ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 141

[FRL–6863–3]

RIN 2040–AD58

Unregulated Contaminant Monitoring Regulation for Public Water Systems; Analytical Methods for List 2 Contaminants; Clarifications to the Unregulated Contaminant Monitoring Regulation

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Safe Drinking Water Act (SDWA), as amended in 1996, requires the U.S. Environmental Protection Agency to establish criteria for a program to monitor unregulated contaminants and to publish a list of contaminants to be monitored. In fulfillment of this requirement, EPA published the Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR) for public water systems on September 17, 1999 (64 FR 50556), which included lists of contaminants for which monitoring was required or would be required in the future. These lists included: List 1 for contaminants with analytical methods; List 2 for contaminants with methods that were being refined; and List 3 for contaminants with methods that were still being developed.

This rule proposes analytical methods for fourteen contaminants on List 2, and to require monitoring for those contaminants in drinking water. These methods and associated monitoring are proposed to support EPA decisions concerning whether or not to regulate and establish standards for these contaminants in drinking water. The intent of regulating and setting standards for any of these contaminants that may be found to occur at levels of health concern is to protect public health. Additionally in this rule, EPA proposes modifications to the UCMR (published September 17, 1999) that affect the implementation of monitoring for both List 1 and List 2 contaminants.

DATES: Comments must be received by October 13, 2000.

ADDRESSES: Send written comments to the Comment Clerk, docket number W–00–01, Water Docket (MC 4101), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington DC, 20460. Comments may also be hand delivered to the Water Docket at Room EB57 U.S. EPA, 401 M Street, SW., Washington DC. Please submit an original and three copies of your comments and enclosures (including references). The full record for this document has been established under docket number W–00–01 and includes supporting documentation as well as printed, paper versions of electronic comments. The full record is available for inspection from 9 a.m. to 4 p.m. Monday through Friday, excluding legal holidays, at the Water Docket, East Tower Basement, Waterside Mall, U.S. EPA, 401 M Street, SW., Washington DC. For access to docket (Docket No. W–00–01) materials, please call (202) 260–3027 between 9 a.m. and 3:30 p.m., Eastern Daylight Savings Time, Monday through Friday, to schedule an appointment. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For technical information regarding everything but the analytical methods, contact Charles Job, Drinking Water Protection Division, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW (MC 4606), Washington, DC 20460, (202) 260–7084. For technical information regarding the analytical methods, contact David Munch, Technical Support Center, U.S. Environmental Protection Agency, 26 W. Martin Luther King Dr., Cincinnati OH, 45268, (513) 569–7948, or e-mail at Munch.Dave@EPA.gov. General information may also be obtained from the EPA 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 federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time.

SUPPLEMENTARY INFORMATION:

Abbreviations and Acronyms Used in the Preamble and Final Rule

2,4-DNT—2,4-dinitrotoluene
2,6-DNT—2,6-dinitrotoluene
4,4'-DDE—4,4'-dichloro dichlorophenyl ethylene, a degradation product of DDT
Alachlor ESA—alachlor ethanesulfonic acid, a degradation product of alachlor
AOAC—Association of Official Analytical Chemists
APHA—American Public Health Association
ASDWA—Association of State Drinking Water Administrators
ASTM—American Society for Testing and Materials
CAS—Chemical Abstract Service
CASRN—Chemical Abstract Service Registry Number
CCL—Contaminant Candidate List
CCR—Consumer Confidence Reports
CERCLA—Comprehensive Environmental Response, Compensation & Liability Act
CFR—Code of Federal Regulations
CFU/mL—colony forming units per milliliter
CWS—community water system
DCPA—dimethyl tetrachloroterephthalate, chemical name of the herbicide dacthal
DCPA mono- and di-acid degradates—degradation products of DCPA
DDE—dichloro dichlorophenyl ethylene, a degradation product of DDT
DDT—dichloro diphenyl trichloroethane, a general insecticide
DNA—deoxyribonucleic acid
EDL—estimated detection limit
EPA—Environmental Protection Agency
EPTC—s-ethyl-dipropylthiocarbamate, an herbicide
EPTDS—Entry Point to the Distribution System
ESA—ethanesulfonic acid, a degradation product of alachlor and other acetanilide pesticides
FACA—Federal Advisory Committee Act
FSIS—federalism summary impact statement
FTE—full-time equivalent
GC—gas chromatography, a laboratory method
GLI method—Great Lakes Instruments method
GW—ground water
GUDI—ground water under the direct influence (of surface water)
HPLC—high performance liquid chromatography, a laboratory method
IC—ion chromatography
ICR—Information Collection Rule
IRFA—initial regulatory flexibility analysis
IMS—immunomagnetic separation
IRIS—Integrated Risk Information System
IS—internal standard
LLE—liquid/liquid extraction, a laboratory method
MAC—Mycobacterium avium complex
MCL—maximum contaminant level
MCT—matrix conductivity threshold
MDL—method detection limit
MRL—minimum reporting level
MS—mass spectrometry, a laboratory method
MS—sample matrix spike
MSD—sample matrix spike duplicate
MTBE—methyl tertiary-butyl ether, a gasoline additive
NAWQA—National Water Quality Assessment Program
NCOD—National Drinking Water Contaminant Occurrence Database
NDWAC—National Drinking Water Advisory Council
NERL—National Environmental Research Laboratory
NPS—National Pesticide Survey
NTIS—National Technical Information Service
NTNCWS—non-transient non-community water system
NTTAA—National Technology Transfer and Advancement Act
OGWDW—Office of Ground Water and Drinking Water
OMB—Office of Management and Budget
PAH—Polycyclic aromatic hydrocarbon
PB—particle beam
PBMS—Performance-Based Measurement System
PCi/L—picocuries per liter
PCR—polymerase chain reaction
^{210}Pb—Lead-210 (also Pb-210), a lead isotope and radionuclide; part of the uranium decay series

^{210}Po—Polonium-210 (also Po-210), a polonium isotope and radionuclide; part of the uranium decay series
PWS—Public Water System
PWSF—Public Water System Facility
QA—quality assurance
QC—quality control
RDX—royal demolition explosive, hexahydro-1,3,5-trinitro-1,3,5-triazine
RFA—Regulatory Flexibility Act
RPD—relative percent difference
RSD—relative standard deviation
SBREFA—Small Business Regulatory Enforcement Fairness Act
SD—standard deviation
SDWA—Safe Drinking Water Act
SDWIS—Safe Drinking Water Information System
SDWIS/FED—the Federal Safe Drinking Water Information System
SM—Standard Methods for the Examination of Water and Wastewater
SMF—Standard Compliance Monitoring Framework
SOC—synthetic organic compound
SOP—standard operating procedure
SPE—solid phase extraction, a laboratory method
spp.—multiple species
SRF—State Revolving Fund
STORET—Storage and Retrieval System
SW—surface water
TBD—to be determined
TDS—total dissolved solid
TNCWS—transient non-community water system
TTHM—total trihalomethane
UCMR—Unregulated Contaminant Monitoring Regulation/Rule
UCM—Unregulated Contaminant Monitoring
UMRA—Unfunded Mandates Reform Act of 1995
USEPA—United States Environmental Protection Agency
UV—ultraviolet
VOC—volatile organic compound
µg/L—micrograms per liter
µS/cm—microsiemens per centimeter

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Potentially Regulated Entities

The regulated entities are public water systems. All large community and non-transient non-community water systems serving more than 10,000 persons are required to monitor under the revised UCMR. A community water system (CWS) is a public water system 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 (NTNCWS) means a public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year. Only a national representative sample of community and non-transient non-community systems serving 10,000 or fewer persons are required to monitor. Transient non-community systems, which are systems that do not regularly serve at least 25 of the same persons over six months per year, are not required to monitor. States, Territories, and Tribes, with primacy to administer the regulatory program for public water systems under the Safe Drinking Water Act sometimes conduct analyses to measure for contaminants in water samples and are regulated by this action. Categories and entities potentially regulated by this action include the following:

Category	Examples of potentially regulated entities	SIC
State, Local, & Tribal Governments	States, local and tribal governments that analyze water samples on behalf of public water systems required to conduct such analysis; States, local and tribal governments that themselves operate community and non-transient non-community water systems required to monitor.	9511
Industry	Private operators of community and non-transient non-community water systems required to monitor.	4941
Municipalities	Municipal operators of community and non-transient non-community water systems required to monitor.	9511

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 applicability criteria in § 141.35(a) of the September 17, 1999 UCMR (see 64 FR 50556) and § 141.40(a) of the September 17, 1999 UCMR as amended by this rule. If you have questions regarding the applicability of this action to a particular entity, consult one of the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

I. Regulatory Background

SDWA section 1445(a)(2), as amended in 1996, requires EPA to establish criteria for a program to monitor unregulated contaminants and to publish a list of contaminants to be monitored. To meet these requirements, EPA published the Revisions to the Unregulated Contaminant Monitoring Regulation for Public Water Systems on September 17, 1999, (64 FR 50556), which substantially revised the previous Unregulated Contaminant Monitoring (UCM) Program, codified at 40 CFR 141.40. The UCMR revised the regulations at 40 CFR 141.35, 141.40, 142.16 and deleted and reserved 142.15(c)(3). The rule covered: (1) The frequency and schedule for monitoring unregulated contaminants, based on PWS size, water source, and likelihood of finding contaminants; (2) a new, shorter list of contaminants for which systems will monitor, referred to as the UCMR (1999) List, which was divided into three lists based on analytical methods availability; (3) procedures for selecting and monitoring a nationally representative sample of small PWSs (those serving 10,000 or fewer persons), and; (4) procedures for entering the monitoring data in the National Drinking Water Contaminant Occurrence Database (NCOD), as required under section 1445. This final rule included a list of contaminants to be monitored which was further subdivided into three lists: List 1 for contaminants with current approved analytical methods, List 2 for contaminants with methods being refined, and List 3 for contaminants with methods being developed in research. In a supplemental rule, published March 2, 2000 (65 FR 11371), the methods for two List 1 contaminants were established as were some technical corrections to the UCMR rule.

Sixteen contaminants were included on the UCMR (1999) List 2, with their analytical methods listed as ''reserved'', pending the conclusion of EPA refinement and review of the analytical methods. Today's rule amends the 1999 UCMR to specify methods for monitoring for 14 contaminants (13 organic chemicals and one microorganism) on List 2. It adds one contaminant to List 2 (nitrobenzene, NOTE: Nitrobenzene is already on List 1 with a method that does not allow detection near the current health effects level) and moves one other contaminant (polonium-210) from List 2 to List 3. Today's rule, when final, will activate Screening Survey monitoring for these 14 contaminants, as described in § 141.40(a)(3), Table 1, List 2.

Today's rule also contains several minor changes to the September 1999 rule. Additionally, the preamble includes discussion of issues of a long-range nature that may affect the unregulated contaminant monitoring program in the future. These issues include: options for defining ''contaminant'' to more fully address the occurrence of related contaminants (for example, parent compounds and degradates); retention of data for contaminants also identified by the specified methods but not required to be reported under this regulation; synchronization of the UCMR with the Contaminant Candidate List (CCL); and the UCMR data reporting process.

II. Explanation of Today's Action

Today's action proposes analytical methods for measurement of 14 contaminants in drinking water, which were included on the UCMR (1999) List 2. The sixteen 1999 List 2 contaminants and their sources, including amendments to List 2 proposed today, are presented in Table 1, Uses and Environmental Sources of UCMR (1999) List 2 Contaminants. This action also proposes modifications affecting the sample collection, analysis and reporting of both List 1 and List 2 contaminants. Please note that EPA is not requesting comment on any aspect of the September 1999 UCMR (as revised in March 2000) other than those changes proposed today; specifically, EPA is not requesting comment on the UCMR list of contaminants other than the two minor changes proposed today (adding one List 1 contaminant (nitrobenzene) to List 2 with a refined analytical method capable of lower detection levels and moving one List 2 contaminant (polonium-210) to List 3.)

TABLE 1.—USES AND ENVIRONMENTAL SOURCES OF UCMR (1999) LIST 2 CONTAMINANTS

Contaminant name	CASRN	Use or environmental source
Proposed Chemical Contaminants		
1,2-diphenylhydrazine	122–66–7	Used in the production of benzidine and anti-inflammatory drugs.
2-methylphenol	95–48–7	Released in automobile and diesel exhaust, coal tar and petroleum refining, and wood pulping.
2,4-dichlorophenol	120–83–2	Chemical intermediate in herbicide production.

TABLE 1.—USES AND ENVIRONMENTAL SOURCES OF UCMR (1999) LIST 2 CONTAMINANTS—Continued

Contaminant name	CASRN	Use or environmental source
2,4-dinitrophenol	51–28–5	Released from mines, metal, petroleum, and dye plants
2,4,6-trichlorophenol	88–06–2	By-product of fossil fuel burning, used as bactericide and wood/glue preservative.
Alachlor ESA and other acetanilide pesticides.		Degradation product of alachlor and other acetanilide pesticides, herbicides generally used with corn, bean, peanut, and soybean crops to control grasses and weeds.
Diazinon	333–41–5	Insecticide used with rice, fruit, vineyards, and corn crops.
Disulfoton	298–04–4	Insecticide used with cereal, cotton, tobacco, and potato crops.
Diuron	330–54–1	Herbicide used on grasses in orchards and wheat crops.
Fonofos	944–22–9	Soil insecticide used on worms and centipedes.
Linuron	330–55–2	Herbicide used with corn, soybean, cotton, and wheat crops.
Nitrobenzene	98–95–3	Used in the production of aniline, which is used to make dyes, herbicides, and drugs.
Polonium-210	13981–52–7	A polonium isotope and radionuclide; part of the uranium decay series—NOTE: proposed to be moved to List 3.
Prometon	1610–18–0	Herbicide used on annual and perennial weeds and grasses.
RDX (royal demolition explosive, hexahydro-1,3,5-trinitro-1,3,5-triazine).	121–82–4	Used in explosives; ammunition plants.
Terbufos	13071–79–9	Insecticide used with corn, sugar beet, and grain sorghum crops.
Microbiological Contaminant		
Aeromonas hydrophila	N/A	Present in all freshwater and brackish water.

A. Relation to the UCMR Published in September 1999

The final UCMR, published on September 17, 1999, and subsequently revised on March 2, 2000, consisted of many program elements designed to enhance and improve the unregulated contaminant monitoring program in several important ways. The rule specifies (1) which systems must monitor, including a statistical approach to select a representative sample of small public water systems; (2) a list of contaminants for which systems must monitor; (3) the monitoring time, frequency, and location of sampling; (4) which methods are to be used for analyzing the contaminants; (5) quality control elements that must be followed in addition to those specified in each analytical method, (6) reporting requirements; and (7) State and Tribal participation concerning the implementation of the monitoring program.

EPA divided the list of contaminants for which systems must monitor into three separate lists based on the availability of analytical methods. List 1, Assessment Monitoring, consisted of 12 contaminants for which analytical methods were available. List 2, Screening Survey, consisted of 16 contaminants for which analytical methods would be developed by the time of initial monitoring in 2001. Pre-Screen Testing, List 3, had 8 contaminants for which analytical methods research is being conducted. Only the contaminants on List 1 must be monitored at all 2,774 large community and non-transient non-community public water systems serving more than 10,000 persons and at a representative sample of approximately 800 systems serving 10,000 or fewer persons. From this set of approximately 3,600 large and small public water systems, EPA will randomly select 300 large and small systems to monitor for List 2 contaminants. Today's rule specifies the analytical methods for fourteen List 2 contaminants. Methods for the other two List 2 contaminants, RDX and Alachlor ESA, need to be refined for analysis in treated drinking water.

The placement of the 16 contaminants on List 2 meant that their analytical methods were being further refined and not ready for the extensive monitoring that would occur for the List 1 contaminants. The evaluation of these new methods during monitoring for List 2 contaminants will include developing the data necessary to support the determination of practical quantitation levels, which are needed to support possible future regulations, as well as determining the occurrence of the analytes measured. Today's proposal would provide for monitoring of 13 List 2 chemical contaminants at the 180 small systems randomly selected (with the small systems doing the sampling and EPA conducting the testing and reporting) from the 800 small systems in the State Monitoring Plans beginning in January 2001. State Monitoring Plans (SMP) collectively specify the 800 randomly selected small water systems serving 10,000 or fewer persons and constitute the national representative sample of such systems. The SMPs also specify the randomly selected large systems that must monitor for List 2 contaminants. The 120 randomly selected large systems would begin List 2 chemical contaminant monitoring January 2002. A second Screening Survey for one List 2 microbiological contaminant will be performed in 2003 by 180 other small systems and 120 other large systems. The delay of the Screening Survey for the microbiological contaminant is allow laboratories to gain experience with the new method and have capacity available for large system testing. The proposed timing will allow monitoring of these List 2 contaminants at small systems concurrently with the List 1, Assessment Monitoring, contaminants. Small systems will monitor in 2001 for List 2 contaminants ahead of large systems in 2002 because EPA is paying for the small system monitoring and also desires to evaluate the performance of the methods to make any adjustments to them prior the large systems using the methods, which must be paid for by the large systems.

Methods are continuing to be refined for the remaining two List 2 contaminants. If methods are developed in a timely fashion for these contaminants, they may be added for monitoring in a separate action, probably in 2003, or during the next UCMR 5-year monitoring cycle which would begin in 2006 . (Please refer to preamble section II.C.2.d.)

As provided in the September 1999 rule, surface water systems will monitor quarterly for one year and as required in the recently revised regulations at 64 FR 50556 ground water systems will monitor twice in one year for List 2 chemical contaminants. Today's proposal specifies quarterly monitoring for microbiological contaminants with monthly monitoring during the vulnerable (warm) quarter. Assessment Monitoring must be done within the three years of 2001 through 2003, which will allow coordination with the three-year compliance monitoring cycle for regulated contaminants. The exceptions that would involve Assessment Monitoring beyond 2003 include: loss of a samples for any reason, necessitating another sampling event, and initiating sampling at entry points to the distribution system if contaminants are found in systems that conduct their other compliance monitoring at source (raw) water sampling points. One of these quarterly or semiannual sampling events must occur in the most vulnerable period of May through July, or an alternate vulnerable period designated by the State, to ensure monitoring of seasonally elevated contaminant concentrations.

B. Systems Affected by This Rule

The focus of the UCMR is on the occurrence or likely occurrence of contaminants in drinking water of community and non-transient, non-community water systems. For regulatory purposes, public water systems are categorized as ''community water systems,'' or ''non-community water systems.'' Community water systems are specifically defined as ''public water systems which serve at least 15 service connections used by year-round residents or regularly serve at least 25 year round residents.'' (40 CFR 141.2) A ''non-community water system'' means any other public water system. Non-community water systems include non-transient non-community water systems and transient non-community water systems. Non-transient non-community systems are those that regularly serve at least 25 of the same persons over six months per year (e.g., schools, industrial buildings). Transient systems are all other non-community systems, which typically serve a transient population such as restaurants or hotels. As explained in the September 1999 UCMR, EPA is excluding transient water systems from monitoring for unregulated contaminants, including those on List 2. The results from the very small community and non-transient non-community systems can be extrapolated to the transient non-community systems.

