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**UCMR Update**  
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 Technical Support Center  
 January 2001

# UCMR Premier Issue

**UCMR Update Issue Number 1-** This information sheet, the **UCMR Update**, is the first one to be issued by the Technical Support Center (TSC) of the Office of Ground Water and Drinking Water (OGWDW). Future issues will be distributed as needed to maintain information flow related to the UCMR.

**Editor's Note:** The UCMR is a multi-tiered rule that was promulgated in the September 17, 1999 *Federal Register* starting on page 50556 (64 *FR* 50556). The three-tiered monitoring approach includes: Assessment Monitoring for the List 1 chemical contaminants, a Screening Survey for the list 2 chemical contaminants and *Aeromonas*, and the Pre-Screen Testing for List 3 contaminants (mostly microbiological contaminants). On December 18, 2000, the List 2 Rule was signed by EPA Administrator, Carol Browner and will soon be published in the *Federal Register*. Well, I don't know about you, but for me, reading the *Federal Register* is a sure cure for insomnia. Therefore, one of the goals of this "rag" (the UCMR Update) will be to look at some of the major provisions of the Rule and attempt to put them into "plain language."

Many of you just receiving this first issue of the **UCMR Update** have already received your notification of the start of the Assessment Monitoring phase of the Unregulated Contaminant Monitoring Rule (UCMR). Notification letters were sent out at the beginning of October to more than one-third of the total (800) randomly selected small systems (those PWSs serving 10,000 or fewer persons) by the States and in some cases, by the **Technical Support Center** here in Cincinnati. Many of the small systems that were notified have been scheduled to begin sampling in the year 2001. Because of their size, the small systems will be getting assistance in the analysis and reporting of their samples. EPA will pay for the assembly and shipment of the sampling kits to the utility, shipment of the water samples to the designated analytical lab for analysis, and data entry of the results by the labs. The small systems will do the actual collection of the samples, but in some cases even that may be done by others (e.g., State or USEPA Regional personnel).

In addition to the small systems, notification letters were also sent to the approximately 2700 large systems (serving more than 10,000 persons) that will be required to sample for the 12 contaminants on List 1. This list will more often be referred to as **Assessment Monitoring**. The large systems, by virtue of their size and staffing, will have to provide their own sampling kits, sample collection, and analytical services. They will also have to have their own results entered into the Internet-based data entry system.

In this first issue of the UCMR Update, we will look at Assessment Monitoring, Index Systems, Data Elements, Monitoring Frequency, the Small System Screening Survey, and Data Reporting. I have selected these topics because they will all be important in the coming year.

**Partnership is Formed** - Due to the size and scope of the UCMR, and the fact that EPA will be directly implementing the rule without required assistance from the States, it was set up as a voluntary partnership arrangement between EPA and the States/Territories. Most of the States did sign Partnership Agreements (PAs), while others only agreed to do certain aspects of the monitoring, but did agree, in a letter to EPA, to do these tasks. A few states said they would not take part in any of the UCMR activities, an action which required the USEPA to get involved directly with the utilities.

In addition to USEPA and the states, there are several other players in this undertaking. For instance, EPA Regional offices were responsible for negotiating the Partnership Agreements with the States. As monitoring begins, some EPA Regional offices will be collecting samples for systems as well as assisting with the review of data or assisting with compliance issues. Therefore, the EPA Regions should be the first contacts for questions concerning the UCMR.

EPA is also working with several contractors on implementation of the UCMR. First, **Cadmus** (an EPA contractor located in Massachusetts) has been responsible for randomly selecting the “small” PWSs for Assessment Monitoring and the Screening Surveys, as well as the large (serving over 10,000 persons) PWSs which will participate in the Screening Surveys. They also worked with the States to compile the State Monitoring Plans (SMP) and drafted all of the guidance documents.

