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Unregulated Contaminant Monitoring Regulation: Approval of Analytical Method for *Aeromonas*; National Primary and Secondary Drinking Water Regulations: Approval of Analytical Methods for Chemical and Microbiological Contaminants; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 141

[FRL–7153–9]

Unregulated Contaminant Monitoring Regulation: Approval of Analytical Method for *Aeromonas;* National Primary and Secondary Drinking Water Regulations: Approval of Analytical Methods for Chemical and Microbiological Contaminants

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: Today's rule proposes the analytical method and an associated Minimum Reporting Level (MRL) for the analysis of *Aeromonas* to support the Unregulated Contaminant Monitoring Regulation's List 2 monitoring of 120 large and 180 small public water systems from January 1, 2003 through December 31, 2003. Only these 300 systems must monitor for *Aeromonas*. Aeromonas hydrophilia is a bacterium that is indigenous to natural waters. It has been implicated as a cause of traveler's diarrhea and other types of infections. *Aeromonas* has been observed in drinking water distribution systems, especially in locations with low residual chlorine levels.

Additionally, USEPA proposes to approve USEPA Method 515.4 to support previously required National Primary Drinking Water Regulation (NPDWR) compliance monitoring for 2,4–D (as acid, salts and esters), 2,4,5–TP (Silvex), dinoseb, pentachlorophenol, picloram and dalapon, and USEPA Method 531.2 to support previously required NPDWR monitoring for carbofuran and oxamyl.

Minor formatting changes are being made to the table of methods required to be used for required organic chemical NPDWR compliance monitoring to improve clarity and to conform to the format of other methods tables. In addition, the Presence-Absence (P–A) Coliform Test listed in the total coliform methods table was inadvertently identified as method 9221. This is being corrected to 9221 D. Also, detection limits for ''Cyanide'' are added in the ''Detection Limits for Inorganic Contaminants'' table for the two proposed cyanide methods.

Finally, USEPA proposes to approve eight additional industry developed analytical methods to support previously required NPDWR compliance monitoring. These eight methods include: a method for the determination of atrazine, two methods for the determination of cyanide, three methods for the determination of total coliforms, a method for the determination of heterotrophic bacteria and a method for the determination of turbidity.

DATES: Written comments should be postmarked by midnight, delivered by hand, or electronically mailed on or before May 6, 2002.

ADDRESSES: Any person may submit written or electronic comments concerning this proposed rule. Please send an original and 3 copies of your comments and enclosures (including references) to the W–01–13 Comment Clerk, Water Docket (MC4101), USEPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460. Hand deliveries should be delivered to: USEPA's Water Docket at 401 M. St., SW., Room EB57, Washington, DC. Comments may also be submitted electronically to *ow-docket@epa.gov*.

FOR FURTHER INFORMATION CONTACT: For information regarding the actions included in this proposal contact David J. Munch, USEPA, 26 West Martin Luther King Dr. (MLK 140), Cincinnati, Ohio 45268, (513) 569–7843 or e-mail at *munch.dave@EPA.gov*. General information may also be obtained from the USEPA 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 a.m. to 5:30 p.m. Eastern Time.

SUPPLEMENTARY INFORMATION:

Potentially Regulated Entities

The only regulated entities are the 300 public water systems selected for *Aeromonas* monitoring; the use of the remaining methods proposed for approval in this action is voluntary however, if one of these methods is selected for use for the purpose of compliance monitoring then, compliance with the procedures specified in the method is required. A nationally representative sample of 120 large community and non-transient non-community water systems serving more than 10,000 persons are required to monitor for *Aeromonas* under the revised UCMR. A nationally representative sample of 180 community and non-transient non-community systems serving 10,000 or fewer persons are also required to monitor for *Aeromonas*. 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 affected by this action. Categories and entities potentially affected by this action include the following:

Category	Examples of potentially regulated entities	NAICS [a]
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.	924110
Industry	Private operators of community and non-transient non-community water systems required to monitor.	221310
Municipalities	Municipal operators of community and non-transient non-community water systems required to monitor.	924110

[a] National American Industrial Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that USEPA 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 potentially regulated by this action concerning the monitoring for *Aeromonas*, you should carefully examine the applicability criteria in § 141.35 and § 141.40 of the Code of Federal Regulations. A listing of the systems selected to perform *Aeromonas* monitoring is available at *http://www.epa.gov/safewater/standard/ucmr/systems.html*. To determine whether your facility is potentially regulated by the action concerning the use of USEPA Methods 515.4, 531.2 or the additional industry developed methods being proposed, you should carefully examine

the applicability criteria in § 141.21, § 141.23, § 141.24 and § 141.74 of the Code of Federal Regulations. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Submitting Comments

Commentors who want USEPA to acknowledge receipt of their comments should enclose a self-addressed, stamped envelope. No facsimiles (faxes) will be accepted. Electronic comments must be submitted as an ASCII, WP5.1, WP6.1 or WP8 file avoiding the use of special characters and forms of encryption. Electronic comments must be identified by the docket number W–01–13. Comments and data will also be accepted on disks in WP 5.1, 6.1, 8 or ASCII file format. Electronic comments on this notice may be filed online at many Federal Depository Libraries. Commentors should use a separate paragraph for each issue discussed.

The record for this proposed rulemaking has been established under docket number W-01–13, and includes all of the supporting documentation, including copies of all of the analytical methods included in this proposed regulation as well as all materials referenced. The record is available for inspection from 9 to 4 p.m., Monday through Friday, excluding legal holidays at the Water Docket, EB 57, USEPA Headquarters, 401 M. St., SW., Washington, DC. For access to docket materials, please call 202/260–3027 to schedule an appointment.

Abbreviations and Acronyms Used in the Preamble and Proposed Rule

2,4-D—2,4-dichlorophenoxyacetic acid
2,4,5-TP—2,4,5 trichlorophenoxyacetic acid
ADA—ampicilin-dextrin
APHA—American Public Health Association
ASTM—American Society for Testing and Materials
CAS—Chemical Abstract Service
CASRN—Chemical Abstract Service Registry Number
CFR—Code of Federal Regulations
CFU/mL—colony forming units per milliliter
DCPA—dimethyl tetrachloroterephthalate, chemical name of the herbicide dacthal
ECD—electron capture detector
USEPA—United States Environmental Protection Agency
EPTDS—entry point to the distribution system
ESA—ethanesulfonic acid, a degradation product of alachlor and other acetanilide pesticides
et al.—and others
GC—gas chromatograph, a laboratory instrument
GLI method—Great Lakes Instruments method
HRGC—high resolution gas chromatography
HRMS—high resolution mass spectrometer
ICR—information collection request
LD—point of lowest disinfectant residual
MCL—maximum contaminant level
MD—midpoint in the distribution system
MDL—method detection limit
MI—4—methylumbelliferyl—beta—D—galactopyranoside'indoxyl—beta—D—glucuronide
µg/L—micrograms per liter
mg/L—milligram per liter
MPN—most probable number
MR—point of maximum retention
MRL—minimum reporting level
MTBE—methyl tertiary-butyl ether, a gasoline additive
NAICS—National American Industry Classification System
NERL—National Environmental Research Laboratory
nm—nanometers
NPDWR—National Primary Drinking Water Regulation
NTIS—National Technical Information Service
NTNCWS—non-transient non-community water system
NTTAA—National Technology Transfer and Advancement Act
OMB—Office of Management and Budget
PCBs—polychlorinated biphenyls pKa—negative logarithm of the acidity constant
pKa—negative logarithm of the acidity constant
PT—performance testing
PWS—public water system
RDX—royal demolition explosive, hexahydro-1,3,5-trinitro-1,3,5-triazine
RFA—Regulatory Flexibility Act
SBREFA—Small Business Regulatory Enforcement Fairness Act
SDWA—Safe Drinking Water Act
UCMR—Unregulated Contaminant Monitoring Regulation
UMRA—Unfunded Mandates Reform Act of 1995
UV—ultraviolet

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I. Regulatory Background

The Safe Drinking Water Act (SDWA) section 1445(a)(2), as amended in 1996, requires USEPA to establish criteria for a program to monitor unregulated contaminants and to publish a list of contaminants to be monitored. To meet these requirements, USEPA published the Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR) for Public Water Systems in (64 FR 50555, September 17, 1999) which substantially revised the previous Unregulated Contaminant Monitoring Program, codified at 40 CFR 141.40. USEPA subsequently published supplements to the rule, including analytical methods for conducting analysis of List 1 and selected List 2 contaminants (65 FR 11372, March 2, 2000 and 66 FR 2273, January 11, 2001) and technical corrections and other supplemental information (66 FR 27215, May 16, 2001 and 66 FR 46221, September 4, 2001). The January 11, 2001 rule specified the requirements for *Aeromonas* monitoring in the UCMR; however, an analytical method was not approved to support the required monitoring for *Aeromonas* which is scheduled to begin on January 1, 2003. Today's rule proposes to amend the UCMR to specify a method and an associated Minimum Reporting Level for monitoring *Aeromonas* on List 2.

The Safe Drinking Water Act (SDWA), as amended in 1996, requires USEPA to promulgate national primary drinking water regulations (NPDWRs) which specify maximum contaminant levels (MCLs) or treatment techniques for drinking water contaminants (SDWA section 1412 (42 U.S.C. 300g–1)).

NPDWRs apply to public water systems pursuant to SDWA section 1401 (42 U.S.C. 300f(1)(A)). According to SDWA section 1401(1)(D), NPDWRs include ''criteria and procedures to assure a supply of drinking water which dependably complies with such maximum contaminant levels; including quality control and testing procedures.'' In addition, SDWA section 1445(a) authorizes the Administrator to establish regulations for monitoring to assist in determining whether persons are acting in compliance with the requirements of the SDWA. USEPA's promulgation of analytical methods is authorized under these sections of the SDWA as well as the general rulemaking authority in SDWA section 1450(a), (42 U.S.C. 300j–9(a)).

