not have Federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132.

The cost to State and local governments is minimal, and the rule does not preempt State law. Thus, Executive Order 13132 does not apply to this rule. In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicited comment on the proposed rule from State and local officials.

*F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.''

This final rule does not have Tribal implications, as specified in Executive Order 13175. It will neither impose substantial direct compliance costs on Tribal governments, nor preempt Tribal law. This final rule also requires monitoring by a nationally representative sample of small systems (i.e., those serving 10,000 or fewer people). EPA estimates that approximately one percent of small Tribal systems will be selected as part of such sample. EPA estimates the average annual cost over the five-year rule period to be $43, based on the labor associated with collecting a sample and preparing it for shipping. All other small-system expenses (associated with shipping and laboratory fees) are paid by EPA.

EPA consulted with Tribal officials early in the process of developing the UCMR program to permit them to have meaningful and timely input into its development. In developing the original UCMR, EPA held stakeholder meetings and prepared background information for stakeholder review. EPA sent requests for review of stakeholder documents to nearly 400 Tribes, Tribal organizations, and small systems organizations to obtain their input. Representatives from the Indian Health Service (IHS) Sanitary Deficiency System and Tribes were consulted regarding decisions on rule design, the design for the statistical selection of small systems, and potential costs.

Tribes raised issues concerning the selection of the nationally representative sample of small systems, particularly the manner in which Tribal systems would be considered under the sample selection process. EPA developed the sample frame for Tribal

systems and Alaska Native water systems in response to those concerns. EPA worked with the Tribes, Alaska Natives, the IHS, and the States to determine how to classify each Tribal system for consideration in the statistically-based selection of the nationally representative sample of small systems. As a result of those discussions, small PWSs that are located in Indian country in each of the EPA Regions containing Indian country were evaluated as part of a Tribal category that receives selection consideration comparable to that of small systems outside of Indian country. Thus, Tribal systems have the same probability of being selected as other water systems in the stratified selection process that weighs systems by water source and size class by population served.

EPA also held a public stakeholder meeting on October 23, 2003. This meeting was announced to the public in a **Federal Register** notice dated September 11, 2003. Prior to the meeting, background materials and rule development information were sent to specific stakeholders, including representatives from the IHS and the Native American Water Association.

As described previously, this final rule requires monitoring by all large systems serving more than 10,000 people. Ten Tribal water systems have been identified as large systems. EPA estimates the average annual cost for each large system over the five-year rule period to be less than $1,200. Such cost is based on a labor component (associated with the collection of samples) and a non-labor component (associated with shipping and laboratory fees).

This final rule, addressing the second UCMR period, maintains the basic program design of the original UCMR, building upon the structure established by the original rule for this cyclical program. The primary changes include: (1) Improving the design of the Screening Survey for List 2 contaminants to increase the statistical strength of the sampling results; (2) updating the lists of contaminants to be monitored and the analytical methods approved to conduct that monitoring; (3) revising the ''data elements'' required to be reported; and (4) revising the implementation of the monitoring program to reflect ''lessons learned'' during UCMR 1.

*G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks*

Executive Order 13045, ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997), applies to any rule that: (1) is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

This final rule is part of the Agency's overall strategy for deciding whether to regulate the contaminants identified on the CCL (63 FR 10274, March 2, 1998 (USEPA, 1998b)). The purpose of this final rule is to ensure that EPA has data on the occurrence of contaminants on the CCL where those data are lacking. EPA is also taking steps to ensure that the Agency will have data on the health effects of these contaminants on children through its research program. The Agency will use these data (both contaminant occurrence and health effects) to help decide whether or not to regulate any of these contaminants.

However, given EPA's interest in protecting children's health, as part of the original provisions in UCMR 1, allowing State Governors to petition EPA to add contaminants to the UCMR Contaminant List, EPA requests Governors to include any information that might be available regarding disproportional risks to the health or safety of children. Such information will help inform EPA's decisionmaking regarding the UCMR contaminant list.

*H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use*

This rule is not a ''significant energy action'' as defined in Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355 (May 22, 2001)) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The frequency of required monitoring and testing in this rulemaking does not rise to the level of significant cost to drinking water utilities. Therefore, we have concluded that this rule is not likely to have any adverse energy costs.

*I. National Technology Transfer and Advancement Act*

As noted in the proposed rule, Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (''NTTAA''), Public Law No. 104–113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This rulemaking involves technical standards. Therefore, the Agency conducted a search to identify potentially applicable voluntary consensus standards. However, we identified no such standards, and none were brought to our attention in comments. Therefore, EPA has decided to use the methods development that the Agency conducted (described in Section III.C), which was necessary to establish acceptable methods for the determination of these UCMR 2 parameters.

*J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*

Executive Order 12898, ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (February 11, 1994), focuses Federal attention on the environmental and human health conditions of minority and low-income populations with the goal of achieving environmental protection for all communities.

By seeking to identify unregulated contaminants that may pose health risks via drinking water from all PWSs, UCMR furthers the protection of public health for all citizens, including minority and low-income populations using public water supplies. Using a statistically-derived set of systems for the nationally representative sample that is population-weighted within each system size category in each State, the final rule ensures that no group within the population is under-represented.

*K. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small

Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A Major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will be effective February 5, 2007.

## VII. Public Involvement in Regulation Development

EPA's Office of Ground Water and Drinking Water has developed a process for stakeholder involvement in its regulatory activities for the purpose of providing early input to regulation development. When designing and developing the UCMR program in the late 1990s, EPA held meetings for developing the CCL, establishing the information requirements of the NCOD, and selecting priority contaminants for monitoring. During the initial development of the UCMR program, stakeholders, including PWSs, States, industry, and other organizations attended meetings to discuss the UCMR. Seventeen other meetings were held specifically concerning UCMR development. For a description of public involvement activities related to the UCMR, please see the discussion in the September 1999 UCMR Final Rule **Federal Register** at 64 FR 50556 (USEPA, 1999).

Specific to the development of UCMR 2, a stakeholder meeting was held on October 29, 2003, in Washington, DC. There were 25 attendees, representing State agencies, Federal agencies, laboratories, PWSs, and drinking water associations. The topics of presentations and discussions included: Rationale for selecting a new list of proposed contaminants; analytical methods to be used in measuring these contaminants; sampling design, particularly for the Screening Survey monitoring; procedure for determining LCMRLs; validation of laboratory performance at or below the MRL; revisions to data elements; and other proposed revisions based on lessons learned during implementation of UCMR 1.

In addition to public involvement during program and proposed rule development, EPA received comments from 36 public commenters. EPA's responses to these comments are summarized in Sections III, IV and V of this preamble. EPA has compiled a document containing all public comments and EPA's responses entitled: ''UCMR 2 Categorized Public Comments,'' (USEPA, 2006b) which can be obtained by going to *http://www.regulations.gov* and searching for Docket ID No. OW–2004–0001 under the advanced search tab.

## VIII. References


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**List of Subjects**

*40 CFR Part 9*

Reporting and recordkeeping requirements.

*40 CFR Part 141*

Environmental protection, Chemicals, Incorporation by reference, Indians-lands, Intergovernmental relations, Radiation protection, Reporting and recordkeeping requirements, Water supply.