With respect to size, about 2,800 large systems (defined here as those serving more than 10,000 persons) provide drinking water to about 80 percent of the U.S. population served by public water systems. The SDWA does not provide for EPA funding of this monitoring. Under the UCMR program, all large systems will be required to monitor for List 1 unregulated contaminants. Only a representative sample of systems serving 10,000 persons or fewer will be required to monitor for unregulated contaminants. SDWA requires EPA to pay for the reasonable testing costs for the national representative sample of small systems.

As described in the September 17, 1999, **Federal Register** (64 FR 50556), EPA will select 300 large and small systems from the systems required to conduct Assessment Monitoring for List 1 to participate in the monitoring for List 2 contaminants. The 300 systems will be divided as follows: 120 large systems serving more than 10,000 persons and 180 small systems serving 10,000 or fewer persons. These allocations will be further subdivided as follows: For the large systems, 60 systems will be selected from systems serving more than 50,000 persons and 60 will be from systems serving from 10,001 to 50,000 persons. For the small systems, 60 systems will be selected from each of the following service size categories: 25 to 500 persons, 501 to 3,300 persons, and 3,301 to 10,000 persons. These systems will be further allocated by water source type and will be randomly selected from the systems required to conduct Assessment Monitoring for List 1 contaminants. EPA has identified the randomly selected large systems that must monitor for List 2 contaminants and placed the list of these systems in the docket for this proposed regulation (docket number W–00–01). The small systems that EPA has randomly selected to monitor for List 2 contaminants from the representative sample of 800 small systems are identified in the State Monitoring Plans for small systems that EPA has sent to States for review.

EPA will pay for the shipping, testing and reporting of results for samples from small systems serving 10,000 or fewer persons. Large systems must arrange and pay for the monitoring, shipping, testing and reporting of results of List 2 contaminants at laboratories approved for List 2 contaminant analysis. If large systems and/or their laboratories are testing for the chemical contaminants identified in List 2 that require use of EPA Methods 526 or 528, they can meet the List 2 certification requirements for EPA Methods 526 or 528 by being certified for use of EPA Methods 525.2 under § 141.28 prior to the analysis of the List 2 contaminants for which EPA Methods 526 or 528 are required. If large systems and/or their laboratories are testing for the chemical contaminants identified in List 2 that require use of EPA Method 532, they can meet the List 2 certification requirements for EPA Method 532 by being certified for use of EPA Methods 549.1 or 549.2 under § 141.28 prior to the analysis of the contaminants for which EPA Method 532 is required. Method 525.2 is a solid phase extraction GC/MS method as are both Methods 526 and 528. Methods 549.1 and 549.2 are solid phase extraction HPLC methods as is Method 532. Using this system of laboratory approval for the UCMR assures that the laboratories that perform these analysis are currently certified to perform compliance monitoring with methods that use the same technologies as those incorporated in the UCMR methods, while providing PWSs with the widest possible source of approved laboratories.

Large PWSs must arrange for the testing for *Aeromonas* using EPA Method 1605 as identified in List 2 by a laboratory certified under § 141.28 for compliance analysis using an EPA-approved membrane filtration method for the analysis of Coliform indicator bacteria. EPA may require laboratories performing EPA Method 1605 to participate in ongoing performance testing (PT) studies to be conducted by EPA, expected to be announced in 2001 or 2002, ahead of the List 2 *Aeromonas* monitoring in 2003.

C. Changes to the UCMR Associated with the Screening Survey for List 2 Contaminants

1. Description of Screening Surveys for List 2 Contaminants

The contaminants for which EPA is proposing new methods, are listed in-§ 141.40(a)(3), Table 1, List 2. This rule, when final, will activate the Screening Survey monitoring for these contaminants. The analytical methods were under development for these contaminants at the time the revised UCMR was promulgated. The purpose of the Screening Survey is to analyze for contaminants where the use of newly developed, non-routine analytical methods are required. The Screening Survey approach will allow EPA to maximize scientifically-defensible occurrence data for emerging contaminants of concern more quickly than could be obtained through a more standard unregulated contaminant monitoring effort. The Screening Survey will, for example, be useful in addressing questions concerning whether a contaminant of concern is in fact occurring in drinking water and the range of concentrations of that occurrence. The Screening Survey is also intended to allow EPA to screen contaminants to see if they occur at high enough frequencies or at concentrations that justify inclusion in future unregulated contaminant Assessment Monitoring or at sufficiently low frequencies so that they do not require further monitoring.

The contaminants in UCMR (1999) List 2 will be monitored, as part of a Screening Survey, by a smaller, statistically selected sample of 300 systems which represent all (large and small) community and non-transient non-community water systems. As in Assessment Monitoring for List 1 contaminants, public water systems serve as a surrogate for the population potentially affected, and are a more efficient way to develop a sampling approach to estimate exposure to contaminants. These systems will be selected using a random number generator. The sample size needed for estimating frequencies of contaminant occurrence are smaller if the actual occurrence frequencies are close to 0 or to 100 percent. When a contaminant is consistently present or consistently absent, it requires fewer samples to determine its frequency with adequate statistical confidence than if it occurs about half the time. Only 300 PWSs are needed to determine if a contaminant is present 5 percent of the time or less frequently, at a 99 percent confidence level and with a 3 percent margin of error. (The same criteria require 1,844 samples when the frequency could be any number.)

If the contaminant occurrence findings are significant, EPA may include the contaminant in the next Unregulated Monitoring Rule (projected to be proposed in 2004 and promulgated in 2005 for additional monitoring. EPA currently considers positive results from 1 to 2 percent of systems as generally significant enough to warrant further monitoring. If the contaminant occurrence is not significant, then no further monitoring would be required. EPA believes that 1 to 2 percent (with the estimated margin of error) is consistent with the approach that this monitoring is a Screening Survey to determine whether the contaminant(s) are occurring in any public water system. One to 2 percent occurrence is equal to 3 to 6 systems for the sample, but mathematically this can be extrapolated to 690 to 1,380 systems out of all small systems in the United States that may have an occurrence of the contaminants. EPA considers this extent of occurrence to be significant and to warrant more extensive monitoring, perhaps even through Assessment Monitoring. EPA will, of course, evaluate other factors and not just the extent of occurrence before deciding to regulate a contaminant.

Another possible outcome of the Screening Survey may be regulatory development. For example, if the contaminant is observed extensively (in a higher percentage of PWSs, such as 5 percent or more) and EPA has health effects data for the contaminant that indicate a significant concern, then that specific contaminant may move directly to development of a national primary drinking water standard (NPDWR) without further monitoring. EPA believes that an occurrence of a contaminant in 5 percent or more of systems, for example, in the Screening Survey may be sufficient to determine whether or not to initiate regulation development. EPA may decide that it needs more information, in which case, EPA could include the contaminant to the next Unregulated Monitoring Rule for more extensive monitoring to inform the regulatory process. This may not always be necessary, however.

Additionally, EPA may conduct a further Screening Survey in this 2001–2005 round of unregulated contaminant monitoring if the analytical methods for the remaining contaminants can be developed and validated for use. The two remaining contaminants include: alachlor ESA and other acetanilide pesticide degradates, and RDX. This monitoring may occur during a twelve month period during the years 2002 through 2004.

With respect to funding the Screening Survey, EPA will pay for the shipping, testing, and reporting for systems serving 10,000 or fewer persons. Systems serving 10,000 or fewer persons will be responsible for sample collection and preparing the samples for shipment. EPA will pay for the shipping of these samples to an EPA-designated laboratory for testing and for reporting of monitoring results to EPA, with a copy to the State. Large systems, those serving more than 10,000 persons, must arrange and pay for the monitoring, shipping, testing, and reporting of results.

2. Contaminants and Analytical Methods

In today's proposal, EPA is proposing the use of three new EPA methods for the monitoring of 13 chemical contaminants on List 2. These contaminants and methods are listed in Table 2. In addition, EPA is proposing to add nitrobenzene to List 2. Methods for two chemical contaminants alachlor ESA and other acetanilide pesticide degradates and RDX are still being refined and remain reserved on List 2. EPA is also proposing to move polonium-210 to List 3. Finally, EPA is proposing a method and monitoring framework for *Aeromonas* for List 2 monitoring (see Table 2). Table 3 lists other pertinent information related to the method specifications for the fourteen contaminants to be monitored from List 2. The status of the contaminants and methods are discussed in further detail in this section.

TABLE 2.—LIST 2 CONTAMINANT METHODS STATUS

	Proposed method or method status	Explanation
Chemical contaminant		
2-methylphenol	EPA Method 528	Ready for List 2 Monitoring in 2001–2002.[a]
2,4,6-trichlorophenol	EPA Method 528	Ready for List 2 Monitoring in 2001–2002.[a]
2,4-dichlorophenol	EPA Method 528	Ready for List 2 Monitoring in 2001–2002.[a]
2,4-dinitrophenol	EPA Method 528	Ready for List 2 Monitoring in 2001–2002.[a]
Linuron	EPA Method 532	Ready for List 2 Monitoring in 2001–2002.[a]
Diuron	EPA Method 532	Ready for List 2 Monitoring in 2001–2002.[a]
1,2 diphenylhydrazine	EPA Method 526	Ready for List 2 Monitoring in 2001–2002.[a]
Diazinon	EPA Method 526	Ready for List 2 Monitoring in 2001–2002.[a]
Disulfoton	EPA Method 526	Ready for List 2 Monitoring in 2001–2002.[a]
Fonofos	EPA Method 526	Ready for List 2 Monitoring in 2001–2002.[a]
Prometon	EPA Method 526	Ready for List 2 Monitoring in 2001–2002.[a]

TABLE 2.—LIST 2 CONTAMINANT METHODS STATUS—Continued

	Proposed method or method status	Explanation
Nitrobenzene	EPA Method 526	Ready for List 2 Monitoring in 2001–2002.[a]
Terbufos	EPA Method 526	Ready for List 2 Monitoring in 2001–2002.[a]
Alachlor ESA and other acetanilide pesticide degradates.	Being refined	Candidate for a 3rd Screening Survey, if conducted.
RDX	Being refined	Candidate for a 3rd Screening Survey, if conducted.
Radioactive Contaminant		
Polonium-210	No Applicable Method	Research needed; Move to List 3.
Microbiological Contaminant		
Aeromonas	EPA Method 1605	Ready for List 2 Monitoring in 2nd Screening Survey in 2003.

[a] EPA is proposing that small systems selected for the Screening Survey One monitor for these contaminants in 2001, and large systems selected for the Screening Survey One monitor in 2002.

TABLE 3.—DETECTION AND QUANTITATION FOR LIST 2 CONTAMINANTS

	MDL	Proposed MRL[a]
Contaminant		
2-methylphenol	0.03 µg/L	1 µg/L.
2,4,6-trichlorophenol.	0.05 µg/L	1 µg/l.
2,4-dichlorophenol	0.03 µg/L	1µg/L.
2,4-dinitrophenol	0.3 µg/L	5 µg/L.
1,2 diphenylhydrazine.	0.03 µg/L	0.5 µg/L.
Diazinon	0.02 µg/L	0.5 µg/L.
Disulfoton	0.02 µg/L	0.5 µg/L.
Fonofos	0.02 µg/L	0.5 µg/L.
Prometon	0.04 µg/L	0.5 µg/L.
Terbufos	0.02 µg/L	0.5 µg/L.
Nitrobenzene	0.01 µg/L	0.5 µg/L.
Linuron	0.07 µg/L	1 µg/L.
Diuron	0.1 µg/L	1 µg/L.
Alachlor ESA and other acetanilide pesticide degradates.	NA	NA.
RDX	NA	NA.
Radioactive contaminant		
Polonium-210 [NOTE: proposed to move to List 3]		
Microbiological Contaminant		
Aeromonas	0.2 cfu/100 mL.	0.2 cfu/100 mL.

NA: Data not available.

[a] Proposed MRL based upon precision and accuracy data derived during methods development and verified in second laboratory validation.

a. *New Methods Proposed for Use in Screening Survey One.* This section includes summaries of the three analytical methods that are being proposed for use for the chemicals included in the Screening Survey in 2001 and 2002. Table 2 lists the contaminants and new methods. The details of these methods and the results of their peer reviews are documented in Water Docket W–00–01. EPA invites public comment on these methods.

(i) *Summary of EPA Method 532.0:* Determination of Phenylurea Compounds in Drinking Water by Solid Phase Extraction and High Performance Liquid Chromatography with Ultraviolet Detection. Today, EPA is proposing the use of EPA Method 532.0 to analyze for diuron and linuron. Under this method, a 500 milliliter volume of water is extracted on a chemically bonded C18 cartridge or disk, extracted with a small amount of methanol, and the resulting extract injected into a high performance liquid chromatographic (HPLC) system equipped with a C18 column and a UV detector. All positive results are confirmed using a second, dissimilar HPLC column.

- *Refinements from Previous Methods.* While linuron and diuron are included in the scope of NPS Method 4 (LLE/HLPC/UV) and EPA Method 553 (SPE/HPLC/MS), these methods were determined to be inappropriate for this monitoring. NPS Method 4 uses mercuric chloride for biological stabilization, does not contain any reagents to reduce disinfectant residuals, and requires the extraction of 1 liter water samples with 180 mL of methylene chloride. EPA Method 553 does not include biological stabilization, and requires the use of a HPLC/MS equipped with a particle beam interface. In EPA Method 532, copper sulfate is used to biologically stabilize samples, solid phase extraction of 500 mL samples reduces solvent use, and analysis is conducted by performing separation and detection using commonly available HPLC/UV instrumentation.

(ii) *Summary of EPA Method 528:* Determination of Phenols in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry (GC/MS). EPA is proposing to require the use of EPA Method 528 to analyze for 2-methylphenol, 2,4,6-trichlorophenol, 2,4-dichlorophenol, and 2,4-dinitrophenol. Under this method, a 1 liter water sample is extracted on a solid phase extraction cartridge containing 0.5 grams of a modified polystyrene divinyl benzene solid phase which is eluted with a small amount of methylene chloride. The resulting extract is then analyzed using a capillary column equipped with GC/MS.

- *Refinements from Previous Methods.* EPA Method 552 lists 2,4-dichlorophenol as an analyte; however, under the conditions specified, the analytes interfere with one another. Other methods evaluated required the use of techniques that are no longer used in modern laboratories such as large volume solvent extraction, acid, base/neutral fractionation, and were developed for packed column chromatography. In addition, no documentation of either aqueous or extract analyte stability was available. In EPA Method 528, sample extractions are performed using solid phase extraction without fractionation, capillary column separation without the need to derivatize the analytes, and the use of mass spectrometry to reduce false positives. Samples are biologically preserved through acidification and disinfectant residuals are reduced with sodium sulfite.

(iii) *Summary of EPA Method 526:* Determination of Selected Semivolatile Organic Compounds in Drinking Water by Solid Phase Extraction and Capillary Column GC/MS. EPA is proposing to require the use of EPA Method 526 to analyze for 1,2-diphenylhydrazine, diazinon, disulfoton, fonofos, prometon, nitrobenzene, and terbufos. Under this method, a 1 liter sample is extracted on a chemically bonded styrene divinyl benzene organic phase cartridge or disk The cartridge or disk is eluted with small quantities of ethyl acetate followed by methylene chloride. The resulting extract is then analyzed on a capillary column equipped GC/MS.

- *Refinements from Previous Methods.* While several of the analytes included in EPA Method 526 are also listed as analytes in EPA Method 507, EPA Method 508, EPA Method 525.2 and other methods, accurate and precise measurement of these analytes in stored samples is not achieved, because of extremely rapid aqueous degradation of these analytes. Literature searches and data collected during methods development of EPA Method 526 demonstrated that many of these analytes are subject to both acid and base catalyzed hydrolysis and that this hydrolysis is also catalyzed by the presence of metals. These compounds are also subject to biological degradation in stored samples, and degradation by free chlorine. In EPA Method 526, reagents are added to all samples to stabilize the analytes. This includes a buffer to neutralize pH, EDTA to complex metals, a biocide to stabilize analytes against biological degradation, and a reagent to reduce disinfectant residuals. Using these reagents, analyte stability has been demonstrated. In addition, all of these reagents can be added to the sample bottles prior to their shipment to the sample collection site.

(iv) *Peer Review.* EPA conducted peer reviews of the analytical methods proposed today. The peer reviews were conducted both within EPA and by personnel from; Montgomery Watson Laboratories, Philadelphia Suburban Water Company, and the American Water Works Service Company.

Summaries of these reviews and EPA responses to them are available at the Water Docket (MC 4101), U.S. EPA, 401 M Street, SW, Washington DC, 20460, Docket number W–00–01.

(v) *Laboratory Approval and Certification.* EPA is proposing that laboratories currently certified to conduct drinking water compliance monitoring using EPA Method 525.2 will be automatically approved to conduct UCMR analysis using methods 526 and/or 528. Laboratories currently certified to conduct drinking water compliance monitoring using EPA methods 549.1 or 549.2, will be automatically approved to conduct UCMR analysis using method 532.

For small systems, EPA will conduct a competitive solicitation and selection process during 2000 to select up to 8 contract laboratories nationally to analyze for List 2 contaminants under contract to EPA. All small system shipping and analysis costs will be payed by EPA. The laboratories must be able to demonstrate that they can meet the certification requirements specified in § 141.40 (a)(5)(ii)(G)(3).

Large systems selected for the Screening Survey will be notified by the State or EPA at least 90 days before the dates established for collecting and submitting samples to determine the presence of contaminants on List 2. For List 2 contaminants, large systems must send samples to certified laboratories (as specified earlier) and then report the results to EPA as specified in § 141.35.

b. *Monitoring Nitrobenzene at Low-Level in Screening Survey One.* EPA requires monitoring for nitrobenzene in Assessment Monitoring of the UCMR between 2001 through 2003 (Table 1, List 1 in the September 1999 UCMR, 64 FR 50613). Nitrobenzene can be reliably and accurately measured at concentrations above 10 μg/L using the purge and trap GC/MS methods approved for use in the Assessment Monitoring phase of the UCMR (64 FR 50556). Although preliminary health effects data suggest that nitrobenzene may be of concern at concentrations lower than can be reliably measured using purge and trap GC/MS methods, nitrobenzene was included in the Assessment Monitoring phase of the UCMR since methods reliably measuring nitrobenzene at lower concentrations were not available at the time. In addition, because the same purge and trap GC/MS methods were being approved and specified for the analyses of other compounds included in Assessment Monitoring, monitoring for nitrobenzene using these same methods could be accomplished at minimal additional cost to the regulated utilities, States, or EPA. Therefore, EPA felt it was prudent to require this monitoring to obtain valid national occurrence data for this compound.

