The NEW EPA UCMR 3 Rule: Ten things you must know

1. **The Lists**. UCMR3 is split into three lists. List 1 testing, also referred to as *Assessment Monitoring,* must be performed by all public drinking water suppliers that serve a population of over 10,0000. List 1 consists of five metals by EPA method 200.7, hexavalent chromium by method 218.7, chlorate by method 300.1, seven VOCs by method 542.3, 1, 2-dioxane by 522, and six perfluorinated compounds by method 537. As initially proposed UCMR3 included nine VOCs and did not include total or hexavalent chromium. Some websites still cite the initial (and now inaccurate) list of target analytes. Any drinking water supplier serving over 100,000 people must do List 1 and List 2 (or Screening Survey), which consists of seven hormones by EPA method 539. When UCMR3 was first proposed, all seven of the methods above were included in List 1. This is no longer the case, but several websites still include this outdated information - Hormones by 539 will only need to be done by very large systems. List 3 consists of two types of viruses and will only apply to a group of very small systems. No large systems (systems included in the list 1 or List 2 groups described above) will be subject to List 3 testing.

2. **EPs & DSMRTs.** Samples for chlorate and metals, including hexavalent chromium, will need to be taken at the entry point (EP) and at a point of "maximum residence time" (DSMRT) within the distribution system. All entry must have a DSMRT; however, a single point may be the DSMRT for more than one entry point. It is somewhat confusing and as of yet the EPA has not provided much guidance on determining how many and where the DSMRTs will be in a given system. You may want to discuss this situation with your local drinking water regulator and check the **SUMMIT LABS** website regularly for updates.

3. **Purchasers.** Systems that purchase their water from other systems or water wholesalers will be subject to this round of UCMR. These systems were not included in UCMR1 or UCMR2, but will be required to monitor their entry point(s) and DSMRTs. Specific requirements apply for determining which and how many EPs (if there are multiple) will need to be monitored.

4. **Blanks**. Blanks will be required for several UCMR3 tests. VOCs will have a trip blank, which will not be opened in the field; metals will have a full bottle which will be opened and exposed to the atmosphere during the sampling event; and methods 537 and 539 (very large systems only) will receive a full bottle of reagent water, which will be opened and poured into an empty bottle during the sampling event. **When requesting and comparing quotes, make sure you find out exactly how the cost of blank analysis is addressed.**

5. **More Blanks.** Any detect of target analyte (in tests requiring a field blank) will require the analysis of the field blank. Since nearly all metal samples will have some reportable level of strontium, nearly all field blanks for this method will need to be analyzed. As currently written, the EPAs lab manual states that any detect in the field blank greater than 1/3 "minimum reporting level" would invalidate the field sampling data and require re-sampling. That means that a detect of strontium in a field blank of anything over 0.1 ppb would invalidate the corresponding metal sample-the current health advisory level for strontium is 40,000 times higher. EPA has not budged on this- any detect in the field blank over 1/3 the reporting level will invalidate the field sampling results regardless of the ratio between sample and blank- however, EPA officials have said they would re-evaluate this situation after six months.

6. **Chlorine Dioxide.** Systems that disinfect with chlorine dioxide will be required to purge their chlorate sample during collection. This will require the use of an inert gas (i.e. helium) in a canister, with tubing and a regulator. At this point, EPA has yet to produce specific guidelines for performing this step. If your system uses chlorine dioxide as a disinfectant, be sure to make laboratories aware of it during the bidding process as this will likely impact pricing. It will certainly impact your sampling process!

7. **Methods.** Although some of the method references may look similar to standard drinking water tests (200.8 and 524.3 for instance), all UCMR methods are highly specialized. Detection limits for all methods are extremely low and quality control requirements are specific to the program and incredibly stringent. EPA's own website actually refers to List 1 analysis utilizing "common analytical method technologies"- some of the technologies may be somewhat common, but the specific method and quality control requirements for UCMR3 analysis are far beyond commonplace.

8. **Laboratory Approval.** All analysis for UCMR3 must be performed by an EPA -approved laboratory. ***State or national approvals (i.e. TNI/NELAP) are not acceptable for this program***. Many labs have approval for some methods and plan to sub-contract the rest of the work; some labs have no approval at all but are marketing themselves only as a middle-man. There is nothing wrong with this approach, but you will probably want to know ahead of time exactly who will be doing your testing and be aware that delays between sample collection and sample receipt (by the ultimate lab performing the work) may increase the likelihood of re-sampling.

9. **Sample Receipt.** Receiving conditions are stringently defined and controlled in the UCMR program. Samples must be received at less than 10 degrees C within 48 hours of collection. If they are received past 48 hours, they must be at or below 6 degrees C and be accompanied by a statement attesting to the fact that the samples were maintained at 6 degrees prior to shipment. Samples that do not meet these temperature requirements must be discarded and re-sampling initiated. Several of the tests also require a dechlorination agent and/ or pH preservative. Only samples for metals by 200.8 may be adjusted upon receipt at the laboratory- any other bottle that does not meet preservation requirements or has a measureable residual chlorine level, must be discarded and re-sampled.

10. **Data Downloading.** Be aware that you are responsible for a number of steps in the electronic data handling and storage operations in the UCMR program. Prior to November 29, 2012 all impacted PWSs must review and edit (if necessary) their schedule within the EPA's database at https://cdx.epa.gov/epa home.asp. Following analysis, your laboratory is required to post data to this same site and PWS has 60 days to review and approve the data. If this is not done by the PWS, the data will automatically be accepted into the system.

Make no mistakes about it; UCMR3 will be the most complex and likely the most costly, finite monitoring program that you have ever been required to participate in. The sampling process will include a number of steps that are totally new to drinking water samplers. It includes new twists on complexities that were introduced during UCMR2. It includes many, many, many conditions that if not met, will invalidate the samples and/ or the data, requiring costly re-sampling. It is vital that participants understand the program completely and work with their laboratory to insure the smoothest (and most cost effective) process.

As the UCMR3 program progresses, EPA may discover that some of the requirements they have put in place and some of the points that they have not fully clarified, are worth readdressing. Certain requirements may not be in place six months or a year from now. **SUMMIT LABS** will make every effort to present the very latest information regarding this program. Check our website often for updates.