**Great Lakes Environmental Center (GLEC)** was chosen as the small system implementation contractor for the UCMR. They will be responsible for coordination of the small system sampling effort including the design and shipment of sampling kits to the systems (or State/Regional samplers). They will also review data from the laboratory analysis of the small system samples. Furthermore, GLEC will be working with **Montgomery Watson (MW)** and **Environmental Health Laboratory (EHL)**, who will perform the chemical analyses for all the small systems in the UCMR. Another contractor, the **National Service Center for Environmental Publications (NSCEP)** is assisting with all the mass mailings (of notification letters and the like) which need to be undertaken for the UCMR. Finally, **Logistics Management Institute (LMI)** is developing the web-based data entry system, as well as the format for transferring batch data.

Of course, there is even a partnership “within” the EPA to get the UCMR off the ground and running, involving several groups within the Office of Ground Water and Drinking Water. For example, the **Targeting and Analysis Branch (TAB)** was responsible for getting the Rule published. The **Infrastructure Branch (IB)** will be responsible for getting the data to Envirofacts. The **Office of Environmental Information (OEI)** is responsible for getting the electronic data reporting system in shape. And last, but not least, the **Technical Support Center (TSC)**, here in Cincinnati, is responsible for implementing the UCMR. TSC also played a significant role in the development of the Rule.

As you can see, the UCMR is truly a partnership arrangement. And TSC, for one, is looking forward to a successful partnership.

**List 2 Large Systems Revealed** - The list of large systems selected for the UCMR Screening Survey for List 2 contaminants is available for your viewing pleasure on EPA’s website at <http://www.epa.gov/safewater/standard/ucmr/list2largesystems.html>. The list consists of the 120 systems designated for 2002, and 120 systems selected for monitoring in 2003.

**Assessment Monitoring** - When you hear the words, Assessment Monitoring, think of List 1. This list contains 12 chemical contaminants, eleven of which can be analyzed using current analytical methods. A new method for the determination of perchlorate (EPA Method 314.0) was developed specifically for the UCMR. [*Refer to Table 1 in the Rule (p. 50613) for the complete list.*] Eleven of the contaminants are organics, while perchlorate, is an inorganic contaminant.

One year of Assessment Monitoring for the List 1 contaminants must take place during the period beginning January 1, 2001 and ending December 31, 2003. The schedule for Assessment Monitoring for small systems down to the year and month has already been determined from the State Monitoring Plans (SMPs). Our implementation contractor, **GLEC**, will soon be contacting the small systems to establish the exact week of sampling and to begin shipping sampling kits to the systems (or the State/EPA Regional samplers).

As for the large systems, they have been notified about the monitoring period for the List 1 UCMR contaminants, but have some discretion when it comes to the year in which they want to monitor. Large

systems must provide their own sampling kits and collect their own samples and have them analyzed by an approved lab of their choosing. Their lab will enter the results into EPA's electronic data reporting system (known as SDWARS and still under development), but the utility will have the opportunity to review data and the responsibility to approve the results through the same data reporting system.

**Index Systems** - The term "Index Systems" applies to the 30 randomly selected small systems that will be monitored over a five-year period for a wide range of parameters. These systems were selected randomly from the systems in State Monitoring Plans (SMPs). The purpose of this sampling program is to study the effect of temporal variation on contaminant occurrence and to provide additional information on small systems which can then be used to "tailor future regulations to small systems."

EPA will pay for Index System monitoring (sampling equipment, shipment of samples, analysis, and data entry). In addition, a field technician will be available to each Index System to collect the samples. Additional system information will be collected initially "to characterize the environmental setting affecting the system." Systems selected as Index Systems will receive further guidance from EPA in the weeks to come.