Since recent health effects information indicates that nitrobenzene may be of concern at concentrations lower than that measured in the assessment portion of the UCMR, EPA also continued additional methods development research. The analytical method (EPA Method 526) developed for the analyses of List 2 compounds diazinon, disulfoton, fonofos, 1,2-diphenylhydrazine, terbufos, and prometon can also reliably measure nitrobenzene at considerably lower concentrations than the purge and trap methods currently approved for the analyses of nitrobenzene in the Assessment Monitoring phase of the UCMR. However, EPA Method 526 was not available at the time that methods for Assessment Monitoring were approved and does not measure any other compound for which monitoring is required under Assessment Monitoring. EPA Method 526 has been developed and is being proposed to enable monitoring and testing of the listed compounds on List 2. Therefore, EPA is retaining the required monitoring for nitrobenzene in the Assessment Monitoring phase of the UCMR to collect national monitoring data, and it is also requiring monitoring for nitrobenzene in this Screening Survey phase of the UCMR to determine the occurrence of nitrobenzene at lower concentrations using the new multi-analyte EPA Method 526. This will permit the Agency to obtain a substantial amount of occurrence data for nitrobenzene at concentrations above 10 μg/L through Assessment Monitoring and also obtain a statistically significant estimate of nitrobenzene at much lower concentrations in the Screening Survey phase of the UCMR.

c. *Proposal for Monitoring of Aeromonas in a Second Screening Survey.* Because a validated *Aeromonas* method was not available at the time of promulgation of the September 17, 1999, UCMR, EPA is proposing today to monitor *Aeromonas* in the second round of the Screening Survey, anticipated to occur in 2003. As currently promulgated in the UCMR, *Aeromonas* is included on List 2. List 2 contaminants would be monitored in a representative randomly selected sample consisting of 180 small systems and 120 large systems. Site vulnerability based on likely occurrence of *Aeromonas* spp. (multiple species) will not be a factor in system selection for monitoring.

(i) *Analytical Method.* The proposed *Aeromonas* spp. method for List 2 monitoring is EPA Method 1605, which is a membrane filter assay based on the ampicillin-dextrin (ADA) method of Havelaar *et al.* (1987), with two additional tests for confirmation, cytochrome oxidase and trehalose fermentation. This method identifies *Aeromonas* to the genus level and detects *A. hydrophila* and a majority of the other aeromonad species. Single laboratory validation of Method 1605 and external peer review, necessary to finalize Method 1605, have been completed. Laboratory approval and certification requirements for *Aeromonas* are proposed in § 141.40 (a)(5)(ii)(G)(3). *Aeromonas* analyses must be performed by laboratories certified under § 141.28 for compliance analysis of coliform indicator bacteria using an EPA approved membrane filtration procedure. Because of differences between Method 1605 and existing membrane filtration methods, EPA believes it is advisable to require laboratories performing EPA Method 1605 also to participate in performance testing (PT) studies to be conducted by EPA. Multilab precision and accuracy statistics are now being developed and analyzed through EPA's Technical Support Center in Cincinnati, Ohio, to provide a basis for determining whether performance testing (PT) by laboratories is necessary to demonstrate that they are capable of consistent analysis for *Aeromonas.* Laboratories conducting *Aeromonas* analyses need to demonstrate that they are able to identify this genus adequately. Based on the results of the multi-laboratory analysis, EPA will make a determination whether it is feasible to produce PT samples for *Aeromonas.* If it is feasible, then EPA will specify in the final rule that successful PT analysis is required prior to lab approval and may require yearly performance tests thereafter to maintain approval.

Commenters representing the scientific community have criticized the proposed analytical method (Method 1605) for not identifying potentially pathogenic strains of *Aeromonas* spp. Currently available methods can only identify taxonomic groups to which pathogenic strains are likely to belong, but will not necessarily indicate whether or not isolates are pathogenic. Isolates from Method 1605 will be tested for taxonomic characteristics that are associated with pathogenic clinical isolates in follow-up tests conducted by EPA or a contractor. Although those tests would increase the specificity of detection, they would add a cost burden to the water systems. Therefore, EPA proposes to do these additional analyses for small and large systems that have confirmed positive colonies of *Aeromonas* (see proposed § 141.40(a)(3), Table 1, List 2, footnote j). Confirmed *Aeromonas* colonies would be archived by analytical laboratories performing Method 1605, and would be shipped to EPA. EPA will arrange to have additional analyses done on isolates to determine the hybridization groups that are associated with pathogenic forms. If the number of confirmed positive samples detected using Method 1605 is less than 2000, all positive isolates, will be analyzed; however, if 2000 or more confirmed *Aeromonas* colonies are found, a representative subset will be analyzed. This will provide some indication of the distribution of different hybridization groups or isolates having virulence factors in finished water and would enable the detected aeromonads to be related to potentially pathogenic types, such as hybridization groups 1, 4 and 8 (Altwegg *et al.,* 1990) which account for 85% of clinical isolates (Janda, 1991). However, strains from many other recognized hybridization groups have also been isolated from human clinical material. Follow-up testing on *Aeromonas* isolates will not include determination of virulence factors. Morgan *et al.* (1985) determined that the possession of virulence factors did not necessarily indicate that *Aeromonas* strains would cause diarrhea in volunteers. This study and others (Janda, 1991; Palumbo *et al.,* 2000) suggests that virulence factors produced by *Aeromonas* that are involved in human disease have not been completely characterized. Since the relation of virulence factors to human disease, and even our knowledge of all virulence factors is incomplete, inclusion of virulence factor testing in the characterization of *Aeromonas* isolates could lead to a potentially incorrect interpretation of results. The detection of isolates having virulence factors might be interpreted as being human pathogens, thereby being equivalent to false positives and increasing the level of risk perceived to be posed by *Aeromonas*.

(ii) *Analytical Method for Determining Pathogenic Strains.* The phenotypic method described by Abbott *et al.* (1992) will be used to identify the hybridization group of each isolate. These investigators described a group of biochemical tests which were able to place 132 of 133 Aeromonas isolates in the correct hybridization group. The use of biochemical tests to determine hybridization groups of Aeromonas is well established (Borrell *et al.,* 1998, Altwegg *et al.,* 1990 and others).

EPA is currently evaluating two DNA sequence based methods for identifying *Aeromonas.* The restriction fragment length polymorphism (RFLP) method of Borrell *et al.* (1997) has been applied to 96 Aeromonas isolates from well and cistern water samples. Additional restriction enzymes were needed to distinguish hybridization groups 2,3,11,16, and 17. Currently these same isolates are being independently identified by sequencing two variable regions on the Aeromonas 16S ribosomal gene (Demarta *et al.,* 1999). The EPA will decide once all the data has been produced whether one of these two methods provides an advantage over the phenotypic method of identification. The EPA welcomes comment concerning the use of these alternative molecular based methods for the identification of *Aeromonas* to the hybridization group level.

(iii) *Vulnerability Factors Affecting Sampling Locations.* Comments have been made by *Aeromonas* experts that the proposed screening survey would not detect *Aeromonas* since it would be a representative survey and would not target water distribution systems that are vulnerable to *Aeromonas* regrowth. Selection of vulnerable water distribution systems would require that the factors responsible for *Aeromonas* regrowth in distribution systems be understood well enough to reliably predict when *Aeromonas* would be present in the distribution system. Published reports and other sources list at least 10 factors associated with *Aeromonas* occurrence in distribution systems. Nonetheless, there is insufficient data (Holmes *et al.,* 1996) or agreement between different studies (see "pros" and "cons" in Table 4) on how to identify vulnerability characteristics to consistently predict which systems are vulnerable to *Aeromonas* occurrence. Therefore, EPA does not feel that enough is understood about *Aeromonas* occurrence to target vulnerable systems, and systems selected for monitoring will be chosen as a representative survey. At the same time, however, there appears to be general agreement that aeromonads grow best within distribution systems during warm seasons when finished water temperature is elevated or in waters characterized as having a low chlorine residual (Holmes *et al.,* 1996). Therefore, EPA is proposing to require sampling at times or locations within a distribution system thought to be vulnerable.

TABLE 4.—FACTORS AFFECTING OR RELATED TO Aeromonas ABUNDANCE

Factor	References
1. Chlorine Residual.	Pro: Grows at <0.2 mg/L chlorine (Holmes and Nicolls, 1995), present when chlorine residual consistently less than 0.3 mg/L (Burke et al., 1984). Con: Little relation between *Aeromonas* numbers and chlorine residual; may be present at 0.45 mg/L chlorine (Gavriel et al. 1998).

TABLE 4.—FACTORS AFFECTING OR RELATED TO *Aeromonas* ABUNDANCE—Continued

Factor	References
2. Temperature or Season.	Pro: Associated with unchlorinated water above 14.5°C (Burke et al., 1984); Most abundant at >12°C, mid June to end of September (Scotland) (Gavriel et al., 1998); June through October (England) (Holmes and Nicolls, 1995); May through October (Oregon) (LeChevallier et al., 1982) Con: *Aeromonas* can grow and has been detected in distribution systems at low temperatures (Holmes and Nicolls, 1995).
3. Rainfall	Pro: Relationship between *Aeromonas* and rainfall in all drinking water reservoirs surveyed (Gavriel et al., 1998); *Aeromonas* numbers may have been affected in a river by rain Pathak et al. 1988); Con: *Aeromonas* occurrence not related to the same degree to rain fall in all rivers sampled (Pettibone, 1998).
4. Heterotrophic plate counts.	Pro: Le Chevallier et al., 1982; Significant correlation (r=0.848, p<0.001) of *Aeromonas* with HPC. Con: No relation of *Aeromonas* to HPC or TOC (Havelaar et al. 1990, Gavriel et al., 1998).
5. Biofilms	Pro: Holmes and Nicolls, 1995; *Aeromonas* is biofilm-associated, especially in surface water derived areas. Con: van der Kooij et al., 1999; *Aeromonas* density is related to the biofilm formation rate.
6. Long residence time in distribution system.	Pro: Havelaar et al. 1990; *Aeromonas* increased in the distal parts of the distribution system. Con: Gavriel et al., 1998 *Aeromonas* found in several closely situated drinking water reservoirs, but not in outlying drinking water reservoirs.
7. Anaerobic ground water or low redox.	van der Kooij personal communication; *Aeromonas* regrowth in anaerobic water containing methane (Havelaar et al., 1990).
8. Corroding cast iron water pipes.	van der Kooij personal communication.
9. pH	Moyer, personal communication.
10. Lime softening.	Plants that lime soften may be more susceptible to *Aeromonas* colonization with low chlorine residual and temperature >15°C (Moyer, unpublished observation).

(iv) *Sampling Times and Locations.* Since the literature suggests that the occurrence of *Aeromonas* numbers .. (Gavriel et al., 1998) and species (Kuhn *et al.,* 1997) tends to be sporadic in water distribution systems, EPA proposes at § 141.40(a)(5)(ii)(B), Table 3, Monitoring Frequency by Contaminant and Water Source Types, that systems sample six times during the year, once per quarter during the cooler seasons and once per month during the warmest (vulnerable) quarter. This would result in sampling in March, June, July, August, September, and December. Six samples will increase the likelihood of detecting sporadic occurrence. At each sample time, three samples would be taken from each system. Sampling locations would include one midpoint in the distribution system where the chlorine residual would be expected to be typical for the system (midpoint, or MD, as defined in the Rule), and two points of maximum retention or locations where the chlorine residual would have typically declined (point of maximum residence, or MR, and location of lowest disinfectant residual or LD, respectively, as defined in the Rule).

Sites selected for *Aeromonas* samples could utilize locations identified for certain other contaminants which may occur under similar conditions to those described for *Aeromonas*. Sampling for coliform indicator bacteria, which would include midpoint samples, is described in 40 CFR 141.21. Compliance monitoring samples for coliform bacteria are taken from a variety of locations through the distribution system. Some of these samples are from locations where the chlorine residual would be representative of the distribution system and would not have significantly declined. Locations specified in the sample plan for coliform bacteria that meet this description could be used for the *Aeromonas* midpoint sample. Additionally, samples will be required to be taken from two locations in the distribution system where the chlorine residual is expected to be low, which is similar to total trihalomethane (TTHM) sample points. Sample locations for TTHMs are described in 63 FR 69468 (1998), the Disinfectants and Disinfection Byproducts Rule, and 40 CFR 141.30. These sample locations would be at distal parts of the distribution system (taking care to avoid chlorine booster stations) or dead ends, or locations which had previously been determined to have the lowest chlorine residual for systems which disinfect. Undisinfected ground water systems would utilize the same sample locations as those that disinfect. Additional information on *Aeromonas* occurrence in relation to retention time or chlorine residual are given in Havelaar *et al.,* 1990, Burke *et al.,* 1984, Gavriel *et al.,* 1998, Holmes and Nicolls, 1995. These studies suggest that *Aeromonas* is more likely to occur where the chlorine residual has declined to less than 0.3 mg/L or where the residence time in the distribution system is longest. Stelzer *et al.* (1992) found *Aeromonas* more commonly at distances greater than 10 km from the treatment plant. Holmes *et al.* (1996) reported after growth of *Aeromonas* in part of a distribution system where the retention time of treated water could exceed 72 hours.

In cases where water is purchased by another water system, distribution systems may be interconnected. In this case, all consecutive systems would be responsible for monitoring at the three specified locations for *Aeromonas*. This is consistent with the requirements of the Total Coliform Rule and the Disinfection Byproducts (DBP) Rule. This approach is proposed in § 141.40(a)(3), Table 1, List 2, footnote i. However, States may specify the three distribution system sampling points that represent the longest residence time or low chlorine residual points of the larger consecutive systems' distribution system so that sampling at three sampling points is not necessary for all consecutive systems. This specification of distribution system sampling points by States allows them to reduce burden in cases where the number of consecutive systems is large, or, from a larger distribution system operation standpoint, it is practical and scientifically sound and justified (because the three sampling points of the larger distribution system are reasonably known and identifiable) to select only the three sampling points in the larger consecutive systems' distribution system (as indicated in § 141.40(a)(3), Table 1, List 2, footnote i of the proposed rule) to meet the proposed UCMR requirements.

Sample location descriptions for large distribution systems may not be applicable for small systems. In the event that the midpoint and distal or low chlorine residual sample locations described for larger systems do not apply, small systems may use a coliform sample location, and two samples at the farthest point from the source water intake.

Three samples from different parts of the distribution system for the UCMR screening survey would provide additional information that would be useful for the next five-year cycle of assessment monitoring which is expected to begin in 2006, depending on the outcome of the screening survey. Due to the size of the screening survey (300 systems total) versus that of assessment monitoring (approximately 3,600 systems), any additional information acquired during the screening survey prior to the next cycle of Unregulated Contaminant monitoring would result in substantial savings. This sampling scheme would provide the best compromise to give a reasonable indication of the occurrence of aeromonads both seasonally and throughout the distribution system while not overburdening the systems with undue cost.

Factors relating to *Aeromonas* occurrence are different than those for chemical contaminants. Therefore, EPA proposes that the water quality parameters identified in § 141.40(a)(4)(i)(B), Table 2, Water Quality Parameters to be Monitored with UCMR Contaminants, be analyzed and reported for the microbiological contaminant on List 2, *Aeromonas*. These parameters include water pH, turbidity, temperature, and free and total chlorine residual.

EPA plans to conduct an in-depth survey at a few systems (a performance test that would precede the Screening Survey) after EPA analyzes the multi-lab statistics for EPA Method 1605 to verify that the previously described sampling and analysis scheme would provide useful data.

(v) *Responsibility for Sampling.* Sampling in the distribution system will include sampling in consecutive systems (systems purchasing water from a primary supplying system). EPA proposes today in revisions to § 141.40(a)(3) Table 1, List 2, that the system that owns the distribution system serving consecutive systems is the public water system responsible for the monitoring of contaminants (in this case, *Aeromonas*) that have been identified for monitoring in distribution systems. The reason for this responsibility is that the system owning the distribution system owns and controls the water in it until it is delivered and thus controls the access to the distribution.

EPA invites public comment on the UCMR monitoring program for *Aeromonas*.

d. *Exclusion of RDX, and Alachlor ESA and Other Acetanilide Pesticide Degradation Products from Monitoring under Screening Survey at This Time.* Not all of the contaminants included in the UCMR (1999) List 2 in the final UCMR Rule (64 FR 50556) are activated for Screening Survey monitoring by this rule. Some of these contaminants, as indicated in this section, still do not have appropriate analytical methods available for monitoring.

(i) *Alachlor ESA and Other Acetanilide Pesticide Degradation Products.* In the **Federal Register** notice announcing the draft Contaminant Candidate List (CCL; 62 FR 52193), EPA initially included only alachlor ethane sulfonic acid (alachlor ESA) on the draft list. However, in response to the proposal, EPA received public comment supporting the inclusion of other acetanilide pesticide degradation products, such as metolachlor ESA and metolachlor oxanilic acid (metolachlor OA). EPA agreed that other acetanilide pesticide degradation products should be included, and thus listed ''alachlor ESA and other acetanilide pesticide degradation products'' as a contaminant group on the final 1998 CCL (63 FR 10273). In part, this was done because at the time of publication of the final 1998 CCL, the Agency did not have sufficient information to determine which degradation products should be included. In the publication of the final UCMR, it was again noted that EPA is evaluating which specific degradation products might be included in this group, and that when these have been identified and analytical methods determined, they could be proposed for monitoring (64 FR 50556).

A few procedures have been identified from the literature and discussions with other agencies that have been used to analyze for particular alachlor degradates. In particular, USGS has utilized some research procedures to measure alachlor ESA in environmental water samples. These are still research procedures and the processes and instrumentation used, such as solid-phase extraction (SPE) with liquid chromatography/mass spectrometry or SPE and enzyme-linked immunosorbent assay, are not commonly available in laboratories performing drinking water analyses. Further, these procedures do not contain the preservation and dechlorination steps necessary to ensure analyte stability in drinking water samples. Such procedures need further refinement and field validation to ensure they would be suitable methods for routine sampling by public water systems or for routine laboratory implementation. For these reasons, EPA is not at this time including alachlor ESA and other acetanilide pesticide degradation products for UCMR (1999) List 2 monitoring. EPA has begun methods development work for acetanilide pesticide degradation products including alachlor ESA and OA, acetochlor ESA and OA, metolachlor ESA and OA, propachlor ESA and OA, and dimenthenamide ESA and OA. When validated methods are available, EPA may propose Screening Survey monitoring for these contaminants.

(ii) *RDX.* EPA did not initially propose to include RDX on the UCMR (1999) List. In the final Rule, however, in response to public comment, EPA included RDX on List 2 of the UCMR (1999) List pending identification of an appropriate analytical method. During the peer review conducted for the UCMR, reviewers identified analytical techniques (*e.g.,* Method 8330, 8095) contained in EPA's SW–846 that might be suitable for monitoring RDX in drinking water and should be investigated. However, one reviewer noted that some of these techniques are often difficult to perform, and that a new or improved method for measuring RDX should be developed. EPA has since evaluated these techniques (3535 for extraction and 8095 and 8330 for determination in various matrices) and found that they are not appropriate for use in the UCMR for drinking water. Specifically, these methods do not contain any instructions for sample collection and preservation of chlorinated samples, and do not include requirements for the use of surrogates and/or internal standards. The U.S. Army Cold Regions Research and Engineering Laboratory (CRREL) has also developed methods to analyze for RDX in contaminated soil and water samples. However, these methods refer to SW 846 for sampling, preservation, and quality control requirements. Since none of these methods require either the sampling and preservation procedures or the quality control elements necessary to ensure the quality of data generated in drinking waters at low RDX concentrations, EPA does not feel that these methods are appropriate for use in the UCMR.