*40 CFR Part 142*

Analytical methods, Chemicals, Environmental Protection, Administrative practice and procedure, Chemicals, Indians-lands, Radiation Protection, Reporting and recordkeeping requirements, Water supply.

Dated: December 20, 2006.

**Stephen L. Johnson,**

*Administrator.*

■ For the reasons set out in the preamble, title 40, chapter 1 of the Code of Federal Regulations is amended as follows:

## PART 9—OMB APPROVALS UNDER THE PAPERWORK REDUCTION ACT

■ 1. The authority citation for part 9 continues to read as follows:

**Authority:** 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345(d) and (e); 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

■ 2. Section 9.1 is amended by revising the entries for ''141.35'' and ''141.40'' to read as follows:

**§ 9.1 OMB approvals under the Paperwork Reduction Act.**

* * * * *

| 40 CFR Citation | OMB Control No. |
|---|---|
| * * * * * | |
| National Primary Drinking Water Regulations | |
| * * * * * | |
| 141.35 | 2040–0270 |
| 141.40 | 2040–0270 |

* * * * *

## PART 141—NATIONAL PRIMARY DRINKING WATER REGULATIONS

■ 3. The authority citation for part 141 continues to read as follows:

**Authority:** 42 U.S.C. 300f, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–4, 300j–9, and 300j–11.

### Subpart C—[Amended]

■ 4. Section 141.24 is amended by revising paragraph (h) introductory text, removing footnote 7 of paragraph (h) introductory text, and by revising paragraph (h)(7)(v) to read as follows:

**§ 141.24 Organic chemicals, sampling and analytical requirements.**

* * * * *

(h) Analysis of the contaminants listed in § 141.61(c) for the purposes of determining compliance with the maximum contaminant level shall be conducted as follows, with the exception that no monitoring is required for aldicarb, aldicarb sulfoxide or aldicarb sulfone:

* * * * *

(7) * * *

(v) If the monitoring results in detection of one or more of certain related contaminants (heptachlor and heptachlor epoxide), then subsequent monitoring shall analyze for all related contaminants.

* * * * *

### Subpart D—[Amended]

■ 5. Section 141.35 is revised to read as follows:

**§ 141.35 Reporting for unregulated contaminant monitoring results.**

(a) *General applicability.* This section applies to any owner or operator of a public water system (PWS) required to monitor for unregulated contaminants under § 141.40(a); such owner or operator is referred to as ''you.'' This section specifies the information that must be reported to EPA prior to the commencement of monitoring and describes the process for reporting monitoring results to EPA. For the purposes of this section, PWS ''population served'' includes the sum of the retail population served directly by the PWS plus the population served by any consecutive system(s) receiving all or part of its finished water from that PWS. For purposes of this section, the term ''finished'' means water that is introduced into the distribution system of a PWS and is intended for distribution and consumption without further treatment, except the treatment necessary to maintain water quality in the distribution system (e.g., booster disinfection, addition of corrosion control chemicals). For purposes of this section, the term ''State'' refers to the State or Tribal government entity that has jurisdiction over your PWS even if that government does not have primary enforcement responsibility for PWSs under the Safe Drinking Water Act. For purposes of this section, the term ''PWS Official'' refers to the person at your PWS who is able to function as the official spokesperson for the system's Unregulated Contaminant Monitoring Regulation (UCMR) activities; and the term ''PWS Technical Contact'' refers to the person at your PWS who is responsible for the technical aspects of your UCMR activities, such as details concerning sampling and reporting.

(b) *Reporting by all systems.* You must meet the reporting requirements of this paragraph if you meet the applicability criteria in § 141.40(a)(2).

(1) *Where to submit UCMR reporting requirement information.* Some of your reporting requirements are to be fulfilled electronically, and others by mail. Information that must be submitted using EPA's electronic data reporting system must be submitted through: *http://www.epa.gov/safewater/ucmr/ucmr2/reporting.html.* Documentation that is required to be mailed can be submitted either: To UCMR Sampling Coordinator, USEPA, Technical Support Center, 26 West Martin Luther King Drive (MS 140), Cincinnati, OH 45268; or by e-mail at *UCMR_Sampling_Coordinator@epa.gov*; or by fax at (513) 569–7191. In addition, you must notify the public of the availability of unregulated contaminant

monitoring data as provided in Subpart Q (Public Notification) of this part (40 CFR 141.207). Community Water Systems that detect unregulated contaminants under this monitoring must also address such detections as part of their Consumer Confidence Reports, as provided in Subpart O of this part (40 CFR 141.151).

(2) *Contacting EPA if your system does not meet applicability criteria or has a status change.* If you have received a letter from EPA concerning your required monitoring and your system does not meet the applicability criteria for UCMR established in § 141.40(a)(2), or if a change occurs at your system that may affect your requirements under UCMR as defined in § 141.40(a)(3) through (5), you must fax, mail, or e-mail a letter to EPA, as specified in paragraph (b)(1) of this section. The letter must be from your PWS Official and must include an explanation as to why the UCMR requirements are not applicable to your PWS, or have changed for your PWS, along with the appropriate contact information. EPA will make an applicability determination based on your letter and in consultation with the State when necessary. You are subject to UCMR requirements unless and until you receive a letter from EPA agreeing that you do not meet the applicability criteria.

(c) *Reporting by large systems.* If you serve a population of more than 10,000 people, and meet the applicability criteria in § 141.40(a)(2)(i), you must meet the reporting requirements in paragraphs (c)(1) through (8) of this section.

(1) *Contact information.* You must provide contact information by April 4, 2007, and provide updates within 30 days if this information changes. The contact information must be submitted using EPA's electronic data reporting system, as specified in paragraph (b)(1) of this section, and include the name, affiliation, mailing address, phone number, fax number, and e-mail address for your PWS Technical Contact and your PWS Official.

(2) *Sampling location and inventory information.* You must provide your sampling location and inventory information by August 2, 2007 using EPA's electronic data reporting system. You must submit the following information for each sampling location, or for each approved representative sampling location (as specified in paragraph (c)(3) of this section regarding representative sampling locations): PWS identification (PWSID) code; PWS facility identification code; water source type, sampling point identification code; and sampling point type code; ( as defined in Table 1, paragraph (e) of this section). If this information changes, you must report updates to EPA's electronic data reporting system within 30 days of the change.

(3) *Proposed ground water representative sampling locations.* Some systems that use ground water as a source and have multiple entry points to the distribution system (EPTDSs) may propose monitoring at representative entry point(s), rather than monitor at every EPTDS, as follows:

(i) *Qualifications.* Large PWSs that have EPA- or State-approved alternate EPTDS sampling locations from a previous UCMR cycle, or as provided for under §§ 141.23(a)(1), 141.24(f)(1), or 141.24(h)(1), may submit a copy of documentation from their State or EPA that approves their alternative sampling plan for EPTDSs. PWSs that do not have an approved alternative EPTDS sampling plan may submit a proposal to sample at representative EPTDS(s) rather than at each individual EPTDS if: They use ground water as a source; all of their well sources have either the same treatment or no treatment; and they have multiple EPTDSs from the same source, such as an aquifer. You must submit a copy of the existing alternate EPTDS sampling plan or your representative well proposal, as appropriate, by May 4, 2007, as specified in paragraph (b)(1) of this section.

