Safe Drinking Water Act (SDWA): Updates and Current Activities

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Overview

- Recent drinking water method development
- UCMR 4 implementation / UCMR 5 preparation
  - America's Water Infrastructure Act (AWIA) of 2018
- Alternative Test Procedure (ATP) and Expedited Method Approval / DW MUR
- Laboratory Stakeholder Collaboration

New Drinking Water Analytical Methods

- Method 533 : PFAS (December 2019)
  - Complements EPA Method 537.1, 25 PFAS (11 PFAS unique to Method 533 / 14 PFAS also included in 537.1)
  - SPE (weak anion exchange) followed by LC/MS/MS
  - Emphasis on “short chain” PFAS with carbon chain lengths of 4-12 (perfluorinated acids, sulfonates and mono/poly perfluorinated ethers)
  - Capable of supporting single-digit ppt (ng/L) reporting levels
  - Incorporates isotope dilution for quantitation, with recovery QC criteria
- Revisions to EPA radiochemistry methods
  - 903.0, 903.1, 904.0 (coming soon)
- Method 127: monochloramine
  - Selective measurement for disinfectant residual (coming soon)

Unregulated Contaminant Monitoring Rule (UCMR)

- UCMR is five-year cyclic program
- Nearing completion of the fourth cycle, UCMR 4 (2017 – 2021)
  - UCMR 4 Sampling Period 2018 – 2020
- Preparing for the fifth cycle, UCMR 5 (2022-2027)
  - Proposal anticipated late 2020
  - Final expected late 2021
  - UCMR 5 anticipated Sampling Period 2023 - 2025
- “UCMR Update" presentation: 8/5, 1:45 PM within “Drinking Water” session

America's Water Infrastructure Act of 2018 (AWIA)

- **Section 2021 - MONITORING FOR UNREGULATED CONTAMINANTS**
  - Creates new UCMR requirements, ***subject to the availability of appropriations*** **and** ***contingent on sufficient laboratory capacity*****.**
  - Requires that all drinking water systems serving between 3,300 and 10,000 persons monitor for unregulated contaminants (in addition to those serving >10,000).
  - Original SDWA provisions called for monitoring at all systems serving >10,000 and only a representative set of systems serving ≤ 10,000.
  - **Authorizes (but does not *appropriate*) funds** for each fiscal year in which monitoring is required to be carried out. Funds used for small-system sample analysis costs.
  - AWIA provisions apply to UCMR 5 and cycles thereafter.

UCMR 5 Future Opportunities under AWIA

UCMR 5 and beyond:

- More than 7 times the number of small PWSs than in prior UCMR cycles, monitored by EPA utilizing contract labs. ~6000 small PWS vs 800 small PWS
- EPA establishes multiple award laboratory contracts for this support with a guaranteed minimum task order award.
- Labs need to be approved in all methods to cover complete analyte list.
- EPA estimates at least 6, to perhaps 10, contract labs needed for UCMR5.
- **Interested?**
  - Register your lab once UCMR 5 proposal published (anticipated later 2020);
  - Submit complete method applications;
  - Qualify and participate in early rounds of EPA offered PT studies; and
  - Attain status as an “EPA approved” UCMR 5 lab.

DISCLAIMER NOTE: AWIA authorizes (but does not *appropriate*) funds

Drinking Water Alternate Test Procedure (ATP) Program

- ATP program evaluates modified or new testing methods (alternative testing procedures)
  - ATP program does not have authority to approve alternate testing procedures
- Drinking Water methods must undergo sufficient validation to support their use at the national level (multi-lab/multi-DW matrices)
  - Single laboratory approvals are not allowed
  - Regional approvals are not allowed

Drinking Water Alternate Test Procedure (ATP) Program

- Validation study compares performance of modified or new method with performance of approved method
  - Must be able to demonstrate the modified or new method is "equally effective" relative to the approved method
- Method approval can take two paths:
  - Expedited method approval
  - Promulgation through notice-and-comment rulemaking

Expedited Method Approval Process

- SDWA allows addition of "equally effective" methods, relative to method(s) cited in the regulations, through publication of FR notice
- Expedited Method Approval Process established via FRN on June 3, 2008 (73 FR 31616).
  - Since then, over 250 methods approved through this process
- Methods treated the same as those approved through the rulemaking process:
  - Data acceptable for compliance monitoring & reporting, provided state adopts the alternative method.
  - Applicable laboratory certification requirements apply to methods approved through the expedited process

Expedited Method Approval Process (cont.)

- Time required for approval is shortened
  - Notice-and-comment rulemaking takes on average 2-3 years
  - Expedited method approval process can take as little as 6-8 months
- Where are these methods listed in the CFR?
  - Not included in the regulation tables
  - Established Appendix A to Subpart C of Part 141 to list the methods approved through the expedited process

Expedited Method Approval Process (cont.)

- Method approvals include:
  - Methods evaluated through the drinking water ATP program
  - Voluntary Consensus Standard Body methods (Standard Methods and ASTM)
  - New or revised EPA methods
- Frequency of approvals
  - Anticipate publishing FR notices approximately on an annual basis
  - Next action anticipated late 2020 / early 2021

ATP and Expedited Method Approval Resources

- Drinking water ATP web page:
  https://www.epa.gov/dwanalyticalmethods/drinking-water-alternate-test-procedure-program
- Expedited methods approval web page:
  https://www.epa.gov/dwanalyticalmethods/expedited-drinking-water-analytical-method-approval-requirements.

  To find specific methods:
  - Public docket associated with each FR notice (except copyright protected VCSB methods)
  - Drinking water methods web page:
    https://www.epa.gov/dwanalyticalmethods/approved-drinking-water-analytical-methods.

Notice and Comment Rulemaking
Drinking Water Method Update Rule (MUR)

- Future Drinking Water MUR conceptualized
  - Compiled comprehensive list for possible action
  - Plotting out migrating prior Expedited Methods (from Appendix A to Subpart C of Part 141) to referenced regulatory sections
  - Anticipate significant stakeholder engagement

Laboratory Stakeholder Collaboration

- Analytical methods support
  - Multi-laboratory method validation
    - E.g., EPA Method 533 (short chain PFAS) in 2019
  - Benefits:
    - Gain early experience and skills using new EPA methods
    - Acknowledgment of lab in method cover page

- Assist with Development of new/revised methods
  - Recent interest in submitting ATP proposal for new LC/MS/MS methods for compliance parameters (e.g. carbamates).

Questions?