There are also safety considerations which need to be addressed. Relatively pure samples of chemicals are used to make standards and spikes for calibration and laboratory quality control. RDX is a chemical used in weapons-grade explosives, presenting a very unique safety issue for each laboratory that might be analyzing for RDX under the UCMR. These safety issues must also be resolved before a method is approved for use. For these reasons, EPA is not activating RDX for UCMR (1999) List 2 monitoring.

Note: The methods for RDX and Alachlor ESA (as well as all the List 3 contaminants identified in the September 1999 Revisions to the UCMR) are currently under development and it is not certain when these methods will be completed. If these methods are completed before December 2001, additional rulemaking should be anticipated with those completed methods being proposed, public comment solicited, final promulgated for the method(s), and the defined monitoring schedule completed on or before December 2003. If these methods are still in development after December 2001, EPA will then begin to consider including these contaminants in the next five-year cycle of UCMR monitoring, currently planned to begin in January 2006.

e. *Movement of Polonium-210 from UCMR (1999) List 2 to UCMR (1999) List 3.* When EPA published the proposed UCMR (1999) List on April 30, 1999 (64 FR 23398). The Agency requested comment on whether to include the radionuclide polonium-210 on the UCMR (1999) List. Polonium-210 was included on List 2 of the UCMR (1999) list in the Final Rule because it was believed at the time that the analytical method for this contaminant was easy to perform. However, further analysis of the method has since indicated that additional development and validation work is needed before the method can be used for drinking water analysis. In addition, EPA and external research indicates that depending on the MRL, the currently available procedure for polonium-210 may be very time consuming and will likely require an experienced analyst, which raises significant laboratory capacity and capability concerns. Few, if any, laboratories currently performing compliance drinking water radiochemistry have any experience with polonium-210. Before requiring monitoring for this contaminant, EPA will need to address issues related to radionuclide laboratory capacity and certification. Due to the need for further research and development of drinking water analytical methods for this contaminant, EPA is proposing to move polonium-210 to List 3 of the UCMR (1999) List, as reflected in proposed § 141.40(a)(3), Table 1, List 3.

The reason that EPA proposes that polonium-210, unlike RDX and alachlor, be moved to List 3 is that for the other two organic chemicals, methods are available but are being refined. However, for polonium-210, the methods are not yet at a sufficient point to be used for drinking water analyses, let alone be refined for routine application. Thus, for drinking water analyses, the methods still require development, peer review and EPA approval. As a result, polonium-210 is more appropriately placed on List 3. EPA invites public comment on moving polonium-210 to List 3.

3. All List 2 Monitoring at Entry Points to the Distribution System

EPA is proposing to modify § 141.40(a)(7), which addresses monitoring for List 2 contaminants, to clarify that all List 2 monitoring must be done at entry points to the distribution system. The current UCMR allows systems that routinely sample at source (raw) water sampling points to sample List 1 contaminants at those points until an unregulated chemical contaminant is found. After such a detection, the system must generally initiate monitoring at the entry points to the distribution system for those contaminants detected (and at its discretion, the other contaminants in the detected contaminant's method, or for all the other UCMR List 1 and 2 contaminants (and their methods) for which it must test). Since EPA is seeking a representative result from the 300 systems (120 large and 180 small systems) that are required to monitor for List 2 chemical contaminants and is also limiting the timeframe for conducting this monitoring (1 year: 2001 for the first Screening Survey of small systems and 2002 for the first Screening Survey of large systems), all List 2 chemical contaminant monitoring at large systems should be done at entry points to the distribution system. Sampling beyond this year would jeopardize the data set's consistency. In States which require compliance monitoring in the source water, Assessment Monitoring for List 1 contaminants in source water is permitted since the approved compliance monitoring methods can simultaneously monitor for these List 1 contaminants and the cost burden is reduced. Contaminants included in List 2 are not included in methods currently used for compliance monitoring, and, consequently, monitoring in source water does not reduce costs and makes it difficult to obtain accurate exposure estimates. All List 2 chemical contaminant monitoring will be done using new methods, so there will not be problems of method applicability at a different sampling point for other compliance purposes.

Specifically, EPA proposes to clarify in § 141.40(a)(7) that List 2 chemical contaminant monitoring by the randomly selected 120 large systems, which is only to be conducted over 1 year (2002) (not any 12 months over the 3-year period, as with List 1 Assessment Monitoring), must be at the entry point to the distribution system for all systems for chemical monitoring, to provide for consistent results nationally. [Note that the 180 small systems randomly selected to monitor in 2001 for Screening Survey One for List 2 contaminants will conduct that monitoring with their Assessment Monitoring for List 1 contaminants, as indicated in this Preamble at 4. Implementation, a. Coordination of Assessment Monitoring and Screening Surveys.] The national data will then be consistent for future analyses. EPA invites public comment on this clarification.

4. Implementation

a. *Coordination of Assessment Monitoring and Screening Surveys.* While no modification of the regulation is proposed for coordination of Assessment Monitoring of List 1 and Screening Surveys for List 2, such coordination, to the extent possible, is an important aspect of the UCMR program. Coordination of Assessment Monitoring and Screening Surveys for small systems will occur for all the small systems required to do both in the year that they are selected to conduct Assessment Monitoring. Not all small systems will be selected to do both, but for those that are, this is clearly indicated in the Initial State Monitoring Plans for small systems: If a small system is selected to conduct a Screening Survey of List 2 contaminants, the SMP for this monitoring is to carry out the Screening Survey and Assessment Monitoring in the same year and frequency. For large systems serving more than 10,000 persons, the systems randomly selected to do the first screening survey must carry out the monitoring for that survey in 2002. Large and small systems selected for the second screening survey for *Aeromonas* must monitor for that microorganism in 2003. This second Screening Survey may not coincide with Assessment Monitoring at any system from the standpoint of sampling months and will be conducted at completely different sampling locations: three sites in the distribution system. EPA recognizes that these dates may not always coincide with compliance monitoring. However, the monitoring for *Aeromonas* is only being conducted at 300 large and small systems in 2003, which has a limited effect on the industry overall. This is a one time, one-year survey, specific to *Aeromonas*, which is being conducted with the expectation that it will provide a nationally consistent result. Figure 1 provides a timeline for implementation of the UCMR, including the Screening Survey for List 2 contaminants.

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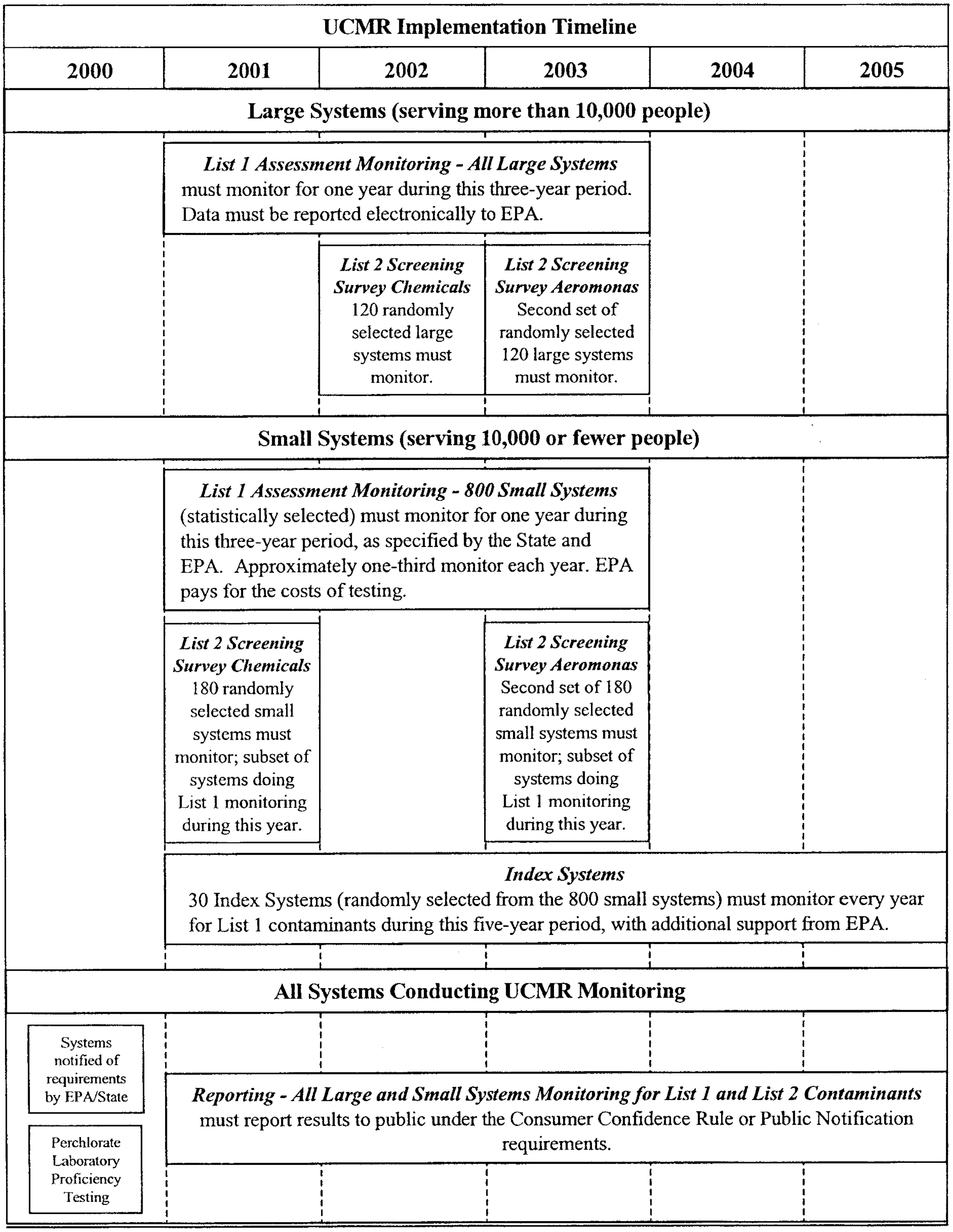
Figure 1

Implementation Timeline for UCMR (1999): Public Water Systems



UCMR Implementation Timeline

Large Systems (serving more than 10,000 people)

List 1 Assessment Monitoring - All Large Systems must monitor for one year during this three-year period. Data must be reported electronically to EPA.

List 2 Screening Survey Chemicals 120 randomly selected large systems must monitor.

List 2 Screening Survey Aeromonas Second set of randomly selected 120 large systems must monitor.

Small Systems (serving 10,000 or fewer people)

List 1 Assessment Monitoring - 800 Small Systems (statistically selected) must monitor for one year during this three-year period, as specified by the State and EPA. Approximately one-third monitor each year. EPA pays for the costs of testing.

List 2 Screening Survey Chemicals 180 randomly selected small systems must monitor; subset of systems doing List 1 monitoring during this year.

List 2 Screening Survey Aeromonas Second set of 180 randomly selected small systems must monitor; subset of systems doing List 1 monitoring during this year.

Index Systems
30 Index Systems (randomly selected from the 800 small systems) must monitor every year for List 1 contaminants during this five-year period, with additional support from EPA.

All Systems Conducting UCMR Monitoring

Systems notified of requirements by EPA/State

Perchlorate Laboratory Proficiency Testing

Reporting - All Large and Small Systems Monitoring for List 1 and List 2 Contaminants must report results to public under the Consumer Confidence Rule or Public Notification requirements.

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b. *Selection of Systems by Water Source and Size.* Today's rule proposes the approved analytical methods for fourteen (14) UCMR (1999) List 2 contaminants for which selected systems will need to monitor. EPA will select these systems from the 2,800 large systems and 800 small systems previously identified by EPA for Assessment Monitoring. One hundred twenty (120) large systems and 180 small systems will be randomly selected to monitor for the Screening Survey and they will be allocated as follows:

System size (persons)	Water source	
	Ground water	Surface water
25–500	30	30
501–3,300	30	30
3,301–10,000	30	30
10,001–50,000	30	30
50,000 or more persons	30	30

This allocation ensures adequate coverage in both small and large system size and the source water categories.

c. *Sampling Period, Location and Frequency.* For the monitoring period, the proposed rule indicates the year the monitoring must be completed. For small systems serving 10,000 or fewer persons, monitoring for List 2 chemicals is proposed to be conducted in 2001, which is also the first year of Assessment Monitoring. EPA will pay for sample shipping, testing, and reporting for small systems. EPA expects to evaluate both the occurrence and the analytical methods used for List 2 contaminants at this time. If adjustments to the methods need to be made before large systems monitor, the monitoring in 2001 will provide EPA time to make these changes before large systems conduct monitoring. Large systems serving more than 10,000 persons would be required to conduct monitoring in 2002. The monitoring of List 2 chemical contaminants in 2001 and 2002 will provide information for the contaminant selection process used for the next (2003) Contaminant Candidate List (see 64 FR 23403). The monitoring for *Aeromonas* is proposed to be conducted by all selected small and large systems in 2003.

The sampling location for the chemical contaminants on List 2 is the entry point to the distribution system. For *Aeromonas*, the sampling locations are the three locations in the distribution system representing: (1) the total coliform location specified by the State, (2) the distal end of the distribution system (maximum residence time) specified for TTHM sampling and/or the location of low disinfection residual, also specified for TTHM sampling, depending on whether these are the same location. If the latter two are the same location, then the third sampling location is at a point between the total coliform and the TTHM location.

The frequency of sampling for chemical contaminants on List 2 is the same as for List 1 Assessment Monitoring: four consecutive quarters for surface water systems and two times six months apart for ground water systems, with one of these sampling events (for both water source types) during the vulnerable time specified by EPA in the rule, or by the State in its State Monitoring Plan. For *Aeromonas*, sampling frequency is once per quarter (specifically the last month of each quarter) and each month during the warmest quarter (July, August and September).

d. *Sample Analysis.* Large systems will sample and send their samples to the EPA certified laboratory of their choice. Large systems will pay for the cost of the shipping, testing, and reporting of the results. At small systems, the owner or operator will collect the sample in EPA-provided equipment. EPA will pay for the shipment, analysis of the samples, and reporting of test results for small systems.

e. *Reporting.* Systems, through their analytical agent or laboratory, will be responsible for reporting the results to EPA, with a copy to the State, in a format specified by EPA, within 30 days of the month in which the results are received from the laboratory. EPA will allow an additional 60 days for system, State, and EPA quality control review before posting the results to the National Drinking Water Contaminant Occurrence Database (NCOD) portion of the Safe Drinking Water Information System.

EPA contract laboratories will generate small system results and will report the data into the EPA system. EPA will provide the small systems the opportunity to conduct a 30-day quality control review of the results before EPA reports them to the NCOD and before the 60-day quality control review by systems and States. During this 60-day period, EPA will also conduct its own quality control review.

D. Other Technical Changes and Clarifications to the UCMR (CFR 141.40)

Changes described in this section will affect monitoring and reporting for both List 1 and List 2 contaminants beginning in 2001.

1. Updating the National Drinking Water Contaminant Occurrence Database

EPA proposes to modify § 141.35(c) to recognize the updating cycle of the National Drinking Water Contaminant Occurrence Database (NCOD). The existing rule provides for placing the data reported to EPA by systems in the NCOD after a 60-day quality control review period. Today's proposal will continue to provide for the 60-day quality control review by systems, States and the Agency. The proposed rule would require that EPA place the available unregulated contaminant occurrence data resulting from UCMR monitoring in the NCOD at the time of each update of the database, which currently is on the same quarterly update cycle as the Safe Drinking Water Information System. Since updating the databases incurs costs, being able to coordinate this update with an existing update process provides a lower level of expenditure for database maintenance. The NCOD would be updated four times per year, rather than six times. Because these data are for long-term analytical purposes, this change should not inhibit its principal use for regulatory determination and development. The data would still be regularly available to the public through the NCOD. The public should also see the results of detections of unregulated contaminants in their consumer confidence reports. EPA invites public comment on this proposed change in the updating cycle of the NCOD for unregulated contaminants.

2. Reporting System and Laboratory Contacts

In § 141.35(d), EPA identified the data elements to be reported with contaminant monitoring results. In the process of initiating implementation of the UCMR, including discussions with stakeholders, EPA realized that to facilitate communication in a rule for which EPA had direct implementation responsibility, the agency needed points of contact with public water systems and their analytical agents or organizations (laboratories). In today's proposal, EPA is amending § 141.35(d) to clarify that systems must provide ''point-of-contact'' information. The proposed rule would amend the UCMR to require on a one-time basis that systems and laboratories provide the following information: name, mailing address, phone number, and email address for: (1) PWS technical person (*i.e.,* the person at the PWS who is responsible for the technical aspects of UCMR activities, such as details concerning sampling and reporting); (2)

PWS official UCMR spokesperson (*i.e.,* the person at the PWS who is able to function as the official spokesperson for the PWS); and (3) laboratory contact person (*i.e.,* the person at the laboratory who is able to address questions concerning the analyses performed). Systems will be asked to update this information if it changes during the course of UCMR implementation. The information will be used to facilitate: communication with PWSs and labs regarding any reporting system problems/modifications; resolution of specific data questions; and periodic distribution of any related materials. EPA invites public comment concerning the provision of system and laboratory point-of-contact information.

3. Modification of Data Element Definitions

In discussions with representatives of systems and laboratories concerning implementation of the UCMR, EPA found that the definitions of several data elements were not clear. EPA is proposing to change nine data element definitions to clarify the data to be reported so that they will be more useful for possible regulatory analysis. These data elements are: PWS facility identification number, sample identification number, sample analysis type, sample batch identification number, analytical precision, analytical accuracy, detection level, detection level unit of measure, and presence/absence. The proposed changes appear in § 141.35, Table 1. The proposed clarifications are as follows:

(a) PWS facility identification sampling point number is proposed to be a two-part number made up of the PWS facility identification number and a unique sampling point number within the PWS and assigned by the State, as well as the sampling point type, to allow for relationships between sampling points and other facilities to be reported and maintained, and for appropriate analyses to be made.

(b) Sample identification number is proposed to be changed to specify a sample or group of samples that are collected at the same time and place.

(c) Sample analysis type is proposed to be modified to address raw and treated field and duplicate samples to ensure that the full range of sample types can be reported.

(d) Sample batch number is proposed to be changed to clarify that an extraction or an analysis batch number are to be reported along with the laboratory identification number and analysis date.

(e) Analytical accuracy and analytical precision are both proposed to be modified to clarify the meaning of each variable identified in the current equations.

(f) The proposed changes appear in § 141.35, Table 1.

EPA proposes to modify both detection level and detection level unit of measure to provide additional reporting flexibility and to change their names to ''minimum reporting level'' and ''minimum reporting level unit of measure,'' respectively. PWSs are required to report all detections occurring at or above the minimum reporting level (MRL). Since some laboratories will be able to accurately and precisely measure some of these analytes at concentrations below the EPA established UCM MRL, EPA proposes to expand the definition of MRL to permit laboratories to establish their own MRLs as long as they are less than the UCM MRL listed in § 141.40(a)(3), Table 1, and that they adhere to the requirements established in Appendix A to § 141.40, paragraphs (2) and (3). These changes will permit PWSs to report data for analytes below the UCM MRLs without compromising the quality of the data reported.