(ii) *Demonstration.* If you are submitting a proposal to sample at representative EPTDS(s) rather than at each individual EPTDS, you must demonstrate that any EPTDS that you select as representative of the ground water you supply from multiple wells is associated with a well that draws from the same aquifer as the wells it will represent. You must submit the following information for each proposed representative sampling location: PWSID Code, PWS Facility Identification Code, and Sampling Point Identification Code (as defined in Table 1, paragraph (e) of this section). You must also include documentation to support your proposal that the specified wells are representative of other wells. This documentation can include system-maintained well logs or construction drawings indicating that the representative well(s) is/are at a representative depth, and details of well casings and grouting; data demonstrating relative homogeneity of water quality constituents (e.g., pH, dissolved oxygen, conductivity, iron, manganese) in samples drawn from each well; and data showing that your wells are located in a limited geographic area (e.g., all wells within a 0.5 mile radius) and/or, if available, the hydrogeologic data indicating the time of travel separating the representative well from each of the individual wells it represents (e.g., all wells within a five-year time of travel delineation). Your proposal must be sent in writing to EPA, as specified in paragraph (b)(1) of this section. You must also provide a copy of this information to the State, unless otherwise directed by the State. Information about the actual or potential occurrence or non-occurrence of contaminants in an individual well, or a well's vulnerability to contamination, must not be used as a basis for selecting a representative well.

(iii) *Approval.* EPA or the State (as specified in the Partnership Agreement reached between the State and EPA) will review your proposal, coordinate any necessary changes with you, and approve the final list of EPTDSs where you will be required to monitor. Your plan will not be final until you receive written approval from EPA or the State.

(4) *Contacting EPA if your PWS has not been notified of requirements.* If you believe you are subject to UCMR requirements, as defined in § 141.40(a)(1) and (2)(i), and you have not been notified by either EPA or your State by June 4, 2007, you must send a letter to EPA, as specified in paragraph (b)(1) of this section. The letter must be from your PWS Official and must include an explanation as to why the UCMR requirements are applicable to your system along with the appropriate contact information. A copy of the letter must also be submitted to the State, as directed by the State. EPA will make an applicability determination based on your letter, and in consultation with the State when necessary, and will notify you regarding your applicability status and required sampling schedule. However, if your PWS meets the applicability criteria specified in § 141.40(a)(2)(i), you are subject to the UCMR monitoring and reporting requirements, regardless of whether you have been notified by the State or EPA.

(5) *Notifying EPA if your PWS cannot sample according to schedule.*

(i) *General rescheduling notification requirements.* Large systems may change their Assessment Monitoring (List 1) or Screening Survey (List 2) schedule up to August 2, 2007 using EPA's electronic data reporting system, as specified in paragraph (b)(1) of this section. After these dates have passed, if your PWS cannot sample according to your assigned sampling schedule (e.g., because of budget constraints, or if a sampling location will be closed during the scheduled month of monitoring),

you must fax, mail, or e-mail a letter to EPA, as specified in paragraph (b)(1) of this section, prior to the scheduled sampling date. You must include an explanation of why the samples cannot be taken according to the assigned schedule and the alternative schedule you are requesting. You are subject to your assigned UCMR sampling schedule or the schedule that you revised on or before August 2, 2007, unless and until you receive a letter from EPA specifying a new schedule.

(ii) *Exceptions to the rescheduling notification requirements.* For ground water sampling, if the second round of sampling will be completed five to seven months after the first sampling event, as specified in Table 2 of § 141.40(a)(4)(i)(B), no notification to EPA is required. If any ground water sampling location will be non-operational for more than one month before and one month after the month in which the second sampling event is scheduled (i.e., it is not possible for you to sample within the five to seven month window), you must notify EPA, as specified in paragraph (b)(1) of this section, explaining why the schedule cannot be met. You must comply with any modified schedule provided by EPA.

(6) *Reporting monitoring results.* For each sample, you must report the information specified in Table 1 of paragraph (e) of this section, using EPA's electronic data reporting system, as follows. If you are conducting Assessment Monitoring, you must include data elements 1 through 5, and 7 through 15 in paragraph (e) of this section; and if you are conducting Screening Survey monitoring, you must include elements 1 through 15. You also must report any changes made to data elements 1 through 6 to EPA, in writing, explaining the nature and purpose of the proposed change, as specified in paragraph (b)(1) of this section.

(i) *Electronic reporting system.* You are responsible for ensuring that the laboratory conducting the analysis of your unregulated contaminant monitoring samples (your laboratory) posts the analytical results to EPA's electronic reporting system. You are also responsible for reviewing, approving, and submitting those results to EPA.

(ii) *Reporting schedule.* You must ensure that your laboratory posts the data to EPA's electronic data reporting system within 120 days from the sample collection date (sample collection must occur as specified in § 141.40(a)(4)). You have 60 days from when the laboratory posts the data in EPA's electronic data reporting system to review, approve, and submit the data to the State and EPA, at the Web address specified in paragraph (b)(1) of this section. If you do not take action on the data within 60 days of the laboratory's posting to the electronic reporting system, the data will be considered approved by you, and available for EPA and State review.

(7) *Only one set of results accepted.* If you report more than one set of valid results for the same sampling location and the same sampling event (for example, because you have had more than one laboratory analyze replicate samples collected under § 141.40(a)(5), or because you have collected multiple samples during a single monitoring event at the same sampling location), EPA will use the highest of the reported values as the official result.

(8) *No reporting of previously collected data.* You cannot report previously collected data to meet the testing and reporting requirements for the contaminants listed in § 141.40(a)(3). All analyses must be performed by laboratories approved by EPA to perform UCMR analyses using the analytical methods specified in Table 1 of § 141.40(a)(3) and using samples collected according to § 141.40(a)(4). Such requirements preclude the possibility of ''grandfathering'' previously collected data.

(d) *Reporting by small systems.* If you serve a population of 10,000 or fewer people, and you are notified that you have been selected for UCMR monitoring, your reporting requirements will be specified within the materials that EPA sends you, including a request for contact information, and a request for information associated with the sampling kit.

(1) *Contact information.* EPA will send you a notice requesting contact information for key individuals at your system, including name, affiliation, mailing address, phone number, fax number, and e-mail address. These individuals include your PWS Technical Contact and your PWS Official. You are required to provide this information within 90 days of receiving the notice from EPA as specified in paragraph (b)(1) of this section. If this information changes, you also must provide updates within 30 days of the change, as specified in paragraph (b)(1) of this section.

(2) *Reporting sampling information.* You must record data elements listed in Table 1 of paragraph (e) of this section on each sample form and sample bottle provided to you by the UCMR Sampling Coordinator, as follows: If you are conducting Assessment Monitoring, you must include elements 1 through 5, and 7; if you are conducting Screening Survey, you must include elements 1 through 7. You must send this information as specified in the instructions of your sampling kit, which will include the due date and return address. You must report any changes made in data elements 1 through 6 by mailing or e-mailing an explanation of the nature and purpose of the proposed change to EPA, as specified in paragraph (b)(1) of this section.