Today's action proposes to approve USEPA Method 515.4 for the determination of 2,4-D (as acid, salts and esters), 2,4,5-TP (Silvex), dinoseb, pentachlorophenol, picloram and dalapon; USEPA Method 531.2 for the determination of carbofuran and oxamyl and an additional industry developed method for the determination of atrazine in drinking water using an immunoassay-based technology and colorimetric determination, as required in § 141.24(e) to support monitoring required under § 141.24(h). Today's rule also proposes to approve seven additional industry developed methods: a method using a micro-scale hard distillation apparatus followed by colorimetric determination of total cyanide and a method using an ultra-violet digester system for the determination of total and available cyanide to support monitoring required under § 141.23 (k)(1); two methods for the determination of the presence or absence of total coliforms and *E. coli* in drinking waters using a liquid culture or membrane filter method, a method for the determination of the presence or absence of total coliforms and *E. coli* using a liquid culture enzyme-substrate procedure for monitoring required under § 141.21, a method for the determination of heterotrophic bacteria for monitoring and a laser based nephelometric system for the determination of turbidity for monitoring required under § 141.74.

Please note that USEPA is not requesting comment on any aspect of the UCMR other than those changes proposed today. Specifically, USEPA is not requesting comment on the UCMR list of contaminants other than the use of USEPA Method 1605 for the analysis of *Aeromonas* and the MRL being proposed. USEPA is not seeking comment on any aspect of the monitoring required under § 141.24 other than the applicability of: USEPA Method 515.4 for the analysis of 2,4-D (as acid, salts and esters), 2,4,5-TP (Silvex), dinoseb, pentachlorophenol, picloram and dalapon; USEPA Method 531.2 for the analysis of carbofuran and oxamyl; or the additional industry developed method for the analysis of atrazine. USEPA is not seeking comment on the monitoring required under § 141.21, § 141.23 or § 141.74 beyond the applicability of the seven additional industry developed methods proposed which include: two methods for the determination of cyanide, three methods for the determination of total coliforms and *E. coli*, a method for the determination of heterotrophic bacteria and a method for the determination of turbidity.

II. *Aeromonas* Related Actions

A. Relation to the UCMR

Prior actions (66 FR 2273, January 11, 2001 and 66 FR 46221, September 4, 2001), specify the methods to be used for analysis of List 2 chemicals to be monitored in 2001 and 2002. Today's proposal specifies the analytical method and associated MRL for a List 2 contaminant, *Aeromonas*. Methods for the other two remaining List 2 contaminants, RDX and Alachlor ESA and other acetanilide pesticides, need to be refined for analysis in treated drinking water and thus may be proposed at a later time. The List 2 Rule specified the timing, frequency, and other requirements for *Aeromonas* monitoring. (66 FR 2273, January 11, 2001) Today's proposal completes the *Aeromonas* monitoring requirements by specifying the analytical method and MRL.

As specified in these prior actions, USEPA will pay for the shipping, analysis and reporting of results for samples from the 180 small systems serving 10,000 or fewer persons which were selected to conduct this monitoring. The 120 large systems selected to perform this monitoring must arrange and pay for the monitoring, shipping, analysis and reporting of results for *Aeromonas* samples. Only the 180 small systems and the 120 large systems that were selected must monitor for *Aeromonas*. No other systems must monitor for *Aeromonas*. A listing of the systems selected to perform *Aeromonas* monitoring is available at *http://www.epa.gov/safewater/standard/ucmr/systems.html.*

As promulgated in the UCMR List 2 Rule (66 FR 2273, January 11, 2001), large systems must use laboratories approved for this analysis. Large PWSs must arrange for the analysis for *Aeromonas* using USEPA Method 1605, as identified in List 2 of Table 1 (today's action), by a laboratory certified under § 141.28 for compliance analysis using an USEPA-approved membrane filtration method for the analysis of coliform indicator bacteria. As required in § 141.40 (a)(5)(ii)(G)(*3*), laboratories performing USEPA Method 1605 must participate in and successfully pass one of potentially two performance testing (PT) studies, the first to be conducted by USEPA 45 days after promulgation of this regulation, and a second to be conducted prior to the start of the List 2 *Aeromonas* monitoring in 2003, time permitting.

B. Contaminant and Analytical Methods

In today's proposal, USEPA is proposing the use of USEPA Method 1605 for the monitoring of *Aeromonas* as specified in List 2 of Table 1 with an MRL of 0.2 Colony Forming Units (CFU)/100 mL. The proposed MRL is based upon precision data derived during the primary laboratory's methods development and then verified in a second laboratory. Ten laboratories provided precision data using samples, fortified with a single strain of *Aeromonas*, which were provided by USEPA. The mean precision reported for reagent water samples analyzed by these laboratories was 27% and for finished water samples was 57%.

C. Laboratory Approval and Certification

This rule proposes that laboratories wishing to analyze samples for *Aeromonas* for the UCMR must use USEPA Method 1605 (described later). USEPA has previously specified, in § 141.40 (a)(5)(ii)(G)(*3*) (66 FR 2273, January 11, 2001), that *Aeromonas* analyses must be performed by laboratories certified under § 141.28 for compliance analyses of coliform indicator bacteria using an USEPA approved membrane filtration procedure. Because of differences between USEPA Method 1605 and existing membrane filtration methods for coliform indicator bacteria, laboratories performing USEPA Method 1605 must also participate in performance testing (PT) studies to be conducted by USEPA. Laboratories wishing to be approved to use Method 1605 for this monitoring must submit a ''request to participate'' letter to USEPA and to analyze 10 samples for *Aeromonas* using Method 1605. USEPA has established 45 days following the publication of the final rule as the latest date by which it will accept the ''request to participate'' letter. A second PT study

will only be conducted if more than 90 days remain between the reporting of the results of the first study and the beginning of *Aeromonas* monitoring, January 2003, to provide utilities with at least 45 days to contract with laboratories that have received approval. Upon completion of the *Aeromonas* PT Program, USEPA will provide each successful laboratory with an approval letter identifying the laboratory by name and the approval date. This letter and a copy of the laboratory's certification under § 141.28 for compliance analysis of coliform indicator bacteria using an USEPA approved membrane filtration procedure, may then be presented to any PWS as evidence of laboratory approval for *Aeromonas* analysis supporting the UCMR. Laboratory approval is contingent upon the laboratory maintaining certification to perform drinking water compliance monitoring using an approved coliform membrane filtration method. USEPA intends to post a listing of the laboratories that have successfully completed each PT study at *www.epa.gov/safewater.*

All large and small systems selected for the Screening Survey will be notified by their State Drinking Water Authority or USEPA at least 90 days before the dates established for collecting and submitting UCMR field samples to determine the presence of *Aeromonas*. Large systems must send samples to approved laboratories and then report the results to USEPA as specified in § 141.35. All small system shipping and analytical costs will be paid by USEPA, however, small systems will be responsible for collecting these samples.

D. Summary of USEPA Method 1605

The proposed *Aeromonas* method for List 2 monitoring is USEPA Method 1605 ''*Aeromonas* in Finished Water by Membrane Filtration using Ampicillin-Dextrin Agar with Vancomycin (ADA–V),'' October 2001 EPA # 821–R–01–034 (see *www.epa.gov/microbes* or the docket for this proposal for a copy of the proposed method). This method is a membrane filter assay based on the ampicillin-dextrin (ADA) method of Havelaar *et al.* (1987). The ADA medium has been modified by the addition of vancomycin to inhibit gram positive bacteria including *Bacillus* species, that may grow on ADA medium, and by the addition of a second stage, which includes three tests for confirmation, cytochrome oxidase, trehalose fermentation, and the production of indole as determined by Kovac's reagent. This method identifies *Aeromonas* to the genus level and detects *A. hydrophila* and a majority of the other aeromonad species.

III. Primary and Secondary Drinking Water Regulation Related Actions

A. Contaminants and Analytical Methods

In today's action, USEPA is proposing two new USEPA developed methods and eight additional industry developed methods, for use in National Primary Drinking Water Regulation (NPDWR) monitoring under § 141.24. The proposed methods, and the contaminants (analytes), are shown in Table 1.

TABLE 1.—REGULATED CONTAMINANTS AND PROPOSED NEW ANALYTICAL METHODS

Contaminant	Method
2,4-D (as acid, salts, and esters)	USEPA Method 515.4.
2,4,5-TP (Silvex)	USEPA Method 515.4.
Dinoseb	USEPA Method 515.4.
Pentachlorophenol	USEPA Method 515.4.
Picloram	USEPA Method 515.4.
Dalapon	USEPA Method 515.4.
Carbofuran	USEPA Method 531.2.
Oxamyl	USEPA Method 531.2.
Atrazine	Syngenta AG–625.
Cyanide	QuikChem 10–204–00–1–X. Kelada 01.
Total coliforms	Readycult® Coliforms 100 Presence/Absence Test. Membrane Filter Technique using Chromocult® Coliform Agar. Colitag® Test.
E. coli	Readycult® Coliforms 100 Presence/Absence Test. Membrane Filter Technique using Chromocult® Coliform Agar. Colitag® Test.
Heterotrophic bacteria	SimPlate.
Turbidity	Hach FilterTrak 10133.

USEPA Method 515.4 was previously approved for use for UCMR List 1 contaminants in § 141.40, Table 1 List 1 (66 FR 2273, January 11, 2001), but was not approved for monitoring compliance with NPDWRs. Also, in a supplemental action (66 FR 46221, September 4, 2001), laboratories certified to conduct compliance monitoring using USEPA Method 515.3 were automatically approved to use USEPA Method 515.4 for UCMR analyses. Approving USEPA Method 515.4 for use in NPDWR compliance monitoring will allow public water systems and their laboratories to analyze one water sample for both UCMR and NPDWR purposes, reducing monitoring costs. It will also provide greater method flexibility for monitoring in the long term.

USEPA Method 531.2 improves the sample preservation procedures required in USEPA Method 531.1 and Standard Method 6610 and updates the method performance tables using data generated with more up to date equipment. Use of USEPA Method 531.2 will improve safety for analysts and sample collection personnel by approving the use of a less toxic preservation reagent. Accuracy, precision and detection limit data generated using USEPA Method 531.2 is superior to that generated with either of the currently approved methods. It will also provide greater method flexibility for monitoring in the long term.

For the additional industry developed methods, the submitting organization provided data to support the validation of the new or modified method. The Agency reviewed these validation packages and is proposing those methods that USEPA has determined are satisfactory compliance methods,

capable of providing the quality of monitoring data required.

B. Summary of Primary and Secondary Drinking Water Regulation Methods

1. USEPA Method 515.4

USEPA Method 515.4 is a gas chromatography (GC) method for the determination of chlorinated acids in drinking waters. Accuracy, precision, and detection limit data have been generated for the method analytes in reagent water and finished ground and surface waters. Accuracy, precision, and detection limit data generated using USEPA Method 515.4 are equivalent to that generated using USEPA Method 515.3 which is currently approved to perform this monitoring.