(g) The presence/absence data element is being reserved for potential future use. All of the contaminants currently being monitored can be accurately and precisely quantified. Therefore, their presence or absence does not need to be reported. This data element is being reserved for contaminants and not deleted in order to permit the use of presence/absence measured if warranted in future regulations.

EPA invites public comment on these proposed changes in reporting for UCMR contaminants.

Special Note on PWS Facility Identification Number. Table 1 of Section 141.35 previously required that the same PWS Facility Identification Number be used consistently throughout the history of unregulated contaminant monitoring to facilitate analysis of the data. States are already required to number and report to EPA water source intakes and treatment plants, but there is no requirement to hold those numbers static, or even to store them in the state's database. EPA is aware that States converting to the State version of the Safe Drinking Water Information System (SDWIS/STATE) will have new numbers assigned to PWS facilities within that State. Other States converting to other databases during the next several years may face a similar problem. It may be less burdensome on the State to be able to change the number, but report to EPA what number the new number is replacing so that SDWIS/FED can link the two for historical tracking. As a result, EPA is proposing additional flexibility in this definition.

One option EPA has given States historically to number their system facilities is to notify EPA of the existence of the facility and have EPA's database automatically generate a number for the facility. EPA is considering requiring States to actually provide an identification number rather than have EPA's database generate a number on the State's behalf so that States are aware of the number and can respond to inquiries regarding it. EPA requests comment on this possible change.

4. Clarification of Data Reporting Procedures

EPA is also proposing to modify § 141.35 to modify the electronic process that EPA intends to implement for the large amount of data that is expected to be reported under the UCMR. As EPA evolves its electronic reporting approach Agency-wide, it is trying to learn from lessons in which it has attempted such streamlining in the past. Specifically, the electronic reporting that occurred under the Information Collection Rule resulted in a process whereby laboratories entered data electronically in formats they used, provided a hard copy of the report to the public water system, and then the system reentered the data to an electronic disc which was sent to EPA. This resulted in rekeying (data entry) errors and transmission errors, including loss of discs (through mail or damage). EPA is moving toward a ''one-entry'' approach for data reporting to improve reporting quality, reduce reporting errors, reduce the time involved in investigating, checking and correcting errors at all levels (laboratory, system, State and EPA), thereby making the data more useful earlier. Electronic reporting supports the President's overall regulatory reinvention goals of reducing the burden of compliance and streamlining regulatory reporting, as stated in his March 1996, Reinventing Environmental Information Report. Electronic reporting allows for improvements to the current submission process, such as additional data quality checks and electronic acknowledgments of data received by EPA. These opportunities provide EPA with the ability to better serve the systems as regulated entities and the public in general. For UCMR implementation, EPA has consulted with system and laboratory representatives concerning an approach that will allow the organization conducting unregulated contaminant analysis for the system to enter the data one-time through EPA's electronic Web-based format, having the system review (electronically or hard copy) the results and approve them for submission. Furthermore, in response to stakeholder input on UCMR implementation, EPA is establishing procedures to accommodate ''batch'' electronic data transfer directly from laboratory information management systems. This will result in a very efficient, cost-effective approach, in addition to enhancing data quality.

In light of these electronic reporting developments and experiences, EPA proposes to modify § 141.35(e) and (f) to clarify its format for reporting and to indicate that a system must instruct the agent or organization that conducts the testing and laboratory analysis for the unregulated contaminants (herein after referred to as ''the laboratory'') to enter the data into the UCMR electronic reporting system. EPA will provide electronic forms via its Internet website or via ''batch'' electronic data transfer following a format specified by EPA. Such data entry also includes the sample collection and PWS information specified in Table 1 of § 141.35.

A public water system has choices for reporting the data to EPA: (a) The public water system can instruct its analytical agent (laboratory) to enter the UCMR results directly into the electronic template that EPA will make available on the Internet through the OGWDW Homepage. The PWS can then review the results on-line and electronically indicate its approval to submit the data to EPA. The advantages of the EPA electronic reporting system are that no duplicate data entry would occur, data quality would improve, access by systems and States would be in near real time and systems could reduce costs of data management for unregulated contaminant reporting. A disadvantage may be that EPA (and potentially the public) would have access to UCMR data entered by laboratories to the EPA electronic reporting system before a system approves submission of the data since the data would be in an EPA database network. However, while these data are subject to public requests under the Freedom of Information Act (FOIA), EPA does not intend to use these data in its regulatory determinations until they have been reviewed for quality control and approved for submission by the PWS. Until the PWS review and submission approval occurred, EPA would consider the data preliminary and usable for Agency decisionmaking.

(b) Systems may require their laboratories to receive their approval before the laboratories post data on the EPA electronic reporting system. In this case, the PWS can, of course, review the results prior to the laboratory's entry of the data into the UCMR electronic reporting system through its previous arrangements for receiving data from the laboratory. Typically, the laboratory has already entered the data into its electronic laboratory information management system (LIMS). Once the laboratory receives approval to submit the data from the PWS, it could electronically send the data in batch form from its LIMS to EPA's electronic reporting system.

(c) A system may determine that its laboratory does not have the capability to report electronically or does not have the capability to provide data to the system prior to submitting it to EPA without rekeying (option b above). In this case, the system may submit a request to EPA to use an alternate reporting format.

In any of the results to EPA within 30 days following the month the PWS receives the results. The single-entry, electronic reporting procedure will reduce concerns about quality control of reporting and is believed to be the most efficient, cost-effective approach since it eliminates potential re-keying steps possible under the current approach.

For small water systems, EPA would enter and report the results directly to its electronic reporting system through its contract laboratories. Since the samples, once sent to EPA by the small system, are in EPA's charge, EPA may make the data available to the public if requested prior to the system's review. Again, however, EPA would consider the preliminary and unreliable until they had undergone a quality control review by the system and EPA.

This proposal further clarifies that if a PWS chooses to report multiple results for a particular contaminant (for the same sampling location and same monitoring period) via the UCMR electronic reporting system, the highest) reported value will be used as the official result.

Additionally, for small systems in States requiring immediate reporting of contaminants found in PWSs, EPA will report these results to the State promptly after laboratory results are received to assist these small systems in meeting State reporting requirements, if this need is identified in the Partnership Agreement. However, EPA makes clear here that such a State requirement for systems to report more immediately any contaminants found is not a requirement on EPA and EPA bears no liability if such reporting by it for a system is beyond a State's reporting date for systems or if there are errors in the reporting of the information. The former situation might occur, for example, if the electronic reporting system were to go off line for any reason around the time specified by the State.

EPA invites public comment on its proposed revisions to the UCMR data reporting process.

5. Clarification of Systems Purchasing Water from Other Systems

At § 141.40(a)(1)(ii), the UCMR indicates that large public water systems not purchasing their water from another wholesale or retail public water system must monitor under the requirements outlined in the rule. However, at § 141.40(a)(1)(iii) and (v), it specifies monitoring requirements for large and small public water systems purchasing their water supply from a wholesale public water system only, with no mention of retail systems. This technical correction seeks to clarify and provide consistency in regards to wholesale and retail systems in the rule. The original intent was to address purchase of water from another system in these cases, whether or not it was a wholesale or retail system. Additionally, for small systems purchasing their entire water supply, the proposed rule changes the wording ''wholesale'' to ''another'' public water system to clarify that the selected small system may have to monitor, in particular in the distribution system, regardless of the type of system from which it purchases water.

6. Clarification of Source (Raw) Water Monitoring Alternative

At § 141.40(a)(5)(ii)(C), the UCMR allows systems in States requiring source (raw) water monitoring for compliance monitoring to conduct UCMR monitoring in the source water. However, once one or more contaminants on the UCMR list are found, the monitoring must also be done at the entry points to the distribution system. This requirement to move the monitoring activity was necessary to allow EPA to assemble a nationally consistent data set for UCMR contaminants. EPA proposes to clarify that should a system in a State requiring source (raw) water monitoring find a contaminant in the source water, the system must initiate monitoring at the entry point to the distribution system only for the contaminant(s) found, unless it desires to sample and test for all contaminants analyzed by that same method, or for all the contaminants, at its option. EPA is also proposing to clarify the rule to specify that the monitoring, once initiated at the entry point to the distribution system, must be conducted for the next 12 month period (four times for surface water systems and two times five to seven months apart for ground water systems), even if the monitoring extends past the end of 2003. While this was the original intent, the September 1999 final rule was not clear on this matter. EPA invites public comment on this clarification of the source (raw) water monitoring alternative.

7. Clarification of Treatment Plant Latitude/Longitude Options

At § 141.40(b)(1)(ix), the existing rule states that, if a State enters into a Memorandum of Agreement with EPA to implement the UCMR, the State must report the latitude and longitude of its systems' treatment plants when the systems report this information with the first Assessment Monitoring results for List 1 contaminants. This requirement under the UCMR is in addition to a preexisting requirement to report by January 1, 2000, either the latitude and longitude or the street address of each treatment plant location. The preexisting reporting requirement is based on 40 CFR 142.15(b)(1) (which requires States to submit inventory information concerning their public water systems, including location information, according to a format and schedule prescribed by EPA; the requirement for reporting latitude/longitude information for treatment plants was transmitted to States by memorandum of July 10, 1998, from Robert J. Blanco, Director, Implementation and Assistance Division, OGWDW, as ''Revised Inventory Reporting Requirements for the Safe Drinking Water Information System,'' June 1998, EPA 816–R–98–007, with a reporting date of January 1, 2000) and the EPA Locational Data Policy (published as Information Resources Management Policy Manual 2600, Chapter 13, April 8, 1991). The EPA Locational Data Policy specifies the content of latitude and longitude data that are to be reported by facilities and other entities required to report locational information. Today's proposal clarifies that the State may use the latitude and longitude of closely adjacent facilities at or near the same site, when the facilities are associated with the treatment plant(s). Specifically, the State may use the latitude and longitude of the intake or wellhead/field if the treatment plant is on the same site, or the latitude and longitude of the entry point to the distribution system if it is on the same site as the treatment plant. Other facilities located closely adjacent to the treatment plant and part of the PWS for which it has a latitude and longitude may also be used. As a guide, ''closely adjacent'' should be taken to mean not more than ¼ mile or 400 meters away from the treatment plant. This approach provides the State with the flexibility to use closely associated measurements without having to return to take field measurements. It also provides EPA with the information to be used in health risk assessment relating to the location of contaminants to populations potentially affected. This report of latitude and longitude would be a one-time reporting, unless the information needed to be updated. EPA invites public comment on the use of these adjacent measurements for latitude and longitude of treatment plants.

8. Addition of Consensus Method for Testing

The 1999 UCMR required systems to arrange for testing of the listed contaminants by a laboratory certified for compliance analysis using specified EPA analytical methods. Since the September 17, 1999 publication of the UCMR, EPA has approved a consensus organization method for compliance monitoring that is also approved for UCMR analysis. Therefore, EPA is revising section 141.40(a)(5)(ii)(G), ''Testing'', to allow laboratories certified to perform compliance monitoring using any consensus method that is also approved for UCMR monitoring, as well as any EPA method, to be automatically approved to perform UCMR monitoring using that method.

9. Approval of EPA Method 502.2 and Standard Methods 6200C for the Analysis of MTBE

During the public comment period for the UCMR (64 FR 50556), EPA received public comment recommending approval of purge and trap/photoionization methods, EPA Method 502.2 and Standard Methods 6200C, for the determination of MTBE in addition to the methods proposed and made final. At that time, EPA did not have data beyond that included in Standard Methods 6200C to support that recommendation. Since that time, EPA has received data from the Suffolk County Water Authority which supports the data contained in Standard Methods (SM) 6200C. Therefore, EPA is proposing the approval of EPA Method 502.2 and Standard Methods 6200C for analyses of MTBE, included on List 1 for Assessment Monitoring. For systems that want to report MTBE data collected prior to 2001 to meet the UCMR regulatory requirements, they will need to use the UCMR (1999) data elements as revised by this rule, when final, to meet the reporting requirements of the UCMR. Otherwise, the data will not meet EPA's minimum reporting requirements for UCMR data and will limit the use of the data in subsequent regulatory analyses. EPA is also proposing at § 141.40(a)(3), Table 1, List 1, footnote ''n,'' that sample preservation techniques and holding times specified in EPA Method 524.2 must be used by laboratories using either EPA Method 502.2 or Standard Methods 6200C. The sampling and holding time requirements of Standard Methods 6010B are not adequate for these determinations.

EPA invites public comment on the use of these additional methods for MTBE analyses to provide flexibility to systems and laboratories already using EPA Method 502.2 and SM 6200C for analyzing MTBE.

10. Approval of EPA Methods 515.3 and 515.4 for the Analysis of DCPA mono-acid degradate and DCPA di-acid degradate

EPA proposes at § 141.40(a)(3), Table 1, List 1, to add methods for analysis of DCPA acid metabolites. Adding these methods will provide systems and their laboratories more flexibility in analyzing these UCMR contaminants and managing costs. The methods previously approved for the UCMR monitoring of DCPA mono-acid and di-acid degradates contained a solvent wash following hydrolysis. The DCPA parent is removed during this sample wash step. Since EPA Method 515.3 does not contain this solvent wash following hydrolysis and the DCPA parent is not hydrolyzed under the conditions specified in these methods, all three forms of DCPA are measured as a total value. Therefore, EPA Method 515.3 was not approved for UCMR monitoring. In this rule, EPA is proposing at § 141.40(a)(3), Table 1, List 1, footnote ''j,'' to permit the use of EPA Method 515.3 for the analysis of DCPA mono-acid and di-acid degradates in the UCMR with the following conditions:

1. When monitoring is conducted using EPA Method 515.3, only the results for DCPA mono-acid and di-acid degradates which are less than the UCMR MRL for these analytes may be reported.
2. If DCPA mono-acid or di-acid degradates are observed at greater than or equal to the UCMR MRL using EPA Method 515.3, then either a duplicate sample must be analyzed within the method specified sample holding time, or a replacement sample collected within the same month as the original sample, must be analyzed using one of the other methods approved for UCMR analysis of DCPA mono-acid and di-acid

degradates. The PWS would then only report the result of subsequent analysis.

EPA is also currently developing a revised version of EPA Method 515.3 titled EPA Method 515.4 which will include a wash step following hydrolysis. In this rule EPA is proposing that EPA Method 515.4 be approved for UCMR monitoring of DCPA mono-acid and di-acid degradates. EPA may also propose the approval of Method 515.4 for compliance monitoring in a future regulation. Until that time, EPA Method 515.4 is not approved for drinking water compliance monitoring. EPA Method 515.4 may be inspected at EPA's Drinking Water Docket, 401 M Street, SW., Washington, DC 20460 (Telephone: 202–260–3027), Docket Number W–00–01; or at the Office of Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

11. Use of pH as a Water Quality Parameter

Today's proposal also clarifies that pH need not be reported as a water quality parameter for chemical contaminants. In the preamble to the proposed UCMR (64 FR 23398), EPA asked for public comment on the monitoring of routinely-tested water quality parameters for all water samples analyzed for UCMR contaminants. EPA proposed to collect these routinely tested water quality parameter data to provide for a more thorough scientific understanding of the occurrence of unregulated contaminants, and, specifically, to gather data that could facilitate the interpretation of UCMR results. The majority of public comments received on this topic generally agreed with EPA's approach, particularly with respect to microbiological contaminants. In the final Rule, EPA moved to require that pH be monitored when collecting samples for unregulated chemical contaminants, and pH, turbidity, temperature, free disinfectant residual, and total disinfectant residual be monitored when collecting samples for unregulated microbiological contaminants. While these chemical and physical parameters can be important indicators of water quality, based on EPA's continuing evaluation of the UCMR Program, EPA does not believe that analyzing the pH of finished drinking water will provide relevant data related to the occurrence of these UCMR chemical contaminants. The pH in the environment, particularly the wide variations in the soil-water environment at the source or during transport, can significantly alter the fate of some contaminants (Barbash and Resek 1996). The pH level can significantly affect both the absorption of contaminants to soil and rock materials (e.g., preventing transport) and the degradation of some organic chemicals by hydrolysis. Depending on the compound, at lower pH values, acid-catalyzed hydrolysis may occur, while at higher pH values, base-catalyzed hydrolysis may have a significant impact on the overall rate of hydrolysis (*e.g.,* Schwarzenbach *et al.,* 1993). Either can contribute to faster degradation or transformation of some compounds.

Thus, for studies of the fate and transport of contaminants in raw water, pH can be a very important water quality parameter to be monitored. However, most of these transformation effects likely have taken place before the contaminant reaches a drinking water system. For drinking water, pH values tend to be near neutral, where the contributions of acid and base-catalysis to overall rates of hydrolysis are smaller. Perhaps most importantly, many common steps in water treatment can alter the pH, for softening or corrosion control, for example. Thus, for many systems, even if pH were a significant factor in determining the fate of a particular contaminant reaching the drinking-water supply, such correlations are lost in the finished water by the purposeful adjustment of the pH. Thus, the data generated by monitoring the pH for chemical contaminants would be of limited utility. For these reasons, EPA proposes eliminating pH as a water quality parameter for chemical contaminants.

While EPA is proposing the elimination of pH as a water quality parameter to be reported with chemical contaminant results under the UCMR, all the water quality parameters in § 141.40(a)(4)(i)(B), Table 2, Water Quality Parameters to be Monitored with UCMR Contaminants, must be reported for microbiological contaminants. The only microbiological contaminant required to be monitored under the 1999 UCMR is *Aeromonas,* a List 2 contaminant to be monitored in 2003 by 120 randomly selected large systems and 180 randomly selected small systems.

12. Method Detection Limit Reference

EPA proposes in the Appendix to § 141.40 to remove the reference to the 136 Appendix B definition of Minimum Detection Limit (MDL) and instead to reference the MDL calculations listed in each method. The 136 Appendix B definition includes extensive reiteration of the MDL and does not specify that MDLs should be determined over a three day period. Maintaining the 136 Appendix B definition would be both inconsistent with the definition used in the List 2 analytical methods, and would result in both additional burden on the laboratories by requiring them to perform the reiterations, and in a less useful MDL estimate because it does not take into account day to day method variations.

13. Detection Confirmation

Since EPA is proposing to add both an HPLC method for the determination of linuron and diuron, and a membrane filtration method for the analysis of *Aeromonas,* the previous requirement to confirm all detections by GC/MS can no longer apply to all analyses. Therefore, EPA is clarifying in the Appendix to § 141.40 that all detections observed using a gas chromatographic analytical method are to be confirmed by GC/MS, however this confirmation requirement does not apply to analytes detected using a non-gas chromatographic method.

14. Method Defined Quality Control

EPA has received some questions from representatives of PWS and laboratories concerning the quality control requirements specified for UCMR analyses. Therefore, EPA is proposing in the Appendix to § 141.40 to clarify the quality control requirements to indicate that by specifying quality control elements specific to UCMR analyses, EPA did not intend to change the methods requirements concerning the analyses of Laboratory Fortified Blanks or Laboratory Performance checks.