**Data Elements** - The 16 data elements which are to be reported include:

1. **PWSID Number** - 2 character postal State code (e.g., FL for Florida) followed by 7-digit number
2. **Sampling Point ID Number** - 3 part alphanumeric designation consisting of: the PWS Facility ID Number, the Sampling Point ID Number, and the Sampling Point Type ID. An example would be: 00105-00105E-SS
3. **Sample Collection Date** - date sample is collected in the format *yyyymmdd*
4. **Sample ID Number** - up to 15 alphanumeric characters assigned by the lab to identify water samples collected at the same time and location
5. **Contaminant/Parameter** - the name of the UCMR contaminant/water quality parameter for which the sample is being analyzed (e.g., MTBE)
6. **Analytical Results - Sign** - alphanumeric value of < (less than) or = (equal to)
7. **Analytical Result - Value** - actual numeric value of the analysis, or the MRL (min. reporting level)
8. **Analytical Result - Unit of Measure** - unit of measurement such as micrograms per liter ( $\mu\text{g/L}$ )
9. **Analytical Method Number** - ID number of analytical method such as, EPA 502.2
10. **Sample Analysis Type** - type of sample collected (one of 4 types: RFS (raw field sample), RDS (raw duplicate field sample), TFS (treated field sample), TDS (treated duplicate field sample))
11. **Sample Batch ID Number** - 3 part number consists of up to: 10 character lab ID code assigned by EPA, 15 character batch (extraction or analysis) code assigned by lab, date (*yyyymmdd* format) batch was extracted or analyzed
12. **Minimum Reporting Level (MRL)** - lowest concentration of an analyte that may be reported
13. **MRL Unit of Measure** - unit of measure such as micrograms per liter ( $\mu\text{g/L}$ )
14. **Analytical Precision** - degree of agreement between two repeated measurements. For the UCMR it is defined as the relative percent difference (RPD) between spiked matrix duplicates
15. **Analytical Accuracy** - describes how close a result is to the true value measured through the use of spiked field samples
16. **Spiking Concentration** - concentration of method analytes added to a sample for the purpose of calculating analytical precision and accuracy

**Monitoring Frequency** - The monitoring frequency for Assessment Monitoring varies from 4 times per year for surface water systems to just two times per year for groundwater systems. Sounds simple doesn't it? *Au contraire*. One of the sampling times for surface water systems must fall between May 1<sup>st</sup> and July 31<sup>st</sup> (the so-called vulnerable period) while the other three sampling times must occur in the same **relative** month in each of the other quarters. For example, if you sample the

vulnerable period in June, the other sampling must be done in March, September, and December (three months before and three and six months after the vulnerable period sampling). For ground water, sample during one month of the vulnerable time (May 1<sup>st</sup> through July 31<sup>st</sup>) and during one month five to seven months earlier or later (e.g., if you plan to sample in June 2001, collect the other sample in either January 2001 or November 2001, December 2001, or January 2002). Now I'm confused. Good luck.

**Small System Screening Survey** - EPA divided the list of contaminants that systems must monitor for into 3 separate lists based on the availability of analytical methods. We have already discussed Assessment Monitoring, the List 1 contaminants. The Screening Survey or List 2 contaminants, consists of 13 chemical contaminants for which analytical methods will be available by the start of monitoring in 2001. Of the 800 randomly selected small systems, 180 small systems were randomly selected to begin monitoring for List 2 contaminants in 2001. (The 120 randomly selected large systems do not begin monitoring for List 2 chemical contaminants until January 2002.) A second Screening Survey for the List 2 microbiological contaminant, *Aeromonas*, will be performed by 180 other small systems in 2003. List 2 monitoring for small systems is scheduled in 2001 to run concurrently with List 1 (Assessment Monitoring) contaminant monitoring. Small system monitoring for List 2 contaminants is taking place before the large systems monitor for these contaminants because EPA is paying for the small system monitoring and hopes to gain some additional experience with the methods before the large systems (which must pay for their own monitoring costs) start their monitoring in 2002.