USEPA Method 515.4 is applicable to the determination of salts and esters of analyte acids. The form of each acid is not distinguished by this method. Results are calculated and reported for each listed analyte as the total free acid. This method is able to quantify the mono- and di-acid forms of DCPA (Dacthal) without contribution from the parent compound.

A 40-mL volume of sample is adjusted to pH ≥ 12 with 4 Normal (N) sodium hydroxide and allowed to sit for one hour at room temperature to hydrolyze derivatives. Following hydrolysis, a wash step using a hexane: methyl tert-butyl ether (MTBE) mixture is performed as a sample cleanup and to remove Dacthal. The aqueous sample is then acidified with sulfuric acid to a pH of less than 1 and extracted with 4-mL of MTBE. The chlorinated acids that have been partitioned into the MTBE are then converted to methyl esters by derivatization with diazomethane. The target esters are separated and identified by fast capillary column gas chromatography (conditions for standard gas chromatography are also included) using an electron capture detector (GC/ECD). Peer reviews for USEPA Method 515.4 were conducted both within USEPA and by personnel from Montgomery Watson Laboratories, Philadelphia Suburban Water Company, and the American Water Works Service Company. All of the technical peer review comments were positive and the only changes requested were editorial in nature.

USEPA Method 515.4, ''Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Microextraction, Derivatization and Fast Gas Chromatography with Electron Capture Detection,'' Revision 1.0, April 2000, USEPA #815/B–00/001, is available from the docket for this proposal or by requesting a copy from the USEPA Safe Drinking Water Hotline at 800–426–4791 (hours are Monday through Friday, excluding Federal holidays, from 9 a.m. to 5:30 p.m. Eastern Time). Alternatively, the method can be accessed and downloaded directly on-line at *www.epa.gov/safewater/methods/sourcalt.html.* Tables of method validation data are included in the written method.

2. USEPA Method 531.2

USEPA Method 531.2 is a high performance liquid chromatographic (HPLC) method applicable to the determination of certain N-methylcarbamoyloximes and N-methylcarbamates in finished drinking waters. Accuracy, precision, and detection limit data generated using USEPA Method 531.2 are superior to that generated using the currently approved methods, USEPA Method 531.1 or Standard Method 6610.

The water sample is filtered. Method analytes are chromatographically separated by injecting an aliquot (400 to 1000 uL) into a high performance liquid chromatographic (HPLC) system equipped with a reversed phase (C_{18}) column. After elution from the column, the analytes are hydrolyzed in a postcolumn reaction with 0.05 N sodium hydroxide (NaOH) at 80 °C to form methyl amine. The methyl amine is reacted with o-phthalaldehyde (OPA) and 2-mercaptoethanol (or N,N-dimethyl-2-mercaptoethylamine) to form a highly fluorescent isoindole which is detected by a fluorescence detector. Analytes are quantitated using the external standard technique. A second laboratory validation for USEPA Method 531.2 was performed at the American Water Works Service Company and demonstrated good agreement with the performance data generated during the development of the method.

USEPA Method 531.2, ''Measurement of N-methylcarbamoyloximes and N-methylcarbamates in Water by Direct Aqueous Injection HPLC with Postcolumn Derivatization,'' Revision 1.0, September 2001, is available in the docket for this proposal or by requesting a copy from the USEPA Safe Drinking Water Hotline within the United States at 800–426–4791 (hours are Monday through Friday, excluding Federal holidays, from 9 a.m. to 5:30 p.m. Eastern Time). Tables of method validation data are included in the written method.

3. Syngenta Method AG–625

Syngenta Crop Protection, Inc.'s ''Atrazine in Drinking Water by Immunoassay'' (Method AG–625) is an additional industry developed method that employs immunoassay technology to determine atrazine in drinking water. Atrazine is determined by using a color-based immunoassay method. Atrazine in a sample is detected by adding sample and enzyme conjugate solution to a culture tube that has been pre-coated with atrazine antibodies. Atrazine competes with the conjugate for antibody binding sites. The culture tube is washed, and an enzyme substrate solution is added. The substrate is enzymatically converted from a colorless to a blue solution, the absorption of which is inversely proportional to atrazine concentration.

Method performance was characterized using data from a 19 laboratory validation study. Average recovery of atrazine from drinking water was 96%, and the relative standard deviation was less than 20%. The stated method detection limit is 0.05 ug/L. Based on these results, USEPA believes that Method AG–625 is a satisfactory compliance method for atrazine in drinking water.

Method AG–625 is available in the docket for this proposal or from Syngenta Crop Protection, Inc. Contact: James Brady, Syngenta Crop Protection, Inc., 410 Swing Road, Post Office Box 18300, Greensboro, NC 27419, telephone (336) 632–6000.

4. QuikChem 10–204–00–1–X

Lachat Instruments ''Digestion and Distillation of Total Cyanide in Drinking and Wastewaters using MICRO DIST and determination of cyanide by flow injection analysis'' (QuikChem Method 10–204–00–1–X) is an additional industry developed method that determines total cyanide in drinking water. The method employs the MICRO DIST apparatus, a reduced volume disposable distillation apparatus. MICRO DIST reduces distillation time, sample and reagent wastes, and allows for multiple distillations simultaneously (one distillation heating block accommodates 21 MICRO DIST distillation devices).

Total cyanide is determined by distilling the sample and measuring cyanide generated using colorimetry or some other method for cyanide ion detection. Six milliliters of sample are added to a distillation tube along with standard cyanide distillation reagents (sulfuric acid, magnesium chloride). A cyanide collector tube, which consists of a gas permeable membrane and sodium hydroxide absorber solution, is attached to the distillation tube; the distillation and collector tubes together comprise the MICRO DIST unit. The

sample is heated for ½ hour, during which hydrogen cyanide gas distills from the sample, passes through the gas permeable membrane, and collects in the sodium hydroxide absorber solution. Using method write-up 10–204–00–1–X, the absorber solution is analyzed using an automated colorimeter; however, the absorber solution may be analyzed using another procedure (e.g., ion selective electrode) as well, provided all precautions in the method write-up are acknowledged (e.g., pH of the absorber solution and standards are adjusted to match).

Method performance was characterized in single laboratory studies, and an eight laboratory validation study. Single laboratory studies, performed by Lachat and by Research Triangle Institute, demonstrated recovery of complex cyanides using MICRO DIST and macro distillations were substantially equivalent by measuring a variety of cyanide complexes using both distillations. The eight laboratory validation study demonstrated that the QuikChem 10–204–00–1–X method is a satisfactory compliance method. Based on these results, USEPA believes that this method is a satisfactory compliance method for total cyanides in drinking water.

Method 10–204–00–1–X is available in the docket for this proposal or from Lachat Instruments, 6645 W. Mill Rd., Milwaukee, WI 53218, USA. Phone: 414–358–4200.

5. Kelada 01

Dr. Nabih Kelada's ''Kelada Automated Test Methods for Total Cyanide, Acid Dissociable Cyanide, and Thiocyanate'' (Kelada 01), USEPA # 821–B–01–009 is an additional industry developed automated procedure that determines total cyanide and acid dissociable cyanide in drinking water. The procedure makes use of a two-stage sample digestion system to determine total cyanide. A sample is introduced into a flow analysis system. The sample then passes through an irradiation coil, where it is exposed to intense ultraviolet (UV) light from a 550 Watt UV photochemical bulb. The UV light breaks down cyanide complexes (include strong ferro- and ferri-cyanide complexes) to free cyanide. The irradiated sample containing free cyanide then passes though a distillation coil from which the free cyanide is distilled into a flow colorimetry system (similar to that used in USEPA Method 335.4) where cyanide concentration is determined. All complex cyanides determined using total cyanide manual distillations are also determined using the Kelada 01 method.

When the irradiation coil is by—passed ''exposing sample only to a distillation coil—''acid dissociable'' cyanide is determined. The complexes measured are substantially equivalent to those measured using cyanide amenable to chlorination (CATC) or procedures which measure available cyanide, according to a single laboratory study performed by the Metropolitan Water Reclamation District of Greater Chicago.

The Kelada 01method offers advantages over currently approved methods. First, it reduces analysis time from 1.5 hours (using manual distillation and analysis) to minutes. Second, the method reduces the effects of many chemical interferences encountered using traditional manual distillation methods.

The method was validated in both single laboratory and multi-laboratory validation studies, including studies involving eight laboratories which was conducted by the Metropolitan Water Reclamation District of Greater Chicago and through a multi-laboratory study involving 31 laboratories managed by Environment Canada. Studies showed total and acid dissociable cyanide recoveries from samples between 90% and 110%, and relative standard deviations of less than 10%. The reported lower limit of detection is 0.5 μg/L. Based on these results, USEPA believes that the Kelada 01method is a satisfactory compliance method for total cyanide in drinking water.

The Kelada 01method is available in the docket for this proposal.

6. Readycult® Coliforms 100 Presence/Absence Test

The Readycult® Coliforms 100 Presence/Absence Test simultaneously determines the presence of total coliforms and *E. coli,* both of which must be monitored under the Total Coliform Rule at § 141.21. The tests involve adding the contents of a blister pack to a 100-mL water sample, followed by incubation at 36 ± 1°C for 24 ± 1 hours. If coliform bacteria are present, the medium changes color from slightly yellow to blue-green. In addition, if *E. coli* is present, the medium will emit a bright blue fluorescence when subjected to a long wave (366 nm) ultraviolet (UV) light, and will form a red ring when indole reagent is added.