15. Clarification of Resampling

EPA offers the following guidance on resampling in response to questions about the 1999 UCMR since its publication last September. If laboratory or shipping problems cause the loss of a sample, then all efforts should be made to replace that sample at the earliest possible time (i.e., resample). EPA's preference is that the sample be replaced within the same month it was originally sampled. If this is not possible, EPA's next preference is within the same quarter. In all but one case, the schedule for future samples should not change: for example, if a surface water PWS is on a sampling schedule of January, April, July, and October and an April sample is lost, it should be resampled as soon as possible (i.e., in April or early May) and the next quarter's samples will still be taken in July. The only time this guideline should not be followed is when all the samples from the first sampling period are lost. In this case, the sampling frequency will be determined by when the first set of samples is collected, analyzed and reported: for example, if the plan was to take samples in July, October, January, and April, but all the July samples were lost. In such an event, the PWS may decide to resample in August, and its new sampling schedule would become August, November, February, and May.

16. Update on Statistical Selection of the Nationally Representative Sample of Small Systems

EPA has refined the statistical sampling plan to select a representative sample of small systems for the UCMR, which was first presented in the April 1999 UCMR proposed rule. This discussion is an information update on the refinement in the selection process. The revised sampling plan has the same key features as the original plan: 800 small public water systems will conduct Assessment Monitoring of UCMR (1999) List 1 contaminants (64 FR 50556). The primary goal of Assessment Monitoring is to estimate the overall exposure fraction of each contaminant (i.e., the fraction of all customers of community and non-transient non-community water systems who are exposed to the contaminant at any time at detectable levels). The secondary goal is that the exposure estimates must be precise enough to yield a 99 percent confidence interval within 1 percent for the true exposure fraction when the estimated fraction of exposure is 1 percent.

Subject to the primary goal constraints and the secondary goal, EPA has revised its sampling plan to allocate the 800 systems in its sample as efficiently as possible. The secondary goal of the revised plan is to gather information about contaminant occurrence within the smaller sampling strata of very small (serving less than 500 people), small (serving 501–3,300 people), and medium-sized (serving 3,301–10,000 people) systems, and of ground water and surface water systems. The revised plan achieves this by reapportioning the probabilities of drawing each of the 800 systems from categories of system size, source water type, State or Territory, and community or non-transient non-community systems. Specifically, the probabilities are chosen to minimize the largest 99 percent-confident margin of error for the exposure fraction in any of the size-by-source-water-type strata, subject to a precise enough estimate of the overall exposure fraction. To meet the constraint for the overall exposure fraction, the revised sample is close to a population-weighted sample. However, compared to a population-weighted sample, the revised plan shifts some samples from ground water to surface water systems, and from larger to smaller system strata (i.e., to increase the confidence, the sample size is increased in the strata that would have few samples on a strictly population-weighted basis). As a result, the largest 99 percent-confident margin of error for the exposure fraction in any of the size-by-source-water-type strata is reduced from 12.1 percent under the strict population-weighted allocation, to 4.1 percent (for very small, surface water systems) under the revised plan.

The revised plan also solves a technical problem in the original plan: the original plan specified separately the sample allocations by State or Territory and by system size and type, but it did not specify the allocation within each stratum of State or Territory, system size, source water type, and community or non-transient non-community systems. The revised plan solves this problem by specifying the probability of selecting each system from each stratum.

The initial sampling frame for the national representative sample of small systems was derived from the inventory of PWSs contained in SDWIS and revised for the 1999 Infrastructure Needs Survey. Revisions were made to the sampling frame to minimize the number of inventory information discrepancies (e.g., population, and source of water). For a more detailed discussion on the sampling frame used to select the national representative sample of small systems, please see the ‘‘National Representative Sample of Small Systems: Statistical Design, Sample Selection, and State Plan’’ available at the Water Docket for this proposed rule, docket number W–000–01.

The small systems were first stratified by system type (CWS, NTNCWS), and all transient non-community water systems were removed from the sample frame, to ensure appropriate population exposure estimates. For this UCMR, purchased water systems were also removed. The remaining systems were then stratified by water source type (ground water or surface water, including ground water under the direct influence of surface water (GWUDI)), service size category (serving 25–500, 501–3,300, and 3,301–10,000), and State. Each U.S. Territory was considered as one individual ‘‘State,’’ while specified Tribal water systems together were considered as one ‘‘State’’ for the purposes of the system sample selection. Each ‘‘State’’ was allocated a minimum of 2 systems (except in the case of Guam, which had only one active eligible system in their inventory), one of which was a CWS.

The number of systems assigned to monitor within each State was based on the proportion of the population served in each strata (source water type, divided into the three service size categories). In addition, the number of systems in each strata was statistically adjusted to ensure that each had enough systems to maximize the statistical confidence in the results (as noted earlier). Once the number of systems in each strata was identified, then the primary list of systems for the initial representative sample was selected using a random number generator. Using the same methodology, two alternate systems were then selected for each system on the primary list. Finally, a general replacement list was selected, for the unusual case in which the primary system and both alternates are inactive, purchase their water, or have merged with another system. These general replacement systems were not picked based on their source water type or service size, but rather were randomly selected from all of the small systems remaining after the primary systems and two alternate systems were selected.

Table 5 shows the total number of small systems that were selected to conduct Assessment Monitoring for UCMR (1999) List 1 contaminants in each State, and the number of systems selected in each State for the Screening Surveys (UCMR (1999) List 2). The number of systems per State varies from one system in Guam to 71 systems in Texas. There is an average of approximately 14 systems per State in the national sample. There are no systems from Washington, D.C. in the national sample, since D.C. does not have any small CWSs or NTNCWSs.

TABLE 5.—DISTRIBUTION OF SMALL SYSTEMS REQUIRED TO CONDUCT ASSESSMENT MONITORING AND SCREENING SURVEY IN EACH STATE/TRIBE/TERRITORY

State/Tribes/Territories	Number of small systems conducting assessment monitoring[1] (A_n)	Number of small systems conducting screening surveys[2] (S_n)
Tribes[3]	7	2
Alabama	15	4
Alaska	4	3
American Samoa	2	2
Arizona	12	3
Arkansas	13	8
California	48	24

TABLE 5.—DISTRIBUTION OF SMALL SYSTEMS REQUIRED TO CONDUCT ASSESSMENT MONITORING AND SCREENING SURVEY IN EACH STATE/TRIBE/TERRITORY—Continued

State/Tribes/Territories	Number of small systems conducting assessment monitoring [1] (A_n)	Number of small systems conducting screening surveys [2] (S_n)
Colorado	10	6
Connecticut	6	2
Delaware	2	1
Florida	32	11
Georgia	22	12
Guam	1	0
Hawaii	3	2
Idaho	8	2
Illinois	28	8
Indiana	20	8
Iowa	16	10
Kansas	12	6
Kentucky	9	4
Louisiana	27	14
Maine	6	3
Mariana Islands	2	1
Maryland	8	2
Massachusetts	12	3
Michigan	24	13
Minnesota	16	8
Mississippi	30	9
Missouri	20	8
Montana	6	3
Nebraska	8	4
Nevada	4	1
New Hampshire	6	2
New Jersey	16	6
New Mexico	8	6
New York	29	14
North Carolina	22	11
North Dakota	4	2
Ohio	28	7
Oklahoma	15	5
Oregon	11	6
Pennsylvania	37	19
Puerto Rico	9	4
Rhode Island	2	0
South Carolina	11	7
South Dakota	4	2
Tennessee	14	9
Texas	71	28
Utah	7	4
Vermont	4	3
Virgin Islands	2	1
Virginia	16	7
Washington	17	10
Washington DC [4]	0	0
West Virginia	10	6
Wisconsin	21	12
Wyoming	3	2
Total	800	360

[1] This column represents the total number of small systems allocated in an individual State and Tribes as a group from the national representative sample of 800 systems.

[2] There are 360 small systems shown for two Screening Surveys (180 for Screening Survey 1 and 180 for Screening Survey 2). Note that in each Screening Survey Group an additional 120 large systems will also be required to monitor. Therefore, there is a total of 300 small and large systems (a total of 600 Screening Survey systems) in each Survey.

[3] The number of Tribal water systems may include Tribal systems in any of the 10 EPA Regions. Tribal systems were aggregated as a group comparable to a State to ensure that Tribal systems were represented in the national representative sample of small systems in the UCMR.

[4] The Washington DC water supply is provided exclusively by large PWSs.

Table 6 shows the number of CWSs by water source and size.

TABLE 6.—ALLOCATION OF CWSS CONDUCTING ASSESSMENT MONITORING

Size category	Ground water-supplied systems	Surface water-supplied systems	Total
	n	n	n
500 and Under	76	51	127
501 to 3,300	208	38	246
3,301 to 10,000	230	106	336
Total	514	195	709

III. Other Issues Related to Unregulated Contaminant Monitoring

A. Reporting Processes

1. Systems

EPA is developing a template for electronically reporting UCMR results to the Agency, with a PWS regulated by the UCMR reviewing and approving submission of the results to EPA by the agent or organization conducting unregulated contaminant analysis (a laboratory). The template is being developed in both ''batch'' electronic data transfer and web-based ''manual'' entry formats. If the laboratory cannot enter the monitoring results using EPA's electronic reporting system, then the PWS must explain to EPA in writing the reasons why alternate reporting is necessary and must receive EPA's approval to use an alternate reporting procedure.

2. States

While § 141.35 (b) specifies that the PWS ''must report the results of unregulated contaminant monitoring to EPA *and provide a copy to the State* * * *'', note that States will have electronic access to the monitoring results for State review concurrent with EPA review of the results (after the results have been submitted by the PWS via the electronic reporting system). Therefore, States may decide to forego the requirement for an independent copy and are free to do so. PWSs should also be aware that some States may have additional requirements (i.e., beyond those specified in this rule), such as immediate reporting of monitoring results which suggest an imminent threat to public health. States are asked to address any additional reporting requirements (or waiver of requirements) when they notify PWSs of their UCMR responsibilities. In the absence of any State direction on this matter, PWSs are expected to provide States with a copy of monitoring results concurrent with reporting those results to EPA via the electronic reporting system. For small systems in States requiring immediate reporting of contaminants found in PWSs, EPA will report these results to the State promptly after laboratory results are received to assist these small systems in meeting State reporting requirements, if this need is identified in the Partnership Agreement. However, EPA makes clear here that such a State requirement for systems to report more immediately any contaminants found is not a requirement on EPA and EPA bears no liability if such reporting by it for system is beyond a State's reporting date for systems. Such a circumstance might occur if the electronic reporting system were to go off line for any reason around the time specified by the State.

If during the 60-day quality control review period, States find questionable data in the data set, EPA will discuss the data at issue with the State and system before determining the disposition of the data relative to placing them in NCOD. Confirmations for all positive results will occur promptly after testing shows a positive occurrence as part of the analytical method quality control, so reported data should be generally reliable.

B. Reporting Data on Other Contaminants

EPA will be paying for the analysis of samples for small systems. The analytical methods used for the List 1 and 2 contaminants will routinely determine the presence of other contaminants for which testing is not required to be done and reported. The contaminants that are not required to be reported but are identified will become research data for EPA and may provide the basis of future Contaminant Candidate Lists. EPA intends to place these data in the NCOD since they would be considered reliable results for unregulated contaminants under the SDWA and, therefore, must be placed in the NCOD under SDWA Section 1445(g). One option considered in placing these data in NCOD is to create a special research section in the NCOD so that these data can be recognized as not required for reporting under the UCMR. A second option is to attach a special ''flag'' to these data that would indicate their research status. EPA seeks public comment on these and other options for storage and access to these data.

C. More Complete Specification of Contaminants for Unregulated Contaminant Monitoring in the Future

The current approach of listing specific contaminants for monitoring under the UCMR program does not address the complete effect of the individual contaminant on the environment and in drinking water. For example, a pesticide may have several degradates. Unregulated contaminant monitoring only for the parent pesticide may entirely miss potentially harmful degradates and by products. For example, the European Union treats several categories of contaminants as groups for the specification of monitoring requirements, such as ''pesticides and degradates.'' (European Union, 1997). EPA requests public comment on whether such an approach should be applied to unregulated contaminants to assess more completely the occurrence of such contaminants in source water and drinking water. The current CCL includes contaminants that are parent compounds, degradates and groups of degradates. Public input on the options may be incorporated in the development of the next CCL, as well as the subsequent UCMR List. Comments should address the following options of listing contaminants by:

1. *Contaminant Groups.* Contaminant groups might include disinfection by-products, pesticides listed by functionality such as sulfonylurea herbicides for example, or haloacetic acids.
2. *Analytical Method Groups.* A particular analytical method may be able to identify a range of contaminants very cost effectively in one scan. The contaminant category might be ''Method 524 contaminants.'' Such an approach offers the potential to obtain information on a larger set of contaminants at small incremental cost.
3. *Parent and Degradates.* A parent and degradates listing may include contaminants such as pesticides which can have many degradates, some of which may also be of health concern. An example would be atrazine, de-ethyl atrazine, and de-isopropylatrazine. This parent and degradates might be listed as ''atrazine and degradates.''
4. *Mixtures of Contaminants.* The literature indicates that chemical mixtures are of concern and should be evaluated for their collective and cumulative effects. (Mumatz, *et al.*, 1991; Yang, 1997; EPA, 1999) Mixtures of contaminants known to be used or applied together may be treated as a category listed as, for example, ''herbicides used on corn and soybean'' or ''gasoline-related mixtures.'' The mixtures would be evaluated for combined occurrence.
5. *Other.* Other categorizations of contaminants may be useful to identify for efficient analysis. EPA welcomes comments on other possible options.

Another approach to the concern for multiple contaminant groups occurring in drinking water would be to have all large and a representative sample of small systems divided into statistical groups to be tested for many contaminants overall, but any particular system not tested for more than the statutory limit of 30. This would give results for a broader set of contaminants and allow the CCL regulatory determination process to focus only on the most significant contaminants. EPA invites public comment on all these and other options for a more complete specification of unregulated contaminants for analysis in public water systems, particularly at low incremental costs to systems.

D. Synchronization of UCMR and CCL in the Future

The current schedules for the development of the CCL and UCMR are February 1998 and August 1999, respectively, and then every five years after each of those dates. This scheduling means that the UCMR responds to the contaminant list of the CCL, rather than allowing the UCMR to anticipate contaminants for which the CCL deliberations could evaluate and decide whether or not to regulate. Given the current characteristics of the UCMR program and CCL process, EPA requests public comment on whether the UCMR monitoring list revisions could be promulgated at the same time as the publication of the revised CCL, indicating which contaminants would be on the Lists 1, 2 or 3 about 1½ years earlier than under the current process. The purpose of this earlier promulgation is to provide information earlier for the next CCL process. A drawback of such a linkage would be that it may reduce the time available to develop analytical methods for newly identified contaminants. If substantial method development effort is required, monitoring may not be able to begin any earlier in the cycle.

Another option would be for the UCMR to anticipate needs for contaminants to be included in future CCLs. Under this option, other possibilities might exist: (1) Contaminants not on the then current CCL would be proposed for monitoring, and (2) a list of many more contaminants may be proposed (more than 30) with systems divided into statistical groups that would allow testing of systems for no more than 30 contaminants as noted previously in C. The CCL could focus on the most important contaminants and health effects research could be focused much earlier. EPA invites public comment on these and other approaches to synchronize the UCMR and CCL processes in the future to improve the acquisition of information relative to the timing of decisions for regulating the contaminants.

IV. Cost and Benefits of the Rule

Today's proposed amendment to the UCMR (64 FR 50556) would add methods for monitoring the UCMR (1999) List 2 contaminants. The first set of List 2 contaminants may be collected during the same time as the Assessment Monitoring component of the UCMR program. As described elsewhere in this Preamble, the first Screening Survey will be conducted over a 2-year period from 2001 to 2002. One hundred eighty small systems randomly selected from the first 267 small systems monitoring in 2001 and 120 large systems randomly selected from the 2,774 large PWSs will monitor in 2002. During 2003, the second Screening Survey will be conducted by a different group of systems (180 small and 120 large systems).

Of the 16 List 2 contaminants, today's Rule establishes the analytical methods for 13 chemical contaminants and one microbiological contaminant. Estimated system and EPA costs are based on the analytical costs for these methods. EPA recognizes that these Screening Survey methods are new and will not coincide with other compliance monitoring. However, since the 13 List 2 chemical contaminants for the first Screening Survey may be analyzed by laboratories using water samples that are collected at the same time as the Assessment Monitoring contaminants, there are no significant additional labor costs anticipated related. The Agency assumes there is no measurable added labor burden associated with filling one more sample bottle. However, the collection of *Aeromonas* under Screening Survey Two will necessitate some minimal additional burden for systems to collect samples. In many cases, the *Aeromonas* samples can be collected at the same time and place as other required microbiological sampling. Where coincident sampling is not possible, EPA assumes an additional one half hour of labor per sampling station.

In addition, today's proposed Rule makes several clarifications and technical corrections to the UCMR (1999) Rule. EPA believes that none of these clarifications and corrections would increase the costs or labor burden to public water systems or States. Most of these items were already included in the cost and burden analyses; their explanation is simply being clarified. These assumptions are discussed below.

Updating the NCOD on a quarterly basis rather than six times per year will not be an additional expense to systems or States, and will reduce EPA costs marginally. Requiring one-time reporting of system and laboratory points-of-contact will improve the implementation of the program by allowing EPA to convey important testing and reporting information to systems and laboratories, thereby enhancing the long-term data quality. Clarifying the data element definitions will provide more usable information by more clearly conveying the data that should be reported and should not be an additional cost to any entity. Clarifying the data reporting procedures through a "single-entry" electronic data reporting process, will reduce costs to systems marginally. Clarification of the source (raw) water monitoring alternative option does not increase the costs to systems beyond those that EPA had anticipated originally in adopting the alternative so that systems in States requiring source water compliance monitoring could coordinate unregulated monitoring with other monitoring. Providing options for reporting treatment plant latitude and longitude should marginally reduce costs to States which had not previously reported these locational data. Approval of EPA Method 502.2 and Standard Methods 6200C for the analysis of MTBE provides systems more flexibility to use methods that they may already be using to monitor for this unregulated contaminant, possibly providing cost savings to them. Approval of EPA Methods 515.3 and 515.4 for the analysis of DCPA mono-acid degradate and DCPA di-acid degradate provides flexibility to systems to use methods similar to those used in compliance monitoring and may reduce costs for testing and analysis of those unregulated contaminants. Eliminating the use of pH as a water quality parameter required for reporting chemical contaminant results will marginally reduce costs to systems for testing and analysis. Removing the reference to 40 CFR Part 136, Appendix B definition of Minimum Detection Limit is a technical change with no cost. Providing contaminant detection confirmation clarification for linuron, diuron and *Aeromonas* as applying only to non-gas chromatographic methods does not change the costs of the rule for the other unregulated contaminants. This change only applies to these three List 2 contaminants and is included in the cost analysis for the List 2 contaminant methods. Clarifying that the method quality controls for UCMR contaminants are to be used along with the UCMR-specific quality controls for testing and analysis does not increase the cost of the regulation. Finally, clarifying the resampling process when samples must be resubmitted does not increase the cost of the regulation. These costs were included in the original analysis.