(e) *Data elements.* Table 1 defines the data elements that must be provided with UCMR sample results.

TABLE 1.—UNREGULATED CONTAMINANT MONITORING REPORTING REQUIREMENTS

| Data element | Definition |
|---|---|
| 1. Public Water System Identification (PWSID) Code ..... | The code used to identify each PWS. The code begins with the standard 2-character postal State abbreviation or Region code; the remaining 7 numbers are unique to each PWS in the State. The same identification code must be used to represent the PWS identification for all current and future UCMR monitoring. |
| 2. Public Water System Facility Identification Code ..... | An identification code established by the State or, at the State's discretion, by the PWS, following the format of a 5-digit number unique within each PWS for each applicable facility (i.e., for each source of water, treatment plant, distribution system, or any other facility associated with water treatment or delivery). The same identification code must be used to represent the facility for all current and future UCMR monitoring. |
| 3. Water Source Type ..... | The type of source water that supplies a water system facility. Systems must report one of the following codes for each sampling location: |

TABLE 1.—UNREGULATED CONTAMINANT MONITORING REPORTING REQUIREMENTS—Continued

| Data element | Definition |
|---|---|
| | **SW** = surface water (to be reported for water facilities that are served all or in part by a surface water source at any time during the twelve-month period).<br>**GW** = ground water (to be reported for water facilities that are served entirely by a ground water source).<br>**GU** = ground water under the direct influence of surface water (to be reported for water facilities that are served all or in part by ground water under the direct influence of surface water at any time during the twelve-month sampling period), and are not served at all by surface water during this period. |
| 4. Sampling Point Identification Code | An identification code established by the State, or at the State's discretion, by the PWS, that uniquely identifies each sampling point. Each sampling code must be unique within each applicable facility, for each applicable sampling location (i.e., entry point to the distribution system or distribution system sample at maximum residence time). The same identification code must be used to represent the sampling location for all current and future UCMR monitoring. |
| 5. Sampling Point Type Code | A code that identifies the location of the sampling point as either:<br>**EP** = entry point to the distribution system.<br>**MR** = distribution system sample at maximum residence time. |
| 6. Disinfectant Residual Type | The type of disinfectant in use at the time of UCMR sampling to maintain a residual in the distribution system for each Screening Survey sampling point. To be reported by systems required to conduct Screening Survey monitoring. Systems must report using the following codes for each Screening Survey sampling location (i.e., EP, MR):<br>**CL** = chlorine<br>**CA** = chloramine<br>**OT** = all other types of disinfectant (e.g., chlorine dioxide)<br>**ND** = no disinfectant used. |
| 7. Sample Collection Date | The date the sample is collected, reported as 4-digit year, 2-digit month, and 2-digit day. |
| 8. Sample Identification Code | An alphanumeric value up to 30 characters assigned by the laboratory to uniquely identify containers, or groups of containers, containing water samples collected at the same sampling location for the same sampling date. |
| 9. Contaminant | The unregulated contaminant for which the sample is being analyzed. |
| 10. Analytical Method Code | The identification code of the analytical method used. |
| 11. Sample Analysis Type | The type of sample collected and/or prepared, as well as the fortification level. Permitted values include:<br>**FS** = field sample; sample collected and submitted for analysis under this rule.<br>**LFSM** = laboratory fortified sample matrix; a UCMR field sample with a known amount of the contaminant of interest added.<br>**LFSMD** = laboratory fortified sample matrix duplicate; duplicate of the laboratory fortified sample matrix.<br>**CF** = concentration fortified; reported with sample analysis types LFSM and LFSMD, the concentration of a known contaminant added to a field sample. |
| 12. Analytical Results—Sign | A value indicating whether the sample analysis result was:<br>(<) ''less than'' means the contaminant was not detected, or was detected at a level below the Minimum Reporting Level.<br>(=) ''equal to'' means the contaminant was detected at the level reported in ''Analytical Result—Value.'' |
| 13. Analytical Result—Value | The actual numeric value of the analytical results for: field samples; laboratory fortified matrix samples; laboratory fortified sample matrix duplicates; and concentration fortified. |
| 14. Laboratory Identification Code | The code, assigned by EPA, used to identify each laboratory. The code begins with the standard two-character State postal abbreviation; the remaining five numbers are unique to each laboratory in the State. |
| 15. Sample Event Code | A code assigned by the PWS for each sample event. This will associate samples with the PWS monitoring plan to allow EPA to track compliance and completeness. Systems must assign the following codes:<br>**SE1** = represents samples collected to meet the UCMR monitoring requirement for the first sampling period (all source types).<br>**SE2** = represents samples collected to meet the UCMR monitoring requirement for the second sampling period (all source types).<br>**SE3** = represents samples collected to meet the UCMR monitoring requirement for the third sampling period (surface water and ground water under the direct influence of surface water (GWUDI) sources only).<br>**SE4** = represents samples collected to meet the UCMR monitoring requirement for the fourth sampling period (surface water and GWUDI sources only). |

**Subpart E—[Amended]**

■ 4. Section 141.40 is revised to read as follows:

**§ 141.40 Monitoring requirements for unregulated contaminants.**

(a) *General applicability.* This section specifies the monitoring and quality control requirements that must be followed if you own or operate a public water system (PWS) that is subject to the Unregulated Contaminant Monitoring Regulation (UCMR), as specified in paragraphs (a)(1) and (2) of this section. In addition, this section specifies the UCMR requirements for State and Tribal participation. For the purposes of this section, PWS ''population served,'' ''State,'' '' PWS Official,'' ''PWS Technical Contact,'' and ''finished water'' apply as defined in § 141.35(a). The determination of whether a PWS is required to monitor under this rule is based on the type of system (e.g., community water system, non-transient non-community water system, etc.); whether the system purchases all of its water, as finished water, from another system; and its population served as of June 30, 2005.

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

(2) *Applicability to community water systems and non-transient non-community water systems.*

(i) *Large systems.* If you own or operate a wholesale or retail PWS (other than a transient non-community system) that serves more than 10,000 people, and do not purchase your entire water supply as finished water from another PWS, you must monitor according to the specifications in this paragraph (a)(2)(i). If you believe that your applicability status is different than EPA has specified in the notification letter that you received, or if you are subject to UCMR requirements and you have not been notified by either EPA or your State, you must report to EPA, as specified in § 141.35(b)(2) or (c)(4).

(A) Assessment Monitoring. You must monitor for the unregulated contaminants on List 1 of Table 1, UCMR Contaminant List, in paragraph (a)(3) of this section. If you serve a population of more than 10,000 people, you are required to perform this monitoring regardless of whether you have been notified by the State or EPA.

(B) Screening Survey. You must monitor for the unregulated contaminants on List 2 (Screening Survey) of Table 1, as specified in paragraph (a)(3) of this section, if your system serves 10,001 to 100,000 people and you are notified by EPA or your State that you are part of the State Monitoring Plan for Screening Survey testing. If your system serves more than 100,000 people, you are required to conduct this Screening Survey testing regardless of whether you have been notified by the State or EPA.