The Readycult test is based upon the detection of three enzymes, β-galactosidase, which is specific to the total coliform group, and β-glucuronidase and tryptophanase, both of which are characteristic of *E. coli.* For detection of β-galactosidase, the medium contains the chromogenic enzyme substrate 5-bromo-4-chloro-3-indolyl-β-D-galactopyranoside (X-GAL). Upon hydrolysis by β-D-galactosidase, X-GAL releases a chromogenic compound (indigo-blue) that turns the medium from slightly yellow to a blue-green color. For detection of β-glucuronidase, the medium contains the fluorogenic enzyme substrate 4-methyl-umbelliferyl-β-D-glucuronide (MUG). Upon hydrolysis by β-glucuronidase, MUG releases 4-methylumbelliferone that fluoresces when exposed to ultraviolet light. For detection of tryptophanase, the medium contains the enzyme substrate tryptophan. Upon cleavage by tryptophanase, tryptophan releases indole that immediately forms a red ring when Kovac's indole reagent is added directly to the broth. The presence of this red ring confirms the presence of *E. coli*

USEPA has evaluated false positive and false negative data submitted by the manufacturer and has determined that results obtained with the Readycult test are substantially equivalent to the Agency's previously approved reference method for total coliforms and *E. coli,* however, USEPA has not yet determined a fully substantiated false negative rate for the USEPA reference method. The manufacturer observed a false-positive error of 7% for total coliforms and 5% for *E. coli.* (The false-positive error for total coliforms was based upon whether the isolate was also positive in lauryl tryptose broth (LTB) and brilliant green lactose bile broth. The false-positive error for *E. coli* was based upon whether the isolate was also positive in LTB and EC+MUG.) The false-negative rate, respectively, was 5.1% and 6.86%. Based on these results, USEPA believes that the Readycult test is a satisfactory compliance method for total coliforms and *E. coli* in drinking water.

The method description for the Readycult test is available in the docket for this proposal or from EM Science (an affiliate of Merck KGgA, Darmstadt Germany), 480 S. Democrat Road, Gibbstown, NJ 08027–1297. Their telephone number is (800) 222–0342.

7. Membrane Filter Technique using Chromocult® Coliform Agar

Chromocult® Coliform Agar is a membrane filter medium that simultaneously determines the presence of total coliforms and *E. coli,* both of which must be monitored under the Total Coliform Rule at § 141.21. For the test, a 100-mL water sample is passed through the membrane that retains the bacteria. Following filtration, the

membrane containing bacterial cells is placed on the media and incubated at 36 ± 1°C for 24 ± 1 h. Salmon to red colonies are recorded as total coliforms (without *E. coli*). In contrast, dark-blue to violet colonies are recorded as *E. coli.*

The membrane filter method using Chromocult® Coliform Agar is based upon the detection of three enzymes; β-galactosidase, which is specific to the total coliform group, and β-glucuronidase and tryptophanase, both of which are characteristic of *E. coli.* For detection of β-galactosidase, the medium contains the chromogenic enzyme substrate 6-chloro-3-indolyl-3-β-D-galactopyranoside (SALMON-GAL). Upon hydrolysis by β-D-galactosidase, SALMON-GAL releases a chromogenic compound (chloroindigo) that forms salmon to red-colored colonies. For detection of β-glucuronidase, the medium contains another chromogenic enzyme substrate, 5-bromo-4-chloro-3-indoxyl-β-D-glucuronic acid, cyclohexylammonium salt (X-GLUC). Upon hydrolysis by β-glucuronidase, X-GLUC releases a chromogenic compound (bromochloroindigo) that forms light-blue to turquoise colonies. *E. coli* produces both β-galactosidase and β-glucuronidase that cleave both SALMON-GAL and X-GLUC, respectively. The simultaneous hydrolysis of these chromogenic substrates forms dark-blue to violet colonies that are easily distinguished from other coliform colonies. For detection of tryptophanase, the medium contains the enzyme substrate tryptophan. Upon cleavage by tryptophanase, tryptophan releases indole that immediately forms a cherry-red color when Kovac's indole reagent is added directly to dark-blue to violet colonies. This reaction thus confirms the presence of *E. coli* in dark-blue to violet colonies.

USEPA has evaluated data submitted by the manufacturer and has determined that more positives were reported with Chromocult® Coliform Agar than the Agency's previously approved reference method for total coliforms and *E. coli,* (USEPA has not yet determined a fully substantiated false negative rate for the USEPA reference method, however, USEPA believes that it is higher than the false negative rate observed for Chromocult® Coliform Agar and that this is responsible for the observed higher positive rate). The manufacturer observed a false-positive error of 13% for total coliforms and 6% for *E. coli.* (The false-positive error for total coliforms was based on whether the isolate was also positive in lauryl tryptose broth (LTB) and brilliant green lactose bile broth. The false-positive error for *E. coli* was based on whether the isolate was also positive in LTB and EC+MUG.) The false-negative rate using the Chromocult® Coliform Agar was 0% for both total coliforms and *E. coli.* Based on these results, USEPA believes that Chromocult® Coliform Agar is a satisfactory medium for use under the Total Coliform Rule to detect total coliforms and *E. coli* in drinking water.

The method description for Chromocult® Coliform Agar is available in the docket for this proposal or from EM Science (an affiliate of Merck KGgA, Darmstadt Germany), 480 S. Democrat Road, Gibbstown, NJ 08027–1297. Their telephone number is (800) 222–0342.

8. Colitag® Test

The ''Colitag® Product as a Test for Detection and Identification of Coliforms and *E. coli* Bacteria in Drinking Water and Source Water as required in National Primary Drinking Water Regulations'' is a liquid culture enzyme-substrate procedure that simultaneously determines the presence of total coliforms and *E. coli,* both of which must be monitored under the Total Coliform Rule at § 141.21. To determine total coliforms, the Colitag® test medium contains chromogenic enzyme substrate ortho-β-D-galactopyranoside (ONPG) for the detection of β-galactosidase, an enzyme indicative of the coliform group. Upon hydrolysis by β-galactosidase, ONPG produces a distinct yellow color that can be observed visually, indicating the presence of coliforms. To determine *E. coli,* Colitag medium contains chromogenic enzyme substrate, 4-methyl-umbelliferyl-β-D-glucuronide (MUG) for detection of β-glucuronidase, an enzyme specific to *E. coli.* Upon hydrolysis by β-glucuronidase, MUG produces the fluorescent compound 4-methylumbelliferone, which fluoresces when exposed to ultraviolet light.

The method differs from currently approved enzymatic methods by the addition of trimethylamine-N-oxide (TMAO) to the list of ingredients. TMAO allows the pH of the medium to increase from 6.2 to 7.0 during incubation, thereby enhancing the recovery of chlorine injured/stressed organisms.

USEPA has evaluated comparability data submitted by the manufacturer and has determined that results obtained with the Colitag® test are statistically equivalent to the Agency's reference method for total coliforms and *E. coli,* however, USEPA has not yet determined a fully substantiated false negative rate for the USEPA reference method. The manufacturer observed a false-positive error of 2.0% for total coliforms and 2.0% for *E. coli.* The false-negative rates were 0% and 0%, respectively. Based on these results, USEPA believes that the Colitag® test is a satisfactory compliance method for total coliforms and *E. coli* in drinking water.

The method description for the Colitag® test is available in the docket for this proposal or from CPI, International, Inc., 5580 Skylane Blvd., Santa Rosa, CA, 95403, telephone (800) 878–7654, Fax (707) 545–7901, e-mail *www.cpiinternational.com.*

9. SimPlate

Under the Surface Water Treatment Rule (SWTR), § 141, Subpart H, a system using surface water or ground water under the direct influence of surface water must, among other requirements, maintain a disinfectant residual in the distribution system. The disinfectant residual in the distribution system cannot be undetectable in more than 5% of the samples each month, for any two consecutive months that the system serves water to the public. However, § 141.72(b)(3) allows a system that does not detect a residual at a particular site to determine the concentration of heterotrophic bacteria at that site. For compliance purposes, a concentration of 500 colonies/mL or fewer, as measured by the pour plate method (Standard Method 9215), is considered to be equivalent to a detectable disinfectant residual.

Because the measured density of heterotrophic bacteria is method-dependent, USEPA to date has only approved one method. Recently, however, USEPA has determined that another test for heterotrophic bacteria, the SimPlate method, provides results substantially equivalent to the pour plate method, given the intended application. Consequently, the Agency is proposing to approve the SimPlate method as an optional procedure for determining the density of heterotrophic bacteria under § 141.72(b)(3).

SimPlate is a substrate-based medium in which the substrates are hydrolyzed by microbial enzymes causing the release of 4-methylumbelliferone, which fluoresces under 365-nm ultraviolet light. The medium is dehydrated when purchased. Two SimPlate formats are available: a unit-dose format and a multi-dose format. The unit-dose format consists of adding 10-mL of test sample to a test tube containing the dehydrated SimPlate medium, and then pouring the dissolved mixture to the center of a plate containing 84 small wells. In contrast, under the multi-dose format, the dehydrated medium needs to be reconstituted first by filling the medium

vessel to the 100-mL mark with sterile diluent, and shaking to dissolve. A 1.0-mL test sample is then pipetted to the center of the plate, followed by 9.0 mL of the reconstituted SimPlate medium. The plate is then gently swirled to mix the sample and medium. The next steps are the same for both formats. The mixture is evenly distributed to the 84 wells on the plate, and the excess liquid drained into an absorbent pad on the plate. The plate is then inverted (the fluid in each well is held in place by surface tension) and incubated for 45–72 hours at 35°C. Bacterial density is determined by counting the number of wells that fluoresce under a 365-nm UV light, and converting this value to a Most Probable Number (MPN) using the table provided, taking into account any dilution factor that may have been used during sample preparation to ensure a proper counting range.

USEPA has evaluated data submitted by the manufacturer from a side-by-side comparison of the SimPlate and the USEPA-approved pour plate method, and has determined that while statistically significant differences were observed in individual matrices those differences were acceptable based upon the intended application of the method. Thus, the Agency believes that the SimPlate method is satisfactory as an additional method for determining the density of heterotrophic bacteria in the distribution system under the SWTR (§ 141.72(b)(3)).

The method description for SimPlate is available in the docket for this proposal or from IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092. Their telephone number is (800) 321–0207. Their website is *www.idexx.com.*

10. Hach Filter Trak

Hach Filter Trak (Method 10133) ''Determination of Turbidity by Laser Nephelometry'' is an additional industry developed method that employs a laser nephelometer to determine the turbidity of finished drinking waters. Method 10133 uses the Hach FilterTrak 660 nephelometer, which functions like a standard nephelometer but has the sensitivity of a particle counter. The method can be used both in a laboratory and on-line fashion.

Turbidity is determined by measuring the scatter of a laser beam onto a photomultiplier detector whose response spectrum significantly overlaps the spectra of the incident light source. Response is compared to the response of Hach Stablcal formazin standards to quantify sample turbidity. Method 10133's FilterTrak 660 system is designed to reduce background light scatter that can artificially raise turbidity measurements when using currently approved methods. Method 10133, by employing the FilterTrak 660, provides increased sensitivity to particle ''events'' (changes in particle concentration). Detection of particle ''events'' is critical to assessing performance of the filtration systems, which in turn is critical to protecting drinking water quality.