As noted, additional non-labor costs from this Rule are solely attributed to the laboratory fees that will be charged for analysis of these contaminants and to additional shipping charges associated with the extra sample bottles. These costs will only be incurred by EPA and by large PWSs. EPA assumes that there will be additional charges imposed for analysis of the List 2 contaminants, since these contaminants will be analyzed under new methods or modifications of existing methods. EPA estimates that the average laboratory fee for the analyses for the 13 Screening Survey One chemical contaminants, using EPA Methods 526, 528, and 532 will be $560. The additional costs for Screening Survey One for laboratory analysis are calculated as follows: the number of systems multiplied times the number of entry or sampling points, multiplied by the sampling frequency, and then multiplied by the cost of analysis.

Sampling for *Aeromonas*, under Screening Survey Two, is calculated in a similar manner, assuming an estimated cost of $25 per sample for presumptive enumeration on the ADA medium. This cost would apply for each sample, at the 120 large systems selected (and the 180 small systems that EPA would pay for). EPA estimates that *Aeromonas* will be detected in 10% of samples. Each of these positive *Aeromonas* samples (i.e., estimated as 10% of all samples), isolated from membrane filters, would incur an additional $25 cost for confirmation at the genus level with cytochrome oxidase and trehalose fermentation tests (which are part of Method 1605). This would be the total cost to large systems. For small systems, where *Aeromonas* has been found, EPA will pay for further identification to hybridization group or determination of virulence factors. The exact cost will depend on the identification method chosen. If a phenotypic method were chosen, the cost could be as little as $25, with another $25 for virulence factors, or if a genotypic method were used the cost could be as much as $100. For the cost estimations presented, EPA assumes that it will incur $100 of additional analytical costs for 10% of small system samples. Note that if a system is a consecutive system to any of the 300 selected Screening Survey systems (i.e., it purchases water from a Screening Survey system), it will also be required to sample for *Aeromonas*. To estimate these costs, EPA assumes that the number of consecutive systems that this includes is statistically proportional to the size of the randomly selected sample for the Screening Survey.

The details of EPA's cost assumptions and estimates can be found in the Information Collection Request (ICR, Number 1882.02) amendment prepared for this Rule (OMB number 2040–0208), which presents estimated cost and burden for the 2000–2002 period. Estimates of costs over the UCMR cycle of 2001–2005 are attached as an appendix to the ICR. It presents the total and the estimated additional annual cost and burden for Screening Survey component of the first 5-year cycle (from 2001 to 2005) of the UCMR. Copies of the ICR and its amendment may be obtained from Sandy Farmer by mail at: OP Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M St., SW., Washington, DC 20460, by email at: farmer.sandy@epa.gov, or by calling: (202) 260–2740. A copy may also be downloaded from the Internet at: *http://www.epa.gov/icr.*

In preparing the UCMR Screening Survey ICR, EPA relied on standard assumptions and data sources used in the preparation of other drinking water program ICRs. These include the public water system inventory, number of entry points per system, and labor rates. EPA expects that States will incur no additional labor or non-labor costs associated with the Screening Survey component of the UCMR. Other assumptions are discussed below.

Over the UCMR implementation period of 2001–2005, EPA estimates that the average annual cost of the two Screening Surveys (including 13 chemical contaminants and *Aeromonas*) is approximately $505,200. These total estimated annual costs are incurred as follows:

1. *EPA:* $178,000 (exclusively for the additional testing costs for small systems).
2. *States:* $0 (no additional burden associated with Screening Survey component of UCMR).
3. *Small systems:* $5,300.
4. *Large systems:* $321,900.

The estimated average annual (non-labor) cost is approximately $1,185 per large system.

V. Administrative Requirements

A. Executive Order 12866—Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether a regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this proposed rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review.

B. Executive Order 13045—Protection of Children From Environmental Health Risks 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 proposed rule is not subject to Executive Order 13045 because it is not "economically significant" as defined under Executive Order 12866. Further, this proposed rule does not concern an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. This rule makes only clarifying changes to the September 1999 UCMR and establishes procedures for monitoring of the List 2 unregulated contaminants.

However, this Rule is part of the Agency's overall strategy for deciding whether to regulate the contaminants under the Safe Drinking Water Act (see discussion of the Contaminant Candidate List (CCL) at 63 FR 10273). Its purpose is to ensure that EPA obtains data on the occurrence of contaminants on the CCL—specifically, 14 of the List 2 contaminants—where those data are currently 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 occurrence and health effects data to decide whether to regulate these contaminants.

C. 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 UMRA section 202, EPA generally must prepare a written statement, including a cost-benefit analysis, for the 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, UMRA section 205 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 UMRA section 203 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 today's proposed 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 for the private sector in any one year. Total annual costs of today's Rule (across the implementation period of 2001–2005), for State, local, and Tribal governments and the private sector, are estimated to be $505,200, of which EPA will pay $178,000, or approximately 35 percent. Again, States are assumed to incur no additional costs associated with the Screening Survey component of the UCMR. Thus, today's Rule is not subject to the requirements of UMRA sections 202 and 205.

EPA has determined that this proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments because EPA will pay for the reasonable costs of sample testing for the small PWSs required to sample and test for unregulated contaminants under this proposed rule, including those owned and operated by small governments. Screening Survey One samples will generally be collected coincident with Assessment Monitoring and therefore has minimal associated additional burden. The only costs that small systems will incur are those attributed to collecting the Screening Survey Two 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, today's rule is not subject to the requirements of UMRA section 203.

D. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* EPA prepared an Information Collection Request (ICR) document (ICR No. 1882.02) and a copy may be obtained from Sandy Farmer by mail at Collection Strategies Division; U.S. Environmental Protection Agency (2822); 1200 Pennsylvania Avenue, NW., Washington, DC 20460; by email at: farmer.sandy@epa.gov; or by calling (202) 260–2740. A copy may also be downloaded from the internet at: http://www.epa.gov/icr.

The information to be collected under today's proposed rule fulfills the statutory requirements of section 1445(a)(2) of the Safe Drinking Water Act, as amended in 1996. The data to be collected will describe the source water, location, and test results for samples taken from PWSs. The concentrations of any identified UCMR contaminants will be evaluated regarding health effects and will be considered for future regulation accordingly. Reporting is mandatory. The data are not subject to confidentiality protection.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and use 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 respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

The cost estimates described below for the List 2 contaminants are solely attributed to additional contract laboratory fees. No additional measurable labor burden will be incurred during the ICR period because of the addition of analytical methods for the 13 chemical contaminants in Screening Survey One to the UCMR (1999) List 2. Screening Survey One sampling will be done coincident with Assessment Monitoring and the burden and costs for sample collection, packing, and shipping, and reporting were included in the original ICR for the UCMR (1999). For the first Screening Survey, 180 small water systems (from the national representative sample of systems serving 10,000 or fewer people) will collect and test during 2001, and 120 large public water systems will collect and test during 2002. During the ICR period, large systems and EPA will incur the additional laboratory fees for the analysis of the 13 List 2 chemical contaminants (*e.g.*, Screening Survey One). Each large system respondent will incur an annual average additional cost of $4,200. For the entire three year ICR period, the additional cost for the 13 Screening Survey One contaminants is estimated to be $4,200 per response by a large system (*e.g.*, the cost per reporting period for the 120 large systems involved). In addition, program implementation costs and burdens for the 56 States and primacy agents were already included in the original ICR for UCMR (1999), and they will not incur any additional unique labor or non-labor costs associated with the Screening Surveys. The frequency of response varies across respondents and years. However, there are no additional responses during the ICR period associated with today's proposed rule, and thus no additional hour burden for any respondents. For the ICR period no additional costs will be incurred by small systems and States. The collection of samples and data and associated reporting for *Aeromonas* in the second Screening Survey is beyond the ICR period for the first Screening Survey. The collection of this information will be addressed in a renewal ICR to be submitted in 2002.

EPA will incur no additional labor costs for implementation of today's proposed rule. EPA's annual non-labor costs for the ICR period are estimated to be $212,700 for Screening Survey One, which consists of 13 chemical contaminants. The non-labor costs are solely attributed to the cost of sample testing and sample kit shipping for the 180 small systems.

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 are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

Comments are requested on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. Send comments on the ICR to the Director, Collection Strategies Division; U.S. Environmental Protection Agency (2822); 1200 Pennsylvania Ave., NW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St., NW, Washington, DC 20503, marked ''Attention: Desk Officer for EPA.'' Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after September 13, 2000, a comment to OMB is best assured of having its full effect if OMB receives it by October 13, 2000. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

E. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et.seq.

The 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. It 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 the above, to establish an alternative small business definition, agencies must consult with SBA's Chief Counsel for Advocacy.

For purposes of assessing the impacts of today's proposed rule on small entities, EPA considered small entities to be systems serving 10,000 or fewer customers because this is the size of system specified in SDWA as requiring special consideration with respect to small system flexibility. In accordance with the RFA requirements, EPA proposed using this alternative definition in the **Federal Register**, (63 FR 7605, February 13, 1998) requested public comment, consulted with SBA, and finalized the alternative definition in the Consumer Confidence Reports rulemaking, (63 FR 44511, August 19, 1998). As stated in that Final Rule, the alternative definition would be applied to future drinking water rules, such as this one, as well.

For the UCMR, published on September 17, 1999, EPA analyzed separately the impact on small privately and publicly owned water systems because of the different economic characteristics of these ownership types. For publicly owned systems, EPA used the ''revenue test,'' which compares a system's annual costs attributed to the rule with the system's annual revenues. EPA used a ''sales test'' for privately owned systems, which involves the analogous comparison of UCMR-related costs to a privately owned system's sales. EPA assumes that the distribution of the national representative sample of small systems will reflect the proportions of publicly and privately owned systems in the national inventory. The estimated distribution of the representative sample for today's proposed rule, categorized by ownership type, source water, and system size, is presented below in SBREFA Table 1.

TABLE 1.—NUMBER OF PUBLICLY AND PRIVATELY OWNED SYSTEMS TO PARTICIPATE IN SCREENING SURVEY ONE AND TWO

Size category	Publicly owned systems	Privately owned systems	Total—all systems
GROUND WATER SYSTEMS			
500 and under	18	65	83
501 to 3,300	68	31	99
3,301 to 10,000	87	24	111
Subtotal Ground	172	120	292
SURFACE WATER SYSTEMS			
500 and under	11	31	42
501 to 3,300	23	11	33
3,301 to 10,000	87	24	111
Subtotal Surface	120	65	185
Total	292	185	477

The basis for the UCMR RFA certification for today's proposed rule, which adds the Screening Survey contaminants and methods to the UCMR program, is as follows: the average annual compliance costs of the rule represent less than 1 percent of revenues/sales for the 180 small water systems that will be affected. The Agency estimates that EPA and small system costs for the first Screening Survey (during 2001 for small systems) will be approximately $638,220. Since the Agency specifically structured the rule to avoid significantly affecting small entities by assuming all costs for laboratory analyses, shipping, and quality control for small entities, EPA incurs the entirety of the non-labor costs associated with adding methods for monitoring the List 2 contaminants, or 97 percent of all costs. Small systems only incur labor costs associated with the collection and arranging for the shipment of *Aeromonas* samples, with an average annual labor cost per system over the 5 years of $11.

In addition, today's proposed Rule makes several clarifications and technical corrections to the UCMR (1999) Rule. EPA believes that none of these clarifications and corrections would increase the costs or labor burden to small public water systems. Most of these items were already included in the cost and burden analyses; their explanation is simply being clarified. After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities.

F. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1993 (NTTAA), Public Law No. 104–113, Section 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.

The proposed rulemaking involves technical standards. Therefore, the Agency conducted a search to identify potentially applicable voluntary consensus standards. However, we identified no such standards. Therefore, EPA proposes to use EPA Methods 526, 528, 532, and 1605. EPA welcomes comments on this aspect of the proposed rulemaking and specifically invites the public to identify potentially applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

G. 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, this proposed regulation furthers the protection of public health for all citizens, including minority and low-income populations using public water supplies.

H. 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.''

Under section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This proposed 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 objective of this Rule is to specify the approved analytical methods for 14 List 2 contaminants, thereby allowing these contaminants to be included in the UCMR Screening Survey program and to make other minor corrections to the September rule. The cost to State and local governments is minimal, and the rule does not preempt State law. Thus, the requirements of section 6 of the Executive Order do not apply to this Rule.

Although section 6 of Executive Order 13132 does not apply to this rule, EPA did consult with State and local representatives in developing this rule.

I. Executive Order 13084—Consultation and Coordination with Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian Tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the Tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected Tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian Tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.''

Today's proposed rule does not significantly or uniquely affect the communities of Indian Tribal governments. Only one Tribal water system serves more than 10,000 persons. All the other Tribal water systems serve 10,000 or fewer persons, and in today's Rule have an equal probability of being selected in the national representative sample of small systems, for which EPA will pay the costs of unregulated contaminant testing. Thus, these Tribal water systems will be treated the same as water systems of a State and the impact of the Rule on them will not be significant. In addition, there are no costs associated with the minor amendments that clarify the September 1999 UCMR.

This proposed rule will not impose substantial direct compliance costs on such communities either because, with the exception of the one large Tribal water system, the Federal government will provide the funds necessary to pay the potential direct costs incurred by Tribal governments in complying with the rule for the testing and reporting of contaminant occurrence of small systems. By statute, EPA must pay the reasonable testing and laboratory analysis costs for small systems selected to participate in this monitoring program. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this Rule.

J. President's Plain Language Directive

Executive Order 12866 and the President's memorandum of June 1, 1998, require each agency to write all rules in plain language. EPA invites public comment on how to make this proposed rule easier to understand. Comments may address the following questions and other factors, as well:

A. Has EPA organized the material to suit your needs?

B. Are the requirements in the rule clearly stated?

C. Does the rule contain technical wording or jargon that is not clear?

E. Would a different format (grouping or order of sections, use of headings, paragraphing) make the rule easier to understand?

F. Would more (but shorter) sections be better?

G. Could EPA improve clarity by using additional tables, lists or diagrams?

H. What else could EPA do to make the rule easier to understand?

VI. 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 to provide early input to regulation development. Today's rule proposes to amend the September 1999 UCMR, by establishing the method requirements for 14 List 2 contaminants and making other minor changes in the UCMR. At the time of UCMR publication—September 1999—the methods for these contaminants were still being refined by EPA. For a description of public involvement activities related to the UCMR, please see the discussion at 64 FR 50556. Relative to the technical changes and clarifications, EPA conducted a series of five national implementation workshops for States and EPA Regions from March 26 through April 27, 2000, in Philadelphia, Atlanta, Kansas City, Denver, and San Francisco. Participants, other than EPA personnel, represented 35 States, two territories, and one Tribe. Questions about implementation of the UCMR prompted many of the technical changes and clarifications proposed.

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List of Subjects in 40 CFR Part 141

Analytical methods, Chemicals, Environmental protection, Intergovernmental relations, Microorganisms, Monitoring, Water supply.

Dated: August 25, 2000.

Carol M. Browner,

Administrator.

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

PART 141—NATIONAL PRIMARY DRINKING WATER REGULATIONS

1. 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.

2. Section 141.35 as revised at 64 FR 50611 (to be effective January 1, 2001), is proposed to be amended by:

a. Revising paragraph (c);

b. Revising paragraph (d) (including Table 1);

c. Revising paragraph (e); and

d. Revising paragraph (f).

The Revisions read as follows:

§ 141.35 Reporting of unregulated contaminant monitoring results.

* * * * *

(c) *When must I report monitoring results?* You must report the results of unregulated contaminant monitoring within thirty (30) days following the month in which you received the results from the laboratory. EPA will conduct its quality control review of the data for sixty (60) days after you report the data, which will also allow for quality control review by systems and States. After the quality control review, EPA will place the data in the national drinking water contaminant occurrence database at the time of the next database update.

(d) *What information must I report?* (1) You must provide the following ‘‘point of contact’’ information: name, mailing address, phone number, and e-mail address for:

(i) PWS Technical Contact, the person at your PWS that is responsible for the technical aspects of your unregulated contaminant monitoring regulation (UCMR) activities, such as details concerning sampling and reporting;

(ii) PWS Official, the person at your PWS that is able to function as the official spokesperson for your UCMR activities; and

(iii) Laboratory Contact Person, the person at your laboratory that is able to address questions concerning the analysis that they provided for you.

(2) You must update this information if it changes during the course of UCMR implementation.

(3) You must report the information specified for data elements 1 through 16 in the following table for each sample with the exception that data element number 12, Minimum Reporting Level, and data element number 13, Minimum Reporting Level Unit of Measure, are optional and only need to be reported if the laboratory conducting the analysis has established a Minimum Reporting Level that is lower than the one established in § 141.40 monitoring requirements for unregulated contaminants:

TABLE 1.—UNREGULATED CONTAMINANT MONITORING REPORTING REQUIREMENTS

Data element	Definition
1. Public Water System (PWS) Identification Number	The code used to identify each PWS. The code begins with the standard two-character postal State abbreviation; the remaining seven characters are unique to each PWS.
2. Public Water System Facility Identification Number—Sampling Point Identification Number and Sampling Point Type Identification.	The Sampling point identification number and sampling point type identification must either be static or traceable to previous numbers and type identifications throughout the period of unregulated contaminant monitoring. The Sampling point identification number is a three-part alphanumeric designation, made up of: a. The Public Water System Facility Identification Number is an identification number established by the State, or at the State's discretion the PWS, that is unique to the PWS for an intake for each source of water, a treatment plant, a distribution system, or any other facility associated with water treatment or delivery and provides for the relationship of facilities to each other to be maintained; b. The Sampling Point Identification Number is an identification number established by the State, or at the State's discretion the PWS, that is unique to each PWS facility that identifies the specific sampling point and allows the relationship of the sampling point to other facilities to be maintained; and c. Sampling Point Type Identification is one of following: SR—Untreated water collected at the source of the water system facility. EP—Entry point to the distribution system. MD—midpoint in the distribution system where the chlorine residual would be expected to be typical for the system such as the location for sampling coliform indicator bacteria as described in 40 CFR 141.21. MR—point of maximum retention is the point located the furthest from the entry point to the distribution system which is approved by the State for trihalomethane (THM) (disinfectant byproducts (DBP)) and/or total coliform sampling. LD—location in the distribution system where the disinfectant residual is the lowest which is approved by the State for THM (DBP) and/or total coliform sampling.
3. Sample Collection Date	The date the sample is collected reported as 4-digit year, 2-digit month, and 2-digit day.
4. Sample Identification Number	An alphanumeric value of up to 15 characters assigned by the laboratory to uniquely identify containers or groups of containers containing water samples collected at the same time and sampling point.
5. Contaminant/Parameter	The unregulated contaminant or water quality parameter for which the sample is being analyzed.
6. Analytical Results—Sign	An alphanumeric value indicating whether the sample analysis result was: a. (<) ''less than'' means the contaminant was not detected or was detected at a level ''less than'' the MRL. b. (=) ''equal to'' means the contaminant was detected at a level ''equal to'' the value reported in ''Analytical Result—Value.''
7. Analytical Result—Value	The actual numeric value of the analysis for chemical and microbiological results, or the minimum reporting level (MRL) if the analytical result is less than the contaminant's MRL
8. Analytical Result—Unit of Measure	The unit of measurement for the analytical results reported. [e.g., micrograms per liter, (µg/L); colony-forming units per milliliter, (CFU/mL), etc.]
9. Analytical Method Number	The identification number of the analytical method used.
10. Sample Analysis Type	The type of sample collected. Permitted values include: a. RFS—Raw field sample—untreated sample collected and submitted for analysis under this rule. b. RDS—Raw duplicate field sample—untreated field sample duplicate collected at the same time and place as the raw field sample and submitted for analysis under this rule.