**Data Reporting** - Analytical data from the UCMR monitoring will be entered into a web-based data entry system known as **SDWARS** (for **S**afe **D**rinking **W**ater **A**cquisition and **R**eporting **S**ystem). This database system is currently under development and it is anticipated that it will be ready to accept data in June 2001. In the interim, it will be necessary for large systems and laboratories to participate in a registration process. Letters will be mailed to these systems and labs in January (or early February) 2001 announcing the start of registration and explaining the procedures to be followed. The registration process will probably (the details are still being worked out) involve submitting a list (on your "Official" letterhead) of potential users that will need access to the system for data entry and/or data review/approval. In turn, a letter will be sent to each potential user with detailed instructions on how to access the system along with a user ID and a **temporary** password. You will then be able to logon to the system (set-up a password of your choosing) and register for the purpose of entering and/or reviewing/approving UCMR data. More on the development of this system in the next UCMR Update.

**Perchlorate Labs Approved** - Just over 100 laboratories have been approved to conduct perchlorate analysis in support of List 1, Assessment Monitoring. These laboratories have successfully completed and passed either the Spring or the Fall 2000 Perchlorate Performance Testing (PT) Study. At the time of these studies, these laboratories were certified by a State or primacy agency to conduct compliance monitoring for at least one inorganic parameter using an approved ion chromatographic method. For a complete listing of these approved labs go to the EPA website at <http://www.epa.gov/safewater/standard/ucmr/aprvlabs.html>

**Additional Information for Systems?** - Recently, many States have been contacted by their systems seeking more information about the UCMR. Help is on the way! Two new guidance documents are about to be released by EPA. One, titled *Unregulated Contaminant Monitoring Regulations Guidance for Operators of Public Water Systems Serving 10,000 or Fewer People* (whew, that's a mouthful) EPA # 815-R-00-018, should help answer some of those nagging questions about the how, what, when, where of UCMR Assessment Monitoring. It is currently on the safewater web site in draft form, but will be published soon and available through the Water Resources Center. Another guidance document with a similar "catchy" title, *Unregulated Contaminant Monitoring Regulation Guidance for Operators of Public Water Systems Serving More Than 10,000 Persons*, EPA # 815-R-00-01? is not yet ready, but should be soon. Another document (UCMR: Interim Update on Reporting) is

being developed primarily for large systems and their laboratories that will provide an informational update on data reporting under the UCMR. Fact sheets are also being developed for both the large and small systems and may be included in the mailing explaining the registration process for the data system.

**List 2 Rule Final** - The final rule for List 2 was proposed in the September 13, 2000 *Federal Register* starting on page 55362 (65 *FR* 55362) and was signed by the EPA Administrator on December 18 authorizing the Rule as Final and its publication in the *Federal Register*. It may not be published in the *Federal Register* until January 2001; in the interim, a prepublication version is available on the web at [http://www.epa.gov/safewater/standard/ucmr/prepubfinal\\_ucmr\\_list2.pdf](http://www.epa.gov/safewater/standard/ucmr/prepubfinal_ucmr_list2.pdf).

The September 1999 UCMR included 3 lists of contaminants to be monitored: List 1 for contaminants with approved analytical methods, **List 2** for contaminants with methods being refined, and List 3 for contaminants with methods being developed in research. This latest rule finalizes analytical methods for 13 (of the original 16) List 2 chemical contaminants and the monitoring schedule for the microbiological contaminant, *Aeromonas* (2003 - if the analytical method is promulgated in 2001). The rule also finalizes minor changes to the September 1999 UCMR that affect the implementation of monitoring for both List 1 and List 2 contaminants.

**When Contacting Us...** - Utilities, please use your PWSID Number (laboratories use your USEPA (EMSL) LAB ID number for lab related issues) as a reference in any written correspondence with the UCMR folks here at TSC. The address is:

UCMR Coordinator  
Technical Support Center  
U. S. Environmental Protection Agency  
26 W. Martin Luther King Drive  
Cincinnati, OH 45268

**Future Issues of the UCMR Update** - This issue of the UCMR Update is being sent to you to keep you abreast of the latest information on the UCMR. If you or someone else would like to receive future issues (limit one per entity, but feel free to copy), please fill out the form below and return it to the Technical Support Center in Cincinnati, or e-mail a short message with your mailing address to [walasek.james@epa.gov](mailto:walasek.james@epa.gov) to be placed on the mailing list. Thank you.

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