Method performance, laboratory and on-line, was characterized using a three laboratory validation study. The method demonstrated good correlation to approved methods and reduced interference from background light scatter. Also, Method 10133 provides quality control requirements to ensure proper operator use. USEPA believes that Method 10133 is a satisfactory additional method for the measurement of turbidity.

Method 10133 is available in the docket for this proposal or from Hach Co., P.O. Box 389, Loveland, Colorado, 80539–0389. Phone: 800–227–4224.

11. MI Agar Medium for Total Coliforms and *E. coli.*

USEPA approved 4-methylumbelliferyl-beta-D-galactopyranoside-indoxyl-beta-D-glucuronide (MI) agar medium as an alternative membrane filter medium for the detection of total coliforms and *E. coli* under the Total Coliform Rule and for enumerating total coliforms under the Surface Water Treatment Rule. (64 FR 67450, December 1, 1999) This approval is reflected in § 141.21(f)(3) and § 141.21(f)(6)(v) and in § 141.74(a)(1). In granting approval, however, USEPA inadvertently did not clearly indicate that colony verification on MI agar was not required. The false-positive rate for MI agar was 4.9% for total coliforms and 4.3% for *E. coli.* Based on these data, USEPA believes that colony verification should not be required and proposes to amend the regulatory language in footnote 6 of the table at § 141.21(f)(3) and in § 141.74(a)(1) to clarify this point.

Finally, USEPA is proposing to correct a typographical error found in section § 141.21(f) by replacing the citation for the ''Presence-Absence (P–A) Coliform Test'' which currently reads ''9221'' with ''9221D.'' USEPA previously proposed for approval and requested comment on (52 FR 42224, November 3, 1987) Method 9221D. USEPA approved Method 9221D on June 29, 1989 (54 FR 27544). The ''D'' was inadvertently dropped by a drinking water method update rule published on December 1, 1999, 64 FR 67450.

IV. Cost of the Rule

Today's proposed amendment to the UCMR adds Method 1605 for analysis of *Aeromonas,* a UCMR (1999) List 2 contaminant. The monitoring requirements for *Aeromonas* were proposed in June 2000 and subject to public comment and review. Following consideration of public comment, the requirements were promulgated in the January 11, 2001 UCMR. As specified in that rule, 180 small systems and 120 large systems were randomly selected to conduct *Aeromonas* monitoring. These systems were selected from the list of systems previously selected to conduct UCMR Assessment Monitoring.

USEPA has estimated system and Agency costs associated with *Aeromonas* monitoring and analysis, based on the burden associated with collecting samples and the analytical costs for Method 1605. There are no costs that will be incurred by States as a result of today's action. State costs attributed to UCMR during this first implementation cycle of 2001–2005 were covered within the UCMR (1999) cost estimations (64 FR 50556, September 17, 1999), and are accounted for in the UCMR discussion within the current ICR (OMB No. 2040–0204—Titled: ''Disinfectants/Disinfection Byproducts, Chemical, and Radionuclides Information Collection Request'').

The collection of *Aeromonas* will necessitate some minimal additional labor burden for participating systems to collect samples. In many cases, the *Aeromonas* samples can be collected at the same time and place as other required distribution system sampling (such as that for the Total Coliform Rule (TCR)). For coincident monitoring, USEPA assumes 0.25 hours per sampling period per system. For monitoring periods in which coincident sampling is not possible, USEPA assumes one hour of labor per system per period. And finally, for monitoring periods in which sampling can only be partially coincident with other monitoring (such as for systems that only have to collect only one TCR sample per month), USEPA assumes 0.75 hours of labor per system per period. In addition, large systems were assumed to incur a small amount of labor burden associated with review of monitoring results, as reported to USEPA's UCMR database by their analytical laboratories. Small system reporting is being handled through USEPA's contract laboratories.

In addition to labor costs, non-labor costs will be incurred by USEPA and by participating large PWSs. Non-labor costs from this rule are solely attributed to the laboratory fees that will be charged for analysis of *Aeromonas* and to shipping charges for sending the sample bottles to the appropriate laboratory. USEPA will cover these costs for small system testing; however, participating large systems will be responsible for these analytical and shipping expenses. USEPA estimates that the average laboratory fee for Method 1605 will be $25. The additional costs for this laboratory analysis are calculated as follows: the number of systems multiplied by three sampling points in the distribution systems, multiplied by the sampling frequency of six times throughout the year 2003, and then multiplied by the $25 cost of the analysis. This cost would apply to the 120 large systems and to USEPA for the cost analyses for the 180 small systems. USEPA will also pay for quality assurance sampling for 10 percent of the small system samples.

In addition, USEPA estimates that *Aeromonas* will be detected in 10 percent of samples. Each of these positive *Aeromonas* samples (i.e., estimated as 10 percent of all samples, including the quality assurance samples for small systems) would incur an additional $25 cost for confirmation tests at the genus level (such tests are part of Method 1605). This would be the total cost to large systems. For small systems, where *Aeromonas* has been found, USEPA will pay for further genotyping at an estimated additional $100 per sample. For the cost estimations presented, USEPA assumes it will pay for genotyping for the estimated 10 percent of positive small system samples.

Today's rule also proposes to approve USEPA Methods 515.4 and 531.2 to support monitoring already required under Phase II/V monitoring (§ 141.24), and proposes eight additional industry developed analytical methods. This part of today's proposed rule merely allows for the optional use of additional standardized methods, offering systems and their laboratories further operational flexibility. Thus, USEPA believes that there is no cost or burden to public water systems associated with the addition of these additional methods. These additional methods may even reduce costs for the testing and analysis of contaminants. However, these potential savings to systems are not estimated here, since use of these methods is voluntary. In addition, because State adoption of these additional analytical methods is voluntary, no costs are estimated for States related to the additional analytical methods that are included in today's proposed rule. Moreover, States that do adopt additional methods often adopt such Federal regulation by reference, or may incorporate these voluntary options when the next set of required regulatory revisions are being incorporated.

The details of USEPA's cost assumptions and estimates regarding implementation of the *Aeromonas* Rule can be found in the proposed Information Collection Request (ICR) (ICR number 2040–0204). This ICR presents estimated cost and burden for the 2001–2005 period. Copies of the proposed ICR may be obtained from Susan Auby by mail at: Collection Strategies Division; U.S. Environmental Protection Agency (2822); 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at: *auby.susan@epa.gov,* or by calling: (202) 260–4901. A copy may also be downloaded from the Internet at: *http://www.epa.gov/icr.*

In preparing these cost estimates, USEPA relied on standard assumptions and data sources used in the preparation of other drinking water program ICRs. These include the public water system inventory and labor rates. USEPA expects that States will incur no additional labor or non-labor costs associated with the Screening Survey component of the UCMR.

USEPA estimates that the total cost for one year of Screening Survey 2 monitoring for *Aeromonas* (in 2003) is approximately $247,320. These total estimated costs are incurred as follows:

TOTAL ESTIMATED COSTS

USEPA	$150,930 (for testing and sample shipping costs for small systems).
States	$0 (no additional burden associated with Screening Survey component of UCMR).
Small systems	$18,260 (labor only).
Large systems	$78,130 (labor and non-labor testing and sample shipping costs).

Over the five year UCMR implementation period of 2001–2005, the estimated average annual cost for each of the 120 large systems conducting *Aeromonas* monitoring is $12 (0.5 hours) per year for labor costs, and $118 for non-labor costs associated with testing and shipping. For the 180 small systems participating in *Aeromonas* monitoring in 2003, the average annual cost per system over that same period is $20.30 (0.84 hours) per year for labor costs (USEPA pays for all non-labor costs for small systems).

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 Office of Management and Budget (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 USEPA 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 USEPA has reason to believe may have a disproportionate effect on children.

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, USEPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an USEPA rule for which a written statement is needed, UMRA section 205 generally requires USEPA 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 USEPA 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 USEPA 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 USEPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

USEPA 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 UCMR implementation period of 2001–2005), for State, local, and Tribal governments and the private sector, are estimated to be $49,500, of which USEPA will pay $30,200, or approximately 61 percent. State drinking water programs are assumed to incur no additional costs associated with the *Aeromonas* Screening Survey component of the UCMR. No costs are estimated/incurred for the other methods included in this proposed rule since they represent additional methods that public water systems may elect to use but that are not required. Thus, today's proposed rule is not subject to the requirements of UMRA sections 202 and 205.

USEPA has determined that this proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments because USEPA will pay for the reasonable costs of sample testing for the small PWSs required to sample and test for *Aeromonas* under this proposed rule, including those owned and operated by small governments. The only costs that small systems will incur are those attributed to collecting the *Aeromonas* samples and packing them for shipping to the laboratory (USEPA will also pay for shipping). These costs are minimal. They are not significant or unique. Again, no costs are estimated/incurred for the other methods. 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.* USEPA prepared an Information Collection Request (ICR) document (ICR No. 1896.03). A copy may be obtained from Susan Auby by mail at Collection Strategies Division; U.S. Environmental Protection Agency (2822); 1200 Pennsylvania Avenue, NW., Washington, DC 20460; by e-mail at: *auby.susan@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 rate of occurrence of *Aeromonas* 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. The cost estimates described below for *Aeromonas* monitoring are attributed to laboratory fees, shipping costs, and some minimal labor burden for reading of requirements and for collecting samples. For large systems, labor burden estimates also consider activities related to reporting of results to USEPA's UCMR database.

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 be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

Average annual non-labor costs during the five year ICR period (2001–2005) are estimated to be: $197 for each large system. USEPA will incur no additional labor costs for implementation of today's proposed rule. The Agency's annual non-labor costs for the ICR period are estimated to be $50,300. These non-labor costs are solely attributed to the cost of sample testing and sample kit shipping for the 180 small systems. A detailed discussion of these costs is presented in section IV.

Today's rule also proposes to approve USEPA Methods 515.4 and 531.2 to support monitoring already required under Phase II/V monitoring (§ 141.24), and proposes eight additional industry developed analytical methods. This part of today's proposed rule merely allows for the use of additional standardized methods, offering systems and their laboratories further operational flexibility. Thus, USEPA believes that there is no cost or burden to public water systems associated with the addition of these additional methods. In addition, because State adoption of analytical methods is voluntary, no costs are estimated for States related to the additional analytical methods that are included in today's proposed rule.