TABLE 1.—UNREGULATED CONTAMINANT MONITORING REPORTING REQUIREMENTS—Continued

Data element	Definition
	c. TFS—Treated field sample—treated sample collected and submitted for analysis under this rule. d. TDS—Treated duplicate field sample—treated field sample duplicate collected at the same time and place as the treated field sample and submitted for analysis under this rule.
11. Sample Batch Identification Number	The sample batch identification number consists of three parts: a. Up to a 10-character laboratory identification code assigned by EPA; b. Up to a 15-character code assigned by the laboratory to uniquely identify each extraction or analysis batch. c. The date that the samples contained in each extraction batch extracted or in an analysis batch were analyzed, reported as an 8-digit number in the form 4-digit year, 2-digit month, and 2-digit day.
12. Minimum Reporting Level	Minimum Reporting Level (MRL) refers to the lowest concentration of an analyte that may be reported. Unregulated contaminant monitoring (UCM) MRLs are established in § 141.40 monitoring requirements for unregulated contaminants. Laboratories may establish "Laboratory" MRLs that are lower than the UCM MRL provided that they meet the requirements of Appendix A to § 141.40 sections (2) and (3).
13. Minimum Reporting Level Unit of Measure	The unit of measure to express the concentration, count, or other value of a contaminant level for the Minimum Reporting Level reported. (e.g., µg/L, colony forming units/mL (CFU/mL), etc.).
14. Analytical Precision	Precision is the degree of agreement between two repeated measurements and is monitored through the use of duplicate spiked samples. For purposes of the Unregulated Contaminant Monitoring Regulation (UCMR), Analytical Precision is defined as the relative percent difference (RPD) between spiked matrix duplicates. The RPD for the spiked matrix duplicates analyzed in the same batch of samples as the analytical result being reported is to be entered in this field. Precision is calculated as Relative Percent Difference (RPD) of spiked matrix duplicates from the mean using: RPD = absolute value of $[(X_1—X_2) / (X_1 + X_2)/2] \times 100\%$ where: X_1 is the concentration observed in spiked field sample minus the concentration observed in unspiked field sample. X_2 is the concentration observed in duplicate spiked field sample minus the concentration observed in unspiked field sample.
15. Analytical Accuracy	Accuracy describes how close a result is to the true value measured through the use of spiked field samples. For purposes of unregulated contaminant monitoring, accuracy is defined as the percent recovery of the contaminant in the spiked matrix sample analyzed in the same analytical batch as the sample result being reported and calculated using: % recovery = [(amt. found in spiked sample—amt. found in sample) / amt. spiked] x 100%.
16. Spiking Concentration	The concentration of method analytes added to a sample to be analyzed for calculating analytical precision and accuracy where the value reported use the same unit of measure reported for Analytical Results.
17. Presence/Absence	Reserved

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

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

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

* * * * *

3. Section 141.40 as revised at 64 FR 50612 (to be effective January 1, 2001), is amended by:

a. Revising paragraph (a)(1)(iii) introductory text;

b. Revising paragraph (a)(1)(v) introductory text;

c. Revising Table 1, List 1, List 2 and List 3, in paragraph (a)(3);

d. Revising Table 2, in paragraph (a)(4)(i);

e. Revising paragraph (a)(5)(ii)(B) (including table 3);

f. Revising paragraph (a)(5)(ii)(C);

g. Revising paragraph (a)(5)(ii)(G);

h. Revising paragraphs (a)(7)(i) and (a)(7)(ii) and adding paragraph (a)(7)(iii);

i. Revising paragraph (b)(1)(ix);

j. In the Appendix to § 141.40 by revising paragraphs (2) and (9); and

k. Adding paragraph (11) to the Appendix to § 141.40.

The Revisions read as follows:

§ 141.40 Monitoring requirements for unregulated contaminants.

(a) * * *

(1) * * *

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

* * * * *

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

* * * * *

(3) * * *

Table 1. Unregulated Contaminant Monitoring Regulation (1999) List

LIST 1.—ASSESSMENT MONITORING—CHEMICAL CONTAMINANTS

1—Contaminant	2—CAS registry number	3—Analytical methods	4—Minimum reporting level	5—Sampling location	6—Period during which monitoring to be completed
2,4-dinitrotoluene	121–14–2	EPA 525.2[a]	2 μg/L[e]	EPTDS[f]	2001–2003
2,6-dinitrotoluene	606–20–2	EPA 525.2[a]	2 μg/L[e]	EPTDS[f]	2001–2003
Acetochlor	34256–82–1	EPA 525.2[a]	2 μg/L[o]	EPTDS[f]	2001–2003
DCPA mono-acid degradate[h]	887–54–7	EPA 515.1[a] EPA 515.2[a] EPA 515.3[i,j] EPA 515.4[k] D5317–93[b] AOAC 992.32[c]	1 μg/L[e]	EPTDS[f]	2001–2003
DCPA di-acid degradate[h]	2136–79–0	EPA 515.1[a] EPA 515.2[a] EPA 515.3[i,j] EPA 515.4[k] D5317–93[b] AOAC 992.32[c]	1 μg/L[e]	EPTDS[f]	2001–2003
4,4′–DDE	72–55–9	EPA 508[a] EPA 508.1[a] EPA 525.2[a] D5812–96[b] AOAC 990.06[c]	0.8 μg/L[e]	EPTDS[f]	2001–2003
EPTC	759–94–4	EPA 507[a] EPA 525.2[a] D5475–93[b] AOAC 991.07[c]	1 μg/L[e]	EPTDS[f]	2001–2003
Molinate	2212–67–1	EPA 507[a] EPA 525.2[a] D5475–93[b] AOAC 991.07[c]	0.9 μg/L[e]	EPTDS[f]	2001–2003
MTBE	1634–04–4	EPA 502.2[a,n] SM 6200C[d,n] EPA 524.2[a] D5790–95[b] SM 6210D[d] SM 6200B[d]	5 μg/L[g]	EPTDS[f]	2001–2003
Nitrobenzene	98–95–3	EPA 524.2[a] D5790–95[b] SM6210D[d] SM6200B[d]	10 μg/L[g]	EPTDS[f]	2001–2003
Perchlorate	14797–73–0	EPA 314.0[l]	4 μg/L[m]	EPTDS[f]	2001–2003

LIST 1.—ASSESSMENT MONITORING—CHEMICAL CONTAMINANTS—Continued

1—Contaminant	2—CAS registry number	3—Analytical methods	4—Minimum reporting level	5—Sampling location	6—Period during which monitoring to be completed
Terbacil	5902–51–2	EPA 507 [a] EPA 525.2 [a] D5475–93 [b] AOAC 991.07 [c]	2 μg/L [e]	EPTDS [f]	2001–2003

Column headings are:

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

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

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

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

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

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

The procedures shall be done in accordance with the documents listed next in these footnotes. The incorporation by reference of the following documents listed in footnotes b–d was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the documents may be obtained from the following sources. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 800–426–4791. Documents may be inspected at EPA's Drinking Water Docket, 401 M Street, SW., Washington, DC 20460 (Telephone: 202–260–3027); or at the Office of Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

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

[b] Annual Book of ASTM Standards, 1996, 1998 and 1999, Vol. 11.02, American Society for Testing and Materials. Method D5812–96 is located in the Annual Book of ASTM Standards, 1998 and 1999, Vol. 11.02. Methods D5790–95, D5475–93, and D5317–93 are located in the Annual Book of ASTM Standards, 1996 and 1998, Vol 11.02. Copies may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

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

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

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

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

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

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

[i] Method 515.3, ''Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Extraction, Derivatization and Gas Chromatography with Electron Capture Detection,'' EPA 815/8–99–001, July 1996. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at 800–426–4791 (Hours are Monday through Friday, excluding federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time). Alternatively, the method can be assessed and downloaded directly on-line at www.epa.gov/safewater/methods/sourcalt.html.

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

[k] Method 515.4, ''Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Extraction, Derivatization and Gas Chromatography with Electron Capture Detection,'' April 2000. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at 800–426–4791 (Hours are Monday through Friday, excluding federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time).

[l] Method 314.0, ''Determination of Perchlorate in Drinking Water Using Ion Chromatography,'' Revision 1.0, EPA 815–B–99–003, November 1999. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at 800–426–4791 (Hours are Monday through Friday, excluding federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time). Alternately, the method can be assessed and downloaded directly on-line at www.epa.gov/safewater/methods/sourcalt.html.

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

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

LIST 2—SCREENING SURVEY—CHEMICAL CONTAMINANTS

[To Be Sampled After Notice of Analytical Methods Availability]

1-Contaminant	2-CAS registry number	3-Analytical methods	4-Minimum reporting level	5-Sampling location	6-Period during which monitoring to be completed
1,2-diphenylhydrazine	122–66–7	EPA 526 [a]	0.5 μg/L [g]	EPTDS [f]	2001—Selected Systems serving ≤ 10,000 persons; 2002—Selected systems serving > 10,000 persons.
2-methyl-phenol	95–48–7	EPA 528 [b]	1 μg/L [g]	EPTDS [f]	Same as above.
2,4-dichlorophenol	120–83–2	EPA 528 [b]	1 μg/L [g]	EPTDS [f]	Same as above.
2,4-dinitrophenol	51–28–5	EPA 528 [b]	5 μg/L [g]	EPTDS [f]	Same as above.
2,4,6-trichlorophenol	88–06–2	EPA 528 [b]	1 μg/L [g]	EPTDS [f]	Same as above.
Diazinon	333–41–5	EPA 526 [a]	0.5 μg/L [g]	EPTDS [f]	Same as above.
Disulfoton	298–04–4	EPA 526 [a]	0.5 μg/L [g]	EPTDS [f]	Same as above.
Diuron	330–54–1	EPA 532 [c]	1 μg/L [g]	EPTDS [f]	Same as above.
Fonofos	944–22–9	EPA 526 [a]	0.5 μg/L [g]	EPTDS [f]	Same as above.
Linuron	330–55–2	EPA 532 [c]	1 μg/L [g]	EPTDS [f]	Same as above.
Nitrobenzene	98–95–3	EPA 526 [a]	0.5 μg/L [g]	EPTDS [f]	Same as above.
Prometon	1610–18–0	EPA 526 [a]	0.5 μg/L [g]	EPTDS [f]	Same as above.
Terbufos	13071–79–9	EPA 526 [a]	0.5 μg/L [g]	EPTDS [f]	Same as above.
Alachlor ESA	Reserved [e]	Reserved [e]	Reserved [e]	Reserved [e]	Reserved.[e]
RDX	121–82–4	Reserved [e]	Reserved [e]	Reserved [e]	Reserved.[e]

LIST 2—SCREENING SURVEY—MICROBIOLOGICAL CONTAMINANTS

[To Be Sampled After Notice of Analytical Methods Availability]

1-Contaminant	2-Identification number	3-Analytical methods	4-Minimum reporting level	5-Sampling location	6-Period during which monitoring to be completed
Aeromonas	NA	EPA 1605 [d, j]	0.2/100mL [h]	Distribution System [i]	2003

Column headings are:

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

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

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

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

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

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

The procedures shall be done in accordance with the documents listed next in these footnotes. Copies of the documents may be obtained from the sources listed in these footnotes. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 800–426–4791. Documents may be inspected at EPA's Drinking Water Docket, 401 M Street, SW., Washington, DC 20460 (Telephone: 202–260–3027); or at the Office of Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

[a] Method 526, ''Determination of Selected Semivolatile Organic Compounds in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry,'' April 2000. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at 800–426–4791 (Hours are Monday through Friday, excluding federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time).

[b] Method 528, ''Determination of Phenols in Drinking Water by Solid Phase Extraction and Capillary Column Gas Chromatography/Mass Spectrometry,'' April 2000. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at 800–426–4791 (Hours are Monday through Friday, excluding federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time).

[c] Method 532, ''Determination of Phenylurea Compounds in Drinking Water by Solid Phase Extraction and High Performance Liquid Chromatography with UV Detection,'' April 2000. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at 800–426–4791 (Hours are Monday through Friday, excluding federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time).

[d] Method 1605, ''*Aeromonas* in Finished Water by Membrane Filtration,'' April 2000. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at (800) 426–4791 (Hours are Monday through Friday, excluding federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern Time).

[e] To be determined at a later time.

[f] Entry Points to the Distribution System (EPTDS), after treatment, representing each non-emergency water source in routine use over the twelve-month period of monitoring; sampling must occur at the EPTDS, source water sampling points are not permitted for List 2 contaminant monitoring.

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

[h] Minimum reporting level will be 0.2/100mL unless water turbidity does not permit filtration of 500 mL.

[i] Three samples will be taken from each distribution system. The sample locations will include one sample from a point (MD from § 141.35(d)(5), Table 1) where the chlorine residual is representative of the distribution system (for disinfected systems). This sample location may be selected from sample locations which have been previously identified for samples to be analyzed for coliform indicator bacteria. Coliform sample locations encompass a variety of sites including midpoint samples which may contain a chlorine residual that is typical of the system. Coliform sample locations are described in 40 CFR 141.21. This same approach must be used for the Aeromonas midpoint sample where the chlorine residual would not have declined and would be typical for the distribution system. Additionally, two samples must be taken from two different locations: either the distal or dead-end locations in the distribution system (MR from § 141.35(d)(5), Table 1), avoiding chlorine booster stations, and/or from locations where previous determinations have indicated that the chlorine residual has declined to 0.3 mg/L or lower (LD from § 141.35(d)(5), Table 1). (For example, this sampling could result in two samples from two different dead-end locations, from two different low-chlorine residual locations, or from one distal end and one low-chlorine residual site.) Locations in the distribution system where chlorine residual is expected to be low are similar to TTHM sampling points. If these two locations of distal (or dead-end) and low chlorine residual sites coincide, then the second sample must be taken at a location between the MD and MR sites. Sampling locations for TTHMs are described in 63 FR 69468. In cases where water is purchased by other systems, all consecutive systems must monitor at the three sampling locations, unless the State has specified MD, MR and LD sampling locations for the applicable consecutive systems as a group based on prior knowledge of the appropriate locations for this sampling.

[j] The public water system, through its laboratory, must archive confirmed positive colonies of *Aeromonas* and send them to EPA for determination of the hybridization group.

LIST 3—PRE-SCREEN TESTING—RADIONUCLIDES

[To Be Sampled After Notice of Analytical Methods Availability]

1-Contaminant	2-CAS registry number	3-Analytical methods	4-Minimum reporting level	5-Sampling location	6-Period during which monitoring to be completed
Lead-210	14255–04–0	Reserved [a]	Reserved [a]	Reserved [a]	Reserved [a]
Polonium-21-	13981–52–7	Reserved [a]	Reserved [a]	Reserved [a]	Reserved [a]

LIST 3—PRE-SCREEN TESTING—RADIONUCLIDES

[To Be Sampled After Notice of Analytical Methods Availability]

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

Column headings are:

1—Chemical or microbiological contaminant; the name of the contaminants to be analylzed

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

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

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

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

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

[a] to be determined at a later time.

* * * * *

(4) * * *

(i) * * *

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

Parameter	Contaminant type	Methodology		
		EPA method	Standard methods [1]	Other
pH	Microbiological	150.1 [2] 150.2 [2]	4500–H+ B	ASTM D1293–84 [3] ASTM D1293–95 [3]
Turbidity	Microbiological	180.1[4,5]	2130 B [4]	GLI Method 2 [2,6]
Temperature	Microbiological		2550.	

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

Parameter	Contaminant type	Methodology		
		EPA method	Standard methods[1]	Other
Free Disinfectant Residual	Microbiological		4500-Cl D 4500-Cl F 4500-Cl G 4500-Cl H 4500-ClO$_2$ D 4500-ClO$_2$ E 4500-O$_3$ B	ASTM D 1253–86[3]
Total Disinfectant Residual	Microbiological		4500-Cl D 4500-Cl E[4] 4500-Cl F 4500-Cl G[4] 4500-Cl I	ASTM D 1253–86.[3]

The procedures shall be done in accordance with the documents listed in these footnotes. The incorporation by reference of the following documents was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the documents may be obtained from the sources listed in these footnotes. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 800–426–4791. Documents may be inspected at EPA's Drinking Water Docket, 401 M Street, SW., Washington, DC 20460 (Telephone: 202–260–3027); or at the Office of Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

[1] The 18th and 19th Editions of *Standard Methods for the Examination of Water and Wastewater,* 1992 and 1995. Methods 2130 B; 2550; 4500-Cl D, E, F, G, H, I; 4500-ClO$_2$ D, E; 4500-H+ B; and 4500-O$_3$ B in the 20th edition *Standard Methods for the Examination of Water and Wastewater,* 1998, American Public Health Association, 1015 Fifteenth St. NW, Washington D.C., 20005.

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

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

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

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

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

* * * * *

(5) * * *

(ii) * * *

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

TABLE 3.—MONITORING FREQUENCY BY CONTAMINANT AND WATER SOURCE TYPES

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

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

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

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

[d] ''Six (6) times in a year taken as follows: Sample during the last month of each quarter and each month of the warmest quarter'' means sampling in March, June, July, August, September, and December.

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

* * * * *

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

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

(*3*) You must arrange for the testing of the chemical contaminants identified in List 2 of Table 1 by a laboratory certified under § 141.28 for compliance analysis using EPA Method 525.2 if performing UCMR analysis using EPA Methods 526 or 528, or a laboratory certified under § 141.28 for compliance analysis using EPA Methods 549.1 or 549.2 if performing UCMR analysis using EPA Method 532. You must arrange for the testing for *Aeromonas* using EPA Method 1605 as identified in List 2 of Table 1 by a laboratory certified under § 141.28 for compliance analysis for Coliform indicator bacteria using an EPA approved membrane filtration procedure. EPA may require that laboratories performing *Aeromonas* analyses with EPA Method 1605 analyze and successfully pass a performance testing (PT) program administered by EPA.

* * * * *

(7) * * *

(i) *All systems.* You must:

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

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

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

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

(iii) *Small systems.* If your system serves 10,000 or fewer persons, you must collect samples in accordance with the instructions sent to you by the State or EPA, or, if informed by the State or EPA that the State or EPA will collect the sample, you must assist the State or EPA in identifying the appropriate sampling locations and in taking the samples. EPA will report the results to you and the State.

* * * * *

(b) * * *

(1) * * *

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

* * * * *

Appendix A to § 141.40 Quality Control Requirements for Testing All Samples Collected

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

* * *

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

* * *

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

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