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

(ii) *Small systems.* Small PWSs, as defined in this paragraph, will not be selected to monitor for any more than one of the three monitoring lists provided in Table 1, UCMR Contaminant List, in paragraph (a)(3) of this section. EPA will provide sample containers, provide pre-paid air bills for shipping the sampling materials, conduct the laboratory analysis, and report and review monitoring results for all small systems selected to conduct monitoring under paragraphs (a)(2)(ii)(A) through (C) of this section. If you own or operate a PWS (other than a transient system) that serves 10,000 or fewer people and do not purchase your entire water supply from another PWS, you must monitor as follows:

(A) Assessment Monitoring. You must monitor for the unregulated contaminants on List 1 of Table 1, 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 Assessment Monitoring.

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

(C) Pre-Screen Testing. You must monitor for the unregulated contaminants on List 3 of Table 1, 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 Pre-Screen Testing.

(3) *Analytes to be monitored.* Lists 1, 2, and 3 of unregulated contaminants are provided in the following table:

TABLE 1.—UCMR CONTAMINANT LIST

[List 1: Assessment Monitoring Chemical Contaminants]

| 1—Contaminant | 2—CAS registry number | 3—Analytical methods [a] | 4—Minimum reporting level [b] | 5—Sampling location [c] | 6—Period during which monitoring to be completed |
|---|---|---|---|---|---|
| Dimethoate | 60–51–5 | EPA 527 [d] | 0.7 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| Terbufos sulfone | 56070–16–7 | EPA 527 [d] | 0.4 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| 2,2′,4,4′-tetrabromodiphenyl ether (BDE–47). | 5436–43–1 | EPA 527 [d] | 0.3 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| 2,2′,4,4′,5-pentabromodiphenyl ether (BDE–99). | 60348–60–9 | EPA 527 [d] | 0.9 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| 2,2′,4,4′,5,5′-hexabromobiphenyl (HBB) | 59080–40–9 | EPA 527 [d] | 0.7 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| 2,2′,4,4′,5,5′-hexabromodiphenyl ether (BDE–153). | 68631–49–2 | EPA 527 [d] | 0.8 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| 2,2′,4,4′,6-pentabromodiphenyl ether (BDE–100). | 189084–64–8 | EPA 527 [d] | 0.5 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| 1,3-dinitrobenzene | 99–65–0 | EPA 529 [e] | 0.8 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| 2,4,6-trinitrotoluene (TNT) | 118–96–7 | EPA 529 [e] | 0.8 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX). | 121–82–4 | EPA 529 [e] | 1 µg/L | EPTDS | 1/1/2008–12/31/2010 |

TABLE 1.—UCMR CONTAMINANT LIST

[List 2: Screening Survey Chemical Contaminants

| 1—Contaminant | 2—CAS registry number | 3—Analytical methods [a] | 4—Minimum reporting level [b] | 5—Sampling location [c] | 6—Period during which monitoring to be completed |
|---|---|---|---|---|---|
| **Acetanilide Pesticide Degradation Products** | | | | | |
| Acetochlor ESA | 187022–11–3 | EPA 535 [f] | 1 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| Acetochlor OA | 184992–44–4 | EPA 535 [f] | 2 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| Alachlor ESA | 142363–53–9 | EPA 535 [f] | 1 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| Alachlor OA | 171262–17–2 | EPA 535 [f] | 2 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| Metolachlor ESA | 171118–09–5 | EPA 535 [f] | 1 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| Metolachlor OA | 152019–73–3 | EPA 535 [f] | 2 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| **Acetanilide Pesticide Parent Compounds** | | | | | |
| Acetochlor | 34256–82–1 | EPA 525.2 [g] | 2 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| Alachlor | 15972–60–8 | EPA 525.2 [g] | 2 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| Metolachlor | 51218–45–2 | EPA 525.2 [g] | 1 µg/L | EPTDS | 1/1/2008–12/31/2010 |
| **Nitrosamines** | | | | | |
| N-nitrosodiethylamine (NDEA) | 55–18–5 | EPA 521 [h] | 0.005 µg/L | DSMRT and EPTDS | 1/1/2008–12/31/2010 |
| N-nitroso-dimethylamine (NDMA) | 62–75–9 | EPA 521 [h] | 0.002 µg/L | DSMRT and EPTDS | 1/1/2008–12/31/2010 |
| N-nitroso-di-n-butylamine (NDBA) | 924–16–3 | EPA 521 [h] | 0.004 µg/L | DSMRT and EPTDS | 1/1/2008–12/31/2010 |
| N-nitroso-di-n-propylamine (NDPA) | 621–64–7 | EPA 521 [h] | 0.007 µg/L | DSMRT and EPTDS | 1/1/2008–12/31/2010 |
| N-nitroso-methylethylamine (NMEA) | 10595–95–6 | EPA 521 [h] | 0.003 µg/L | DSMRT and EPTDS | 1/1/2008–12/31/2010 |
| N-nitrosopyrrolidine (NPYR) | 930–55–2 | EPA 521 [h] | 0.002 µg/L | DSMRT and EPTDS | 1/1/2008–12/31/2010 |
| Reserved [i] | Reserved [i] | Reserved [i] | Reserved [i] | Reserved [i] | Reserved [i] |

Column headings are:
1—Contaminant: The name of the contaminant to be analyzed.
2—CAS (Chemical Abstract Service) Registry Number 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 of the contaminant must be measured using the approved analytical methods.
5—Sampling Location: The locations within a PWS at which samples must be collected.
6—Period During Which Monitoring to Be Completed: The dates during which the sampling and testing are to occur for the indicated contaminant.

The analytical procedures shall be performed in accordance with the documents associated with each method (per the following footnotes). The incorporation by reference of the following documents listed in footnotes d—h was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Information on how to obtain these documents can be provided by the Safe Drinking Water Hotline at (800) 426–4791. Documents may be inspected at EPA's Drinking Water Docket, 1301 Constitution Avenue, NW., EPA West, Room B102, Washington, DC 20460, Telephone: (202) 566–2426; or at the National Archives and Records Administration (NARA). For information on availability of this material at NARA, call 202–741–6030, or go to:*http://www.archives.gov/federal-register/index.html.*

[a] The version of the EPA methods which you must follow for this Regulation are listed in d—h as follows.

[b] The Minimum Reporting Level (MRL) was established by EPA by adding the mean of the Lowest Concentration Minimum Reporting Levels (LCMRL) determined according to the procedure detailed in ''Statistical Protocol for the Determination of The Single-Laboratory Lowest Concentration Minimum Reporting Level (LCMRL) and Validation of the Minimum Reporting Level (MRL)'' by the primary and secondary laboratories conducting the development and validation of the analytical method to three times the difference of the LCMRLs. If LCMRL data from three or more laboratories were available, the MRL was established by EPA by adding three times the standard deviation of the LCMRLs to the mean of the LCMRLs. Note that EPA Method 525.2 was developed prior to UCMR 2, hence the LCMRLs were not determined for analytes determined by this method.