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 USEPA'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 proposed 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 USEPA.'' Include the ICR number (OMB No. 2040–0204) in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after March 7, 2002, a comment to OMB is best assured of having its full effect if OMB receives it by April 8, 2002. 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, USEPA considered small entities to be systems serving 10,000. This is the cut-off level specified by Congress in the 1996 Amendments to the Safe Drinking Water Act for small system flexibility provisions. In accordance with the RFA requirements, USEPA proposed using this alternative definition in the **Federal Register** (63 FR 7620, February 13, 1998), requested public comment, consulted with SBA, and expressed its intention to use the alternative definition for all future drinking water regulations in the Consumer Confidence Reports regulation, (63 FR 44511, August 19, 1998). As stated in that final rule, the alternative definition would be applied to this regulation as well.

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.

As for the UCMR, published on September 17, 1999, USEPA 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, USEPA used the ''revenue test,'' which compares a system's annual costs attributed to the rule with the system's annual revenues. USEPA used a ''sales test'' for privately owned systems, which involves the analogous comparison of UCMR-related costs to a privately owned system's sales. Because USEPA does not know the ownership types of the systems selected for *Aeromonas* monitoring, the Agency 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 (as estimated by USEPA's 1995 Community Water System Survey, http://www.epa.gov/safewater/cwssvr.html). The estimated distribution of the sample for today's proposed rule, categorized by ownership type, source water, and system size, is presented in the following table.

NUMBER OF PUBLICLY AND PRIVATELY OWNED SMALL SYSTEMS TO PARTICIPATE IN SCREENING SURVEY TWO FOR AEROMONAS

Size category	Publicly owned systems	Privately owned systems	Total—all systems
GROUND WATER SYSTEMS			
500 and under	8	29	37
501 to 3,300	35	16	51
3,301 to 10,000	27	7	34
Subtotal Ground	70	52	122
SURFACE WATER SYSTEMS			
500 and under	5	13	18
501 to 3,300	10	4	14
3,301 to 10,000	20	6	26
Subtotal Surface	35	23	58
Total	105	75	180

The basis for the UCMR RFA certification for today's proposed rule, which approves Method 1605 for the analysis of *Aeromonas,* was determined by evaluating average annual costs as a percentage of system revenues/sales. In the worst-case-scenario, the smallest system size category (i.e., 500 and under) is estimated to have revenues/sales of approximately $16,000 per year. The annual cost related to *Aeromonas* monitoring for these 55 systems represents less than 0.2 percent of their annual revenue/sales. The impact for larger systems will be even less significant. USEPA specifically structured the rule to avoid significantly affecting small entities by assuming all

costs for laboratory analyses, shipping, and quality control for small entities. USEPA incurs the entirety of the non-labor costs associated with *Aeromonas* monitoring, or 89 percent of all costs. Small systems only incur labor costs associated with the collection of *Aeromonas* samples, and for reading about their sampling requirements, with an average annual labor cost per system over the 5 years of UCMR implementation of $20.30. USEPA continues to be interested in the potential impacts this proposal has on small entities and welcomes comments on issues related to such impacts.

F. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs USEPA 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 USEPA 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. USEPA identified no voluntary consensus standards for *Aeromonas.* Therefore, USEPA proposes to use USEPA Method 1605.

Concerning the approval of USEPA Method 515.4, while the Agency identified two new methods (ASTM D5317–98, and SM 6640 B) for the acid herbicides as being potentially applicable, we do not propose to include them in this rulemaking. USEPA decided not to approve SM 6640 B. The use of this voluntary consensus standard would have been impractical because of significant shortcomings in the sample preparation and quality control sections of the method instructions. USEPA previously approved ASTM Method D5317–93 for acid herbicides. ASTM D5317–98 is an updated version of ASTM D5317–93 with no changes in the basic procedure and with limited changes to ''Table 4 Acceptance Criteria for Initial Demonstration of Proficiency'' and the addition of a table of acceptance criteria for quality control samples. While these tables are slightly different than those in ASTM D5317–93, they still permit acceptance windows for the initial demonstration of proficiency for laboratory fortified blank samples that are as large as 0% to 223% recovery for picloram, with tighter criteria for other regulated contaminants. When ASTM D5317–93 was originally proposed, a set of fixed acceptance limits of 70% to 130% recovery was also proposed. Due to adverse public comments concerning the ability of laboratories to meet this criteria due to low recovery expectations for picloram (and other analytes not currently regulated), this criteria was withdrawn. USEPA is currently considering alternate procedures for determining useful acceptance criteria for these methods, however, a discussion and proposal of those procedures is beyond the scope of this regulation. Therefore, USEPA is proposing to add approval only for USEPA Method 515.4 for the acid herbicides at this time.

Concerning the approval of USEPA Method 531.2, while the Agency identified two new methods (Standard Method 6610, 20th Edition, and Standard Method 6610, 20th Supplemental Edition) for the carbamates as being potentially applicable, we do not propose to use them in this rulemaking. Standard Method 6610, 20th Edition has previously been proposed for compliance monitoring in (66 FR 3466, January 16, 2001). Since it is currently in the rulemaking process it is not included in this regulation. USEPA has concerns about the Standard Method 6610, 20th Supplemental Edition. This version of Method 6610 permits the use of a strong acid, hydrochloric acid (HCL), as a preservative. The preservatives in all of the other approved USEPA and Standard Methods procedures for these analytes are weak acids that adjust the pH to a specific value based upon the pKa of the preservative. The use of HCL would require accurate determinations of the pH of the sample in the field and could be subject to considerable error and possible changes in pH upon storage. Although not observed for oxamyl or carbofuran, structurally similar pesticides will degrade over time when kept at pH 3. Therefore, USEPA is concerned about the use of a strong acid such as HCL when positive control of the pH is critical. Therefore, USEPA is proposing to add approval only for USEPA Method 531.2 for determining oxamyl and carbofuran, at this time.

The eight analytical methods developed by industry being proposed in this regulation are additional analytic methods for use in drinking water compliance monitoring proposed to USEPA by industry. These industry methods will supplement existing approved methods, some of which are voluntary consensus standards.

USEPA 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. This proposal adds new analytic methods to Part 141. It does not withdraw any currently approved methods nor does it add nor alter any current monitoring requirement. The purpose of this proposal is to provide additional analytical methods for drinking water utilities to use to meet the currently existing monitoring requirements. USEPA has determined that there are no environmental justice issues in this rulemaking.

H. Executive Order 13132—Federalism

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

This 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 proposed rule is to specify

approved analytical methods, thereby allowing *Aeromonas* to be included in the UCMR Screening Survey program, and to add USEPA Methods 515.4 and 531.2 and eight additional industry developed methods that public water systems may use to conduct analyses previously required. The cost to State and local governments is minimal, and the rule does not preempt State law. Thus, Executive Order 13132 does not apply to this rule.

In the spirit of Executive Order 13132, and consistent with USEPA policy to promote communications between USEPA and State and local governments, USEPA specifically solicits comment on this proposed rule from State and local officials.

I. Executive Order 13175—Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 6, 2000), requires USEPA to develop an accountable process to ensure ''meaningful and timely input by Tribal officials in the development of regulatory policies that have Tribal implications.'' ''Policies that have Tribal implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.''

This proposed rule does not have Tribal implications. It will not have substantial direct effects on Tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. The objective of this proposed rule is to specify approved analytical methods, thereby allowing *Aeromonas* to be included in the UCMR Screening Survey program and to add USEPA Methods 515.4, 531.2 and eight additional industry developed methods that public water systems may use to conduct analyses previously required. Only one small Indian Tribal system was selected for *Aeromonas* monitoring. Since this utility will be receiving sampling assistance from the State of Montana and the USEPA will pay for all shipping and analysis costs, the cost to the Tribal government will be minimal. The rule does not preempt Tribal law. Thus, Executive Order 13175 does not apply to this rule.

In the spirit of Executive Order 13175, and consistent with USEPA policy to promote communications between USEPA and Tribal governments USEPA specifically solicits additional comment on this proposed rule from Tribal officials.

J. Plain Language Directive

Executive Order 12866 requires each agency to write all rules in plain language. USEPA 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 USEPA 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?

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

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

F. Could USEPA improve clarity by using additional tables, lists or diagrams?

G. What else could USEPA do to make the rule easier to understand?

K. Executive Order 13211—Energy Effects

This rule is not subject to Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

VI. References

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Kelada, Nabih, validation report for the ''Kelada Automated Test Methods for Total Cyanide, and Thiocyanate'' (Undated).

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MERCK Corporation, Readycult and Chromocult Coliform Agar Validation Report, March 20, 2000.

Morgan, D., P.C. Johnson, H.L. DuPont, T.K. Satterwhite, and L.V. Wood. 1985. Lack of correlation between known virulence properties of *Aeromonas hydrophila* and enteropathogenicity for humans. *Infection and Immunity*. 50:62–65.

Novartis Crop Protection, Inc., ''Validation Study of an Atrazine immunoassay for Drinking Water Monitoring in Compliance with the Safe Drinking Water Act'', May 26, 1999.

Palumbo, S., G.N. Stelma Jr., and C. Abeyta. 2000. The *Aeromonas hydrophila* group. In: The Microbiological Safety and Quality of Food, B.M. Lund, T.C. Baird-Parker, and G.W. Gould (eds.), Aspen Publishers, Inc. Gaithersburg, MD.

USEPA. 2001. Results of the Interlaboratory Validation of Method 1605: *Aeromonas* in Finished Water, December 2001, EPA # 821–R–01–038.

List of Subjects in 40 CFR Part 141

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

Dated: March 1, 2002.

Christine Todd Whitman,

Administrator.

For the reasons set out in the preamble, title 40, chapter I 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 141.21 is amended:

a. By revising the Table in paragraph (f)(3),

b. By adding paragraphs (f)(6) (viii) through (x).

The revision and additions read as follows:

§ 141.21 Coliform sampling.

* * * * *

(f) * * *

(3) * * *

Organism	Methodology [12]	Citation [1]
Total Coliforms [2]	Total Coliform Fermentation Technique [3,4,5]	9221 A, B.
	Total Coliform Membrane Filter Technique [6]	9222 A, B, C.
	Presence-Absence (P–A) Coliform Test [5,7]	9221 D.
	ONPG–MUG Test [8]	9223.
	Colisure Test [9].	
	E*Colite® Test [10].	
	m-ColiBlue24® Test [11].	
	Readycult® Coliforms 100 Presence/Absence Test [13].	
	Membrane Filter Technique using Chromocult® Coliform Agar [14].	
	Colitag® Test [15].	

The procedures shall be done in accordance with the documents listed below. The incorporation by reference of the following documents listed in footnotes 1, 6, 8, 9, 10 and 11 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 below. 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. St. SW., Washington, DC 20460 (Telephone: 202–260–3027); or at the Office of FEDERAL REGISTER, 800 North Capitol Street, NW., Suite 700, Washington, DC 20408.

[1] Methods 9221 A, B; 9222 A, B, C; 9221 D and 9223 are contained in Standard Methods for the Examination of Water and Wastewater, 18th edition (1992) and 19th edition (1995) American Public Health Association, 1015 Fifteenth Street NW., Washington, DC 20005; either edition may be used.

[2] The time from sample collection to initiation of analysis may not exceed 30 hours. Systems are encouraged but not required to hold samples below 10 deg. C during transit.

[3] Lactose broth, as commercially available, may be used in lieu of lauryl tryptose broth, if the system conducts at least 25 parallel tests between this medium and lauryl tryptose broth using the water normally tested, and this comparison demonstrates that the false-positive rate and false-negative rate for total coliform, using lactose broth, is less than 10 percent.

[4] If inverted tubes are used to detect gas production, the media should cover these tubes at least one-half to two-thirds after the sample is added.

[5] No requirement exists to run the completed phase on 10 percent of all total coliform-positive confirmed tubes.

[6] MI agar also may be used. Preparation and use of MI agar is set forth in the article, ''New medium for the simultaneous detection of total coliform and *Escherichia coli* in water'' by Brenner, K.P., et. al., 1993, Appl. Environ. Microbiol. 59:3534–3544. Also available from the Office of Water Resource Center (RC–4100), 401 M. Street SW., Washington DC 20460, EPA/600/J–99/225. Verification of colonies is not required.

[7] Six-times formulation strength may be used if the medium is filter-sterilized rather than autoclaved.

[8] The ONPG-MUG Test is also known as the Autoanalysis Colilert System.

[9] A description of the Colisure Test, Feb 28, 1994, may be obtained from IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092. The Colisure Test may be read after an incubation time of 24 hours.

[10] A description of the E*Colite® Test, ''Presence/Absence for Coliforms and E. Coli in Water,'' Dec 21, 1997, is available from Charm Sciences, Inc., 36 Franklin Street, Malden, MA 02148–4120.

[11] A description of the m-ColiBlue24® Test, Aug 17, 1999, is available from the Hach Company, 100 Dayton Avenue, Ames, IA 50010.

[12] EPA strongly recommends that laboratories evaluate the false-positive and negative rates for the method(s) they use for monitoring total coliforms. EPA also encourages laboratories to establish false-positive and false-negative rates within their own laboratory and sample matrix (drinking water or source water) with the intent that if the method they choose has an unacceptable false-positive or negative rate, another method can be used. The Agency suggests that laboratories perform these studies on a minimum of 5% of all total coliform-positive samples, except for those methods where verification/confirmation is already required, e.g., the M-Endo and LES Endo Membrane Filter Tests, Standard Total Coliform Fermentation Technique, and Presence-Absence Coliform Test. Methods for establishing false-positive and negative-rates may be based on lactose fermentation, the rapid test for β-galactosidase and cytochrome oxidase, multi-test identification systems, or equivalent confirmation tests. False-positive and false-negative information is often available in published studies and/or from the manufacturer(s).

[13] The Readycult® Coliforms 100 Presence/Absence Test is described in the document, ''Readycult® Coliforms 100 Presence/Absence Test for Detection and Identification of Coliform Bacteria and *Escherichia coli* in Finished Waters'', November 2000, Version 1.0, available from EM Science (an affiliate of Merck KGgA, Darmstadt Germany), 480 S. Democrat Road, Gibbstown, NJ 08027–1297. Telephone number is (800) 222–0342, e-mail address is: adellenbusch@emscience.com.

[14] Membrane Filter Technique using Chromocult® Coliform Agar is described in the document, ''Chromocult® Coliform Agar Presence/Absence Membrane Filter Test Method for Identification of Coliform Bacteria and *Escherichia coli* in Finished Waters'', November 2000, Version 1.0, available from EM Science (an affiliate of Merck KGgA, Darmstadt Germany), 480 S. Democrat Road, Gibbstown, NJ 08027–1297. Telephone number is (800) 222–0342, e-mail address is: adellenbusch@emscience.com.

[15] Colitag® Test is described in the document, ''Colitag® Product as a Test for Detection and Identification of Coliforms and *Esherichia coli* Bacteria in Drinking Water and Source Water as required in National Primary Drinking Water Regulations'', available from CPI International, Inc., 5580 Skylane Blvd., Santa Rosa, CA 95403, telephone (800) 878–7654, fax (707) 545–7901, internet address is www.cpiinternational.com.

* * * * *

(6) * * *

(viii) Readycult® Coliforms 100 Presence/Absence Test, a description of which is cited in footnote 13 to the table at paragraph (f)(3) of this section.

(ix) Membrane Filter Technique using Chromocult® Coliform Agar, a description of which is cited in footnote 14 to the table at paragraph (f)(3) of this section.

(x) Colitag® Test, a description of which is cited in footnote 15 to the table at paragraph (f)(3) of this section.

* * * * *

3. Section 141.23 is amended by revising the entry for ''Cyanide'' in the table in paragraph (a)(4)(i) and in the table in paragraph (k)(1) to read as follows:

§ 141.23 Inorganic chemical sampling and analytical requirements.

* * * * *

(a) * * *

(4) * * *

(i) * * *

DETECTION LIMITS FOR INORGANIC CONTAMINANTS

Contaminant	MCL (mg/L)	Methodology	Detection limit (mg/L)
* * *		* * *	*
Cyanide	0.2	Distillation, Spectrophotometric [3]	0.02
		Distillation, Automated, Spectrophotometric [3]	0.005
		Distillation, Selective Eleectrode [3]	0.05
		Distillation, Amenable, Spectrophotometric [4]	0.02
		UV, Distillation, Spectrophotometric	0.05
		Distillation, Spectrophotometric	0.0006
* * *		* * *	*

* * * * * * *

[3] Screening method for total cyanides.

[4] Measures ''free'' cyanides.

* * * * * * *

(k) * * *

(1) * * *

Contaminant and methodology [13]	EPA	ASTM [3]	SM [4]	Other
* * *		*	*	* *
Cyanide: Manual Distillation followed by		D2036–91A	4500–CN–C	
Spectrophotometric, Amenable		D2036–91B	4500–CN–G	
Spectrophotometric, Manual		D2036–91A	4500–CN–E	I–3300–85 [5]
Spectrophotometric, Semi-automated	[6]335.4			
Selective Electrode			4500–CN–F	
Distillation/Spectrophotometric				QuikChem 10–204–00–1–X [16]
UV /Distillation/Spectrophotometric				Kelada 01 [17]
* * *		*	*	* *

* * * * * * *

[3] Annual Book of ASTM Standards, 1994 and 1996, Vols. 11.01 and 11.02, American Society for Testing and Materials. The previous versions of D1688–95A, D1688–95C (copper), D3559–95D (lead), D1293–95 (pH), D1125–91A (conductivity) and D859–94 (silica) are also approved. These previous versions D1688–90A, C; D3559–90D, D1293–84, D1125–91A and D859–88, respectively are located in the Annual Book of ASTM Standards, 1994, Vols. 11.01. Copies may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

[4] 18th and 19th editions of Standard Methods for the Examination of Water and Wastewater, 1992 and 1995, respectively, American Public Health Association; either edition may be used. Copies may be obtained from the American Public Health Association, 1015 Fifteenth Street NW, Washington, DC 20005.

[5] Method I–2601–90, Methods for Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Inorganic and Organic Constituents in Water and Fluvial Sediments, Open File Report 93–125, 1993; For Methods I–1030–85; I–1601–85; I–1700–85; I–2598–85; I–2700–85; and I–3300–85 See Techniques of Water Resources Investigation of the U.S. Geological Survey, Book 5, Chapter A–1, 3rd ed., 1989; Available from Information Services, U.S. Geological Survey, Federal Center, Box 25286, Denver, CO 80225–0425.

[6] ''Methods for the Determination of Inorganic Substances in Environmental Samples'', EPA/600/R–93/100, August 1993. Available at NTIS, PB94–120821.

* * * * * * *

[13] Because MDLs reported in EPA Methods 200.7 and 200.9 were determined using a 2X preconcentration step during sample digestion, MDLs determined when samples are analyzed by direct analysis (i.e., no sample digestion) will be higher. For direct analysis of cadmium and arsenic by Method 200.7, and arsenic by Method 3120 B sample preconcentration using pneumatic nebulization may be required to achieve lower detection limits. Preconcentration may also be required for direct analysis of antimony, lead, and thallium by Method 200.9; antimony and lead by Method 3113 B; and lead by Method D3559–90D unless multiple in–furnace depositions are made.

* * * * * * *

[16] The description for the QuikChem Method 10–204–00–1–X, Revision 2.1, November 30, 2000 for cyanide is available from Lachat Instruments, 6645 W. Mill Rd., Milwaukee, WI 53218, USA. Phone: 414–358–4200.

[17] The description for the Kelada 01 Method, Revision 1.2, August 2001, USEPA # 821–B–01–009 for cyanide is available from the National Technical Information Service (NTIS), PB 2001–108275, 5285 Port Royal Road, Springfield, VA 22161. The toll free telephone number is 800-553–6847.