[c] Sampling must occur at entry points to the distribution system (EPTDSs) after treatment is applied that represent each non-emergency water source in routine use over the 12-month period of monitoring. See 40 CFR 141.35(c)(3) for an explanation of the requirements related to use of representative EPTDSs. Sampling for nitrosamines on List 2 must also occur at the disinfection byproduct distribution system maximum residence time (DSMRT) sampling locations as defined in 40 CFR 141.132(b)(1)(i) and at EPTDS sampling locations. If a treatment plant/water source is not subject to the sampling required in 40 CFR 141.132(b)(1), then the samples for nitrosamines must be collected only at the EPTDS location(s).

[d] EPA Method 527 ''Determination of Selected Pesticides and Flame Retardants in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS),'' Revision 1.0, April 2005 is available at *http://www.epa.gov/safewater/methods/sourcalt.html.*

[e] EPA Method 529 ''Determination of Explosives and Related Compounds in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS),'' Revision 1.0, September 2002 is available at *http://www.epa.gov/nerlcwww/ordmeth.htm.*

[f] EPA Method 535 '' Measurement of Chloroacetanilide and Other Acetamide Herbicide Degradates in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS),'' Version 1.1, April 2005 is available at *http://www.epa.gov/nerlcwww/ordmeth.htm.*

[g] EPA Method 525.2 ''Determination of Organic Compounds in Drinking Water by Liquid-Solid Extraction and Capillary Column Gas Chromatography/Mass Spectrometry,'' Revision 2.0, 1995 is available at *http://www.NEMI.gov.*

[h] EPA Method 521 ''Determination of Nitrosamines in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography with Large Volume Injection and Chemical Ionization Tandem Mass Spectrometry (MS/MS),'' Version 1.0, September 2004 is available at *http://www.epa.gov/nerlcwww/ordmeth.htm.*

[i] To be determined at a later time.

(4) *Sampling requirements.*

(i) *Large systems.* If you serve more than 10,000 people and meet the UCMR applicability criteria specified in paragraph (a)(2)(i) of this section, you must comply with the requirements specified in paragraphs (a)(4)(i)(A) through (I) of this section. Your samples must be collected according to the

schedule that you are assigned by EPA or your State, or the schedule that you revised using EPA's electronic data reporting system on or before August 2, 2007. Your schedule must follow both the timing and frequency of monitoring specified in Tables 1 and 2 of this section.

(A) Monitoring period. You must collect the samples in one continuous 12-month period for List 1 Assessment Monitoring, and, if applicable, for List 2 Screening Survey, or List 3 Pre-Screen Testing, during the time frame indicated in column 6 of Table 1, in paragraph (a)(3) of this section. EPA or your State will specify the month(s) and year(s) in which your monitoring must occur. As specified in § 141.35(c)(5), you must contact EPA if you believe you cannot conduct monitoring according to your schedule.

(B) Frequency. You must collect the samples within the time frame and according to the frequency specified by contaminant type and water source type for each sampling location, as specified in Table 2, in this paragraph, with the following exception. For the second round of ground water sampling, if a sample location is non-operational for more than one month before and one month after the scheduled sampling month (i.e., it is not possible for you to sample within the five to seven month window specified the Table 2, in this paragraph), you must notify EPA as specified in § 141.35(c)(5).

TABLE 2.—MONITORING FREQUENCY BY CONTAMINANT AND WATER SOURCE TYPES

| Contaminant type | Water source type | Time frame | Frequency |
|---|---|---|---|
| Chemical | Surface water or ground water under the direct influence of surface water (GWUDI) (includes all sampling locations for which some or all of the water comes from a surface water or GWUDI source at any time during the 12 month monitoring period). | 12 months | You must monitor for 4 consecutive quarters. Sample events must occur 3 months apart. |
| | Ground water | 12 months | You must monitor twice in a consecutive 12-month period. Sample events must occur 5–7 months apart. |

(C) Location. You must collect samples for each List 1 Assessment Monitoring contaminant, and, if applicable, for each List 2 Screening Survey, or List 3 Pre-Screen Testing contaminant, as specified in Table 1, in paragraph (a)(3) of this section. Samples must be collected at each sample point that is specified in column 5 of Table 1, in paragraph (a)(3) of this section. If you are a ground water system with multiple EPTDSs, and you request and receive approval from EPA or the State for sampling at representative EPTDS(s), as specified in § 141.35(c)(3), you must collect your samples from the approved representative sampling location(s). Systems conducting Screening Survey monitoring must also sample for nitrosamines at the disinfection byproduct distribution system maximum residence time (DSMRT) sampling location(s) if they are subject to sampling requirements in § 141.132(b)(1).

(D) Sampling instructions. For each List 1 Assessment Monitoring contaminant, and, if applicable, for each List 2 Screening Survey, or List 3 Pre-Screen Testing contaminant, you must follow the sampling procedure for the method specified in column 3 of Table 1, in paragraph (a)(3) of this section. In addition, you must not composite (that is, combine, mix, or blend) the samples; you must collect and preserve each sample separately. Samples collected for the analysis of Acetanilide ''parent'' pesticides and their degradation products (Methods 525.2 and 535) must be collected at the same sampling point, at the same time.

(E) Sample collection and shipping time. If you must ship the samples for analysis, you must collect the samples early enough in the day to allow adequate time to send the samples for overnight delivery to the laboratory. You should not collect samples on Friday, Saturday, or Sunday because sampling on these days may not allow samples to be shipped and received at the laboratory at the required temperature, unless you have made special arrangements with your laboratory to receive the samples.

(F) Analytical methods. For each contaminant, you must use the respective analytical methods for List 1, and, if applicable, for List 2, or List 3 that are specified in column 3 of Table 1, in paragraph (a)(3) of this section; report values at or above the minimum reporting levels for List 1, and, if applicable, for List 2 Screening Survey, or List 3 Pre-Screen Testing, that are specified in column 4 of Table 1, in paragraph (a)(3) of this section; and conduct the quality control procedures specified in paragraph (a)(5) of this section.

(G) Laboratory errors or sampling deviations. If the laboratory data do not meet the required QC criteria, as specified in paragraph (a)(5) of this section, or you do not follow the required sampling procedures, as specified in paragraphs (a)(4) of this section, you must resample within 30 days of being informed or becoming aware of these facts. This resampling is not for the purpose of confirming previous results, but to correct the sampling or laboratory error. All systems must report the results obtained from the first sampling for each sampling period, except for cases of sampling or laboratory errors. For the purposes of this rule, no samples are to be recollected for the purposes of confirming the results observed in a previous sampling.

(H) Analysis. For the List 1 contaminants, and, if applicable, List 2 Screening Survey, or List 3 Pre-Screen Testing contaminants, identified in Table 1, paragraph (a)(3) of this section, you must arrange for testing by a laboratory that has been approved by EPA according to requirements in paragraph (a)(5)(ii) of this section.

(I) Review and reporting of results. After you have received the laboratory results, you must review, approve, and submit the system information, and sample collection data and test results. You must report the results as provided in § 141.35(c)(6).

(ii) *Small systems.* If you serve 10,000 or fewer people and are notified that you are part of the State Monitoring Plan for Assessment Monitoring, Screening Survey or Pre-Screen monitoring, you must comply with the requirements specified in paragraphs (a)(4)(i)(A) through (H) of this section. If EPA or the State informs you that they

will be collecting your UCMR samples, you must assist them in identifying the appropriate sampling locations and in collecting the samples.