* * * * * * *

4. Section 141.24 is amended by revising paragraph (e)(1) and by revising the table in paragraph (e)(1) to read as follows:

§ 141.24 Organic chemical, sampling and analytical requirements

* * * * *

(e) * * *

(1) The following documents are incorporated by reference. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be inspected at EPA's Drinking Water

Docket, 401 M Street, SW, Washington, DC 20460; or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC. Method 508A and 515.1 are in *Methods for the Determination of Organic Compounds in Drinking Water,* EPA/600/4–88–039, December 1988, Revised, July 1991. Methods 547, 550 and 550.1 are in *Methods for the Determination of Organic Compounds in Drinking Water—Supplement I,* EPA/600–4–90–020, July 1990. Methods 548.1, 549.1, 552.1 and 555 are in *Methods for the Determination of Organic Compounds in Drinking Water—Supplement II,* EPA/600/R–92–129, August 1992. Methods 502.2, 504.1, 505, 506, 507, 508, 508.1, 515.2, 524.2 525.2, 531.1, 551.1 and 552.2 are in *Methods for the Determination of Organic Compounds in Drinking Water—Supplement III,* EPA/600/R–95–131, August 1995. Method 1613 is titled ''Tetra-through Octa-Chlorinated Dioxins and Furans by Isotope-Dilution HRGC/HRMS'', EPA/821-B–94–005, October 1994. These documents are available from the National Technical Information Service, NTIS PB91–231480, PB91–146027, PB92–207703, PB95–261616 and PB95–104774, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll-free number is 800–553–6847. Method 6651 shall be followed in accordance with *Standard Methods for the Examination of Water and Wastewater,* 18th edition, 1992 and 19th edition, 1995, American Public Health Association (APHA); either edition may be used. Method 6610 shall be followed in accordance with the *Supplement to the 18th edition of Standard Methods for the Examination of Water and Wastewater,* 1994 or with the 19th edition of *Standard Methods for the Examination of Water and Wastewater,* 1995, APHA; either publication may be used. The APHA documents are available from APHA, 1015 Fifteenth Street NW, Washington, DC 20005. Other required analytical test procedures germane to the conduct of these analyses are contained in *Technical Notes on Drinking Water Methods,* EPA/600/R–94–173, October 1994, NTIS PB95–104766. EPA Methods 515.3 and 549.2 are available from U.S. Environmental Protection Agency, National Exposure Research Laboratory (NERL)—Cincinnati, 26 West Martin Luther King Drive, Cincinnati, OH 45268. ASTM Method D 5317–93 is available in the *Annual Book of ASTM Standards,* 1996, Vol. 11.02, American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428, or in any edition published after 1993. EPA Method 515.4, ''Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Microextraction, Derivatization and Fast Gas Chromatography with Electron Capture Detection,'' Revision 1.0, April 2000, EPA /815/B–00/001. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at 800–426–4791 (Hours are Monday through Friday, excluding Federal holidays, from 9 a.m. to 5:30 p.m. Eastern Time). Alternatively, the method can be assessed and downloaded directly on-line at *www.epa.gov/safewater/methods/sourcalt.html.* The Syngenta AG–625 is available from Syngenta Crop Protection, Inc., 410 Swing Road, Post Office Box 18300, Greensboro, NC 27419, Phone number (336) 632–6000. Method 531.2 ''Measurement of N-methylcarbamoyloximes and N-methylcarbamates in Water by Direct Aqueous Injection HPLC with Postcolumn Derivatization,'' Revision 1.0, September 2001. Available by requesting a copy from the EPA Safe Drinking Water Hotline within the United States at 800–426–4791 (Hours are Monday through Friday, excluding Federal holidays, from 9 a.m. to 5:30 p.m. Eastern Time).

Contaminant	EPA method [1]	Standard methods	ASTM	Other
Benzene	502.2, 524.2.			
Carbon tetrachloride	502.2, 524.2, 551.1.			
Chlorobenzene	502.2, 524.2.			
1,2-Dichlorobenzene	502.2, 524.2.			
1,4-Dichlorobenzene	502.2, 524.2.			
1,2-Dichloroethane	502.2, 524.2.			
cis-Dichloroethylene	502.2, 524.2.			
trans-Dichloroethylene	502.2, 524.2.			
Dichloromethane	502.2, 524.2.			
1,2-Dichloropropane	502.2, 524.2.			
Ethylbenzene	502.2, 524.2.			
Styrene	502.2, 524.2.			
Tetrachloroethylene	502.2, 524.2, 551.1.			
1,1,1-Trichloroethane	502.2, 524.2, 551.1.			
Trichloroethylene	502.2, 524.2, 551.1.			
Toluene	502.2, 524.2.			
1,2,4-Trichlorobenzene	502.2, 524.2.			
1,1-Dichloroethylene	502.2, 524.2.			
1,1,2-Trichloroethane 5	502.2, 524.2, 551.1.			
Vinyl chloride	502.2, 524.2.			
Xylenes (total)	502.2, 524.2.			
2,3,7,8-TCDD (dioxin)	1613.			
2,4-D [4] (as acid, salts and esters)	515.2, 555, 515.1, 515.3, 515.4		D5317–93.	
2,4,5-TP [4] (Silvex)	515.2, 555, 515.1, 515.3, 515.4		D5317–93.	
Alachlor [2]	507, 525.2, 508.1, 505, 551.1.			
Atrazine [2]	507, 525.2, 508.1, 505, 551.1			Syngenta AG–625
Benzo(a)pyrene	525.2, 550, 550.1.			
Carbofuran	531.1, 531.2	6610		
Chlordane	508, 525.2, 508.1, 505.			
Dalapon	552.1, 515.1, 552.2, 515.3, 515.4.			
Di(2-ethylhexyl)adipate	506, 525.2.			
Di(2-ethylhexyl)phthalate	506, 525.2.			
Dibromochloropropane (DBCP)	504.1, 551.1.			
Dinoseb [4]	515.2, 555, 515.1, 515.3, 515.4.			

Contaminant	EPA method [1]	Standard methods	ASTM	Other
Diquat	549.2.			
Endothall	548.1.			
Endrin	508, 525.2, 508.1, 505, 551.1.			
Ethylene dibromide (EDB)	504.1, 551.1.			
Glyphosate	547	6651		
Heptachlor	508, 525.2, 508.1, 505, 551.1.			
Heptachlor Epoxide	508, 525.2, 508.1, 505, 551.1.			
Hexachlorobenzene	508, 525.2, 508.l, 505, 551.1.			
Hexachlorocyclopentadiene	508, 525.2, 508.1, 505, 551.1.			
Lindane	508, 525.2, 508.1, 505, 551.1.			
Methoxychlor	508, 525.2, 508.1, 505, 551.1.			
Oxamyl	531.1, 531.2	6610		
PCBs [3] (as decachlorobiphenyl)	508A.			
PCBs [3] (as Aroclors)	508.1, 508, 525.2, 505.			
Pentachlorophenol	515.2, 525.2, 555, 515.1, 515.3, 515.4		D5317–93.	
Picloram [4]	515.2, 555, 515.1, 515.3, 515.4		D5317–93.	
Simazine [2]	507, 525.2, 508.1, 505, 551.1.			
Toxaphene	508, 508.1, 525.2, 505.			
Total Trihalomethanes	502.2, 524.2, 551.1.			

[1] For previously approved EPA methods which remain available for compliance monitoring until June 1, 2001, see paragraph (e)(2) of this section.

[2] Substitution of the detector specified in Method 505, 507, 508 or 508.1 for the purpose of achieving lower detection limits is allowed as follows. Either an electron capture or nitrogen phosphorous detector may be used provided all regulatory requirements and quality control criteria are met.

[3] PCBs are qualitatively identified as Aroclors and measured for compliance purposes as decachlorobiphenyl. Users of Method 505 may have more difficulty in achieving the required detection limits than users of Methods 508.1, 525.2 or 508.

[4] Accurate determination of the chlorinated esters requires hydrolysis of the sample as described in EPA Methods 515.1, 515.2, 515.3, 515.4 and 555 and ASTM Method D5317–93.

* * * * * * *

5. Section 141.40 is amended in paragraph (a)(3), table 1, by revising the second List 2 table including the title, and by revising footnotes f and h, to read as follows:

§ 141.40 Monitoring requirements for unregulated contaminants.

(a) * * *

(3) * * *

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

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

* * * * * * *

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.

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

[h] EPA Method 1605 ''*Aeromonas* in Finished Water by Membrane Filtration using Ampicillin-Dextrin Agar with Vancomycin (ADA–V)'', October 2001, EPA # 821–R–01–034. 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/microbes.*

* * * * *

6. Section 141.74 is amended by revising the table in paragraph (a)(1) and adding footnotes 11 and 12 to read as follows:

§ 141.74 Analytical and monitoring requirements.

(a) * * *

(1) * * *

Organism	Methodology	Citation [1]
Total Coliform [2]	Total Coliform Fermentation Technique [3 4 5]	9221 A, B, C.
	Total Coliform Membrane Filter Technique [6]	9222 A, B, C.
	ONPG–MUG Test [7]	9223.
Fecal Coliforms [2]	Fecal Coliform Procedure [8]	9221 E.
	Fecal Coliforms Filter Procedure	9222 D.
Heterotrophic bacteria [2]	Pour Plate Method	9215 B.
	SimPlate [11]	
Turbidity	Nephelometric Method	2130 B.
	Nephelometric Method	180.1 [9].
	Great Lakes Instruments	Method 2 [10].
	Hach FilterTrak	10133 [12].

Note: The procedures shall be done in accordance with the documents listed below. The incorporation by reference of the following documents listed in footnotes 1, 6, 7, 9 and 10 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 below. 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 the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, D.C. 20408.

[1] Except where noted, all methods refer to Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992 and 19th edition, 1995, American Public Health Association, 1015 Fifteenth Street NW, Washington, D.C. 20005; either edition may be used.

[2] The time from sample collection to initiation of analysis may not exceed 8 hours. Systems must hold samples below 10 deg. C during transit.

[3] Lactose broth, as commercially available, may be used in lieu of lauryl tryptose broth, if the system conducts at least 25 parallel tests between this medium and lauryl tryptose broth using the water normally tested, and this comparison demonstrates that the false—positive rate and false—negative rate for total coliform, using lactose broth, is less than 10 percent.

[4] Media should cover inverted tubes at least one—half to two—thirds after the sample is added.

[5] No requirement exists to run the completed phase on 10 percent of all total coliform—positive confirmed tubes.

[6] MI agar also may be used. Preparation and use of MI agar is set forth in the article, ''New medium for the simultaneous detection of total coliform and *Escherichia coli* in water'' by Brenner, K.P., et. al., 1993, Appl. Environ. Microbiol. 59:3534–3544. Also available from the Office of Water Resource Center (RC–4100), 401 M. Street SW, Washington D.C., 20460, EPA/600/J–99/225. Verification of colonies is not required.

[7] The ONPG—MUG Test is also known as the Autoanalysis Colilert System.

[8] A–1 Broth may be held up to three months in a tightly closed screw cap tube at 4 deg. C.

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

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

[11] A description of the SimPlate method can be obtained from IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092, telephone (800) 321–0207.

[12] A description of the Hach FilterTrak method 10133 can be obtained from; Hach Co., P.O. Box 389, Loveland, Colorado, 80539–0389. Phone: 800–227–4224.

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