(A) Monitoring period and frequency. You must collect samples at the times specified for you by the State or EPA. Your schedule must follow both the timing of monitoring specified in Table 1, List 1, and, if applicable, List 2, or List 3, and the frequency of monitoring in Table 2 of this section.

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

(C) Sample kits. You must store and maintain the sample collection kits sent to you by the UCMR Sampling Coordinator in accordance with the kit's instructions. 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 in the kit or arrive damaged, you must notify the UCMR Sampling Coordinator who sent you the sample collection kits.

(D) 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 preparation of sample and shipping containers for shipment. You must not composite (that is, combine, mix, or blend) the samples. You also must collect, preserve, and test each sample separately. You must also comply with the instructions sent to you by the UCMR Sampling Coordinator concerning the handling of sample containers for specific contaminants.

(E) Sampling deviations. If you do not collect a sample according to the instructions provided to you for a listed contaminant, you must report the deviation within 7 days of the scheduled monitoring on the sample reporting form, as specified in § 141.35(d)(2). You must resample following instructions that you will be sent from the UCMR Sampling Coordinator or State. A copy of the form must be sent to the laboratory with the recollected samples, and to the UCMR Sampling Coordinator.

(F) Duplicate samples. EPA will select a subset of 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 for an individual sampling location 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 each of the sampling forms and bottles sent to you by the UCMR Sampling Coordinator, including data elements listed in § 141.35(e) for each sample. If you are conducting Assessment Monitoring, you must include elements 1 through 5, and 7; and if you are conducting Screening Survey, you must include elements 1 through 7. You must sign and date the sampling forms.

(H) Sample collection and shipping. You must collect the samples early enough in the day to allow adequate time to send the samples for overnight delivery to the laboratory. You should not collect samples on Friday, Saturday, or Sunday because sampling on these days may not allow samples to be shipped and received at the laboratory at the required temperature unless you have made special arrangements with EPA for the laboratory to receive the samples. 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 on the air bill.

(5) *Quality control requirements.* If your system serves more than 10,000 people, you must ensure that the quality control requirements listed below are met during your sampling procedures and by the laboratory conducting your analyses. You must also ensure that all method quality control procedures and all UCMR quality control procedures are followed.

(i) *Sample collection/preservation.* You must follow the sample collection and preservation requirements for the specified method for each of the contaminants in Table 1, 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 you must assure that the laboratory follow.

(ii) *Laboratory approval for Lists 1, List 2 and List 3.* To be approved to conduct UCMR testing, the laboratory must be certified under § 141.28 for one or more compliance analyses; demonstrate for each analytical method it plans to use for UCMR testing that it can meet the Initial Demonstration of Capability (IDC) requirements detailed in the analytical methods specified in column 3 of Table 1, in paragraph (a)(3) of this section; and successfully participate in the UCMR Proficiency Testing (PT) Program administered by EPA for each analytical method it plans to use for UCMR testing. UCMR laboratory approval decisions will be granted on an individual method basis for the methods listed in column 3 of Table 1 in paragraph (a)(3) of this section for List 1, List 2, and List 3 contaminants. Laboratory approval is contingent upon the capability of the laboratory to post monitoring data to the EPA electronic data reporting system. To participate in the UCMR Laboratory Approval Program, the laboratory must complete and submit the necessary registration forms by April 4, 2007. Correspondence must be addressed to: UCMR 2 Laboratory Approval Coordinator, USEPA, Technical Support Center, 26 West Martin Luther King Drive (MS 140), Cincinnati, OH 45268; or e-mailed to EPA at *UCMR_Sampling_Coordinator@epa.gov*.

(iii) *Minimum Reporting Level.* The MRL is the lowest analyte concentration for which future recovery is predicted to fall, with high confidence (at least 99%), between 50% and 150% recovery.

(A) Validation of laboratory performance. Your laboratory must be capable of quantifying each contaminant listed in Table 1, at or below the MRL specified in column 4 of Table 1, in paragraph (a)(3) of this section. You must ensure that the laboratory completes and has on file and available for your inspection, records of two distinct procedures. First, your laboratory must have conducted an IDC involving replicate analyses at or below the MRL as described in this paragraph. Second, for each day that UCMR analyses are conducted by your laboratory, a validation of its ability to quantify each contaminant, at or below the MRL specified in column 4 of Table 1, in paragraph (a)(3) of this section, following the procedure listed in paragraph (a)(5)(iii)(B) of this section, must be performed. The procedure for initial validation of laboratory performance at or below the MRL is as follows:

*(1)* All laboratories using EPA drinking water methods under UCMR must demonstrate that they are capable of meeting data quality objectives (DQOs) at or below the MRL listed in Table 1, column 4, in paragraph (a)(3) of this section.

(*2*) The MRL, or any concentration below the MRL, at which performance is being evaluated, must be contained within the range of calibration. The calibration curve regression model and the range of calibration levels that are used in these performance validation steps must be used in all routine sample

analyses used to comply with this regulation. Only straight line or quadratic regression models are allowed. The use of either weighted or unweighted models is permitted. The use of cubic regression models is not permitted.

(*3*) Replicate analyses of at least seven (7) fortified samples in reagent water must be performed at or below the MRL for each analyte, and must be processed through the entire method procedure (*i.e.*, including extraction, where applicable, and with all preservatives).

(*4*) A prediction interval of results (PIR), which is based on the estimated arithmetic mean of analytical results and the estimated sample standard deviation of measurement results, must be determined by Equation 1:

$$\text{Equation 1} \qquad PIR = Mean \pm s \times t_{(df,\ 1-\alpha/2)} \times \sqrt{1+\frac{1}{n}}$$

Where:

*t* is the Student's *t* value with *df* degrees of freedom and confidence level (1–α),
*s* is the sample standard deviation of *n* replicate samples fortified at the MRL,
*n* is the number of replicates.

(*5*) The values needed to calculate the PIR using Equation 1 are: Number of replicates (*n*); Student's *t* value with a two-sided 99% confidence level for *n* number of replicates; the average (mean) of at least seven replicates; and the sample standard deviation. Factor 1 is referred to as the Half Range PIR ($HR_{PIR}$).

$$HR_{PIR} = s \times t_{(df,\ 1-\alpha/2)} \times \sqrt{1+\frac{1}{n}}$$

For a certain number of replicates and for a certain confidence level in Student's *t*, this factor

$$C = t_{(df,\ 1-\alpha/2)} \times \sqrt{1+\frac{1}{n}}$$

is constant, and can be tabulated according to replicate number and confidence level for the Student's *t*. Table 3 in this paragraph lists the constant factor (*C*) for replicate sample numbers 7 through 10 with a confidence level of 99% for Student's *t*.

(*6*) The HRPIR is calculated by Equation 2:

$$\text{Equation 2} \qquad HR_{PIR} = s \times C$$

(*7*) The PIR is calculated by Equation 3:

$$\text{Equation 3} \qquad PIR = Mean \pm HR_{PIR}$$

TABLE 3.—THE CONSTANT FACTOR (C) TO BE MULTIPLIED BY THE STANDARD DEVIATION TO DETERMINE THE HALF RANGE INTERVAL OF THE PIR (STUDENT'S t 99% CONFIDENCE LEVEL) [a]

| Replicates | Degrees of freedom | Constant factor (C) to be multiplied by the standard deviation |
|---|---|---|
| 7 | 6 | 3.963 |
| 8 | 7 | 3.711 |
| 9 | 8 | 3.536 |
| 10 | 9 | 3.409 |

[a] The critical *t*-value for a two-sided 99% confidence interval is equivalent to the critical *t*-value for a one-sided 99.5% confidence interval, due to the symmetry of the *t*-distribution. PIR = Prediction Interval of Results.

(*8*) The lower and upper result limits of the PIR must be converted to percent recovery of the concentration being tested. To pass criteria at a certain level, the PIR lower recovery limits cannot be lower than the lower recovery limits of the QC interval (50%), and the PIR upper recovery limits cannot be greater than the upper recovery limits of the QC interval (150%). When either of the PIR recovery limits falls outside of either bound of the QC interval of recovery (higher than 150% or less than 50%), laboratory performance is not validated at the concentration evaluated. If the PIR limits are contained within both bounds of the QC interval, laboratory performance is validated for that analyte.

(B) Quality control requirements for validation of laboratory performance at or below the MRL.

(*1*) You must ensure that the calibration curve regression model and that the range of calibration levels that are used in these performance validation steps are used in future routine sample analysis. Only straight line or quadratic regression models are allowed. The use of either weighted or unweighted models is permitted. The use of cubic regression models is not permitted.

(*2*) You must ensure, once your laboratory has performed an IDC as specified in each analytical method (demonstrating that DQOs are met at or below an MRL), that a daily performance check is performed for each analyte and method. A single laboratory blank, fortified at or below the MRL for each analyte, must be processed through the entire method procedure. The measured concentration for each analyte must be converted to a percent recovery, and if the recovery is within 50%–150% (inclusive), the daily performance of the laboratory has been validated. The results for any analyte for which 50%–150% recovery cannot be demonstrated during the daily check are not valid. Laboratories may elect to re-run the daily performance check sample if the performance for any analyte or analytes cannot be validated. If performance is validated for these analytes, the laboratory performance is considered validated. Alternatively, the laboratory may re-calibrate and repeat the performance validation process for all analytes.

(iv) *Laboratory fortified sample matrix and laboratory fortified sample matrix duplicate.* You must ensure that your laboratory prepares and analyzes the Laboratory Fortified Sample Matrix

(LFSM) sample for accuracy and Laboratory Fortified Sample Matrix Duplicate (LFSMD) samples for precision to determine method accuracy and precision for all contaminants in Table 1, in paragraph (a)(3) of this section. LFSM/LFSMD samples must be prepared using a sample collected and analyzed in accordance with UCMR 2 requirements and analyzed at a frequency of 5% (or 1 LFSM/LFSMD set per every 20 samples) or with each sample batch, whichever is more frequent. In addition, the LFSM/LFSMD fortification concentrations must be alternated between a low-level fortification and mid-level fortification approximately 50% of the time. (For example: A set of 40 samples will require preparation and analysis of 2 LFSM/LFSMD sets. The first set must be fortified at either the low-level or mid-level, and the second set must be fortified with the other standard, either the low-level or mid-level, whichever was not used for the initial LFSM/LFSMD set.) The low-level LFSM/LFSMD fortification concentration must be within ±50% of the MRL for each contaminant (e.g., for an MRL of 1 µg/L the acceptable fortification levels must be between 0.5 µg/L and 1.5 µg/L). The mid-level LFSM/LFSMD fortification concentration must be within ±20% of the mid-level calibration standard for each contaminant, and should represent, where possible and where the laboratory has data from previously analyzed samples, an approximate average concentration observed in previous analyses of that analyte. There are no acceptance criteria specified for LFSM/LFSMD analyses. All LFSM/LFSMD data are to be reported.

(v) *Method defined quality control.* You must ensure that your laboratory performs Laboratory Fortified Blanks and Laboratory Performance Checks, as appropriate to the method's requirements, for those methods listed in Table 1, column 3, in paragraph (a)(3) of this section. Each method specifies acceptance criteria for these QC checks.

(vi) *Reporting.* You must ensure that your laboratory reports the analytical results and other data, with the required data listed in Table 1, in § 141.35(e). You must require your laboratory to submit these data electronically to the State and EPA using EPA's electronic data reporting system, accessible at (*http://www.epa.gov/safewater/ucmr/ucmr2/reporting.html*), within 120 days from the sample collection date. You then have 60 days from when the laboratory posts the data to review, approve, and submit the data to the State and EPA, via EPA's electronic data reporting system. If you do not electronically approve and submit the laboratory data to EPA within 60 days of the laboratory's posting to EPA's electronic reporting system, the data will be considered approved and final for State and EPA review.

(6) *Violation of this rule.*

(i) *Monitoring violations.* Any failure to monitor in accordance with § 141.40(a)(3)–(5) is a monitoring violation.

(ii) *Reporting violations.* Any failure to report in accordance with § 141.35 is a reporting violation.

(b) *Petitions and Waivers by States.*

(1) *Governors' petition for additional contaminants.* The Safe Drinking Water Act allows Governors of seven (7) or more States to petition the EPA Administrator to add one or more contaminants to the UCMR Contaminant 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, 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 UCMR Contaminant List in paragraph (a)(3) of this section.

(2) *State-wide waivers.* A State can waive monitoring requirements only with EPA approval and under very limited conditions. Conditions and procedures for obtaining a waiver are as follows:

(i) *Application.* A State may apply to EPA for a State-wide waiver from the unregulated contaminant monitoring requirements for PWSs serving more than 10,000 people. To apply for such a waiver, the State must submit an application to EPA that includes the following information: The list of contaminants on the UCMR Contaminant List for which a waiver is requested, along with documentation for each contaminant in the request demonstrating that the contaminants or their parent compounds do not occur naturally in the State, and certifying that during the past 15 years they have not been used, applied, stored, disposed of, released, or detected in the source waters or distribution systems in the State.

(ii) *Approval.* EPA will review State applications and notify the State whether it accepts or rejects the request. The State must receive written approval from EPA before issuing a State-wide waiver.

## PART 142—NATIONAL PRIMARY DRINKING WATER REGULATIONS IMPLEMENTATION

■ 6. The authority citation for part 142 continues to read as follows:

**Authority:** 42 U.S.C. 300f, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–4, 300j–9, and 300j–11.

### Subpart B—[Amended]

■ 7. Section 142.16 is amended by revising paragraph (e) introductory text to read as follows:

**§ 142.16 Special primacy requirements.**

* * * * *

(e) An application for approval of a State program revision which adopts the requirements specified in §§ 141.11, 141.23, 141.24, 141.32, 141.61, and 141.62 for a newly regulated contaminant must contain the following (in addition to the general primacy requirements enumerated elsewhere in this part, including the requirement that State regulations be at least as stringent as the Federal requirements):

* * * * *

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