DWQI Testing Subcommittee

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PQL for PFOA

Response to comments

February 16, 2017

Chemistry Council of New Jersey Comments

- **Comment:** "Many of the laboratories' PQLs reported in the materials actually do not meet the 6 ppt proposed PQL utilizing USEPA Method 537, making it unclear that this is truly an achievable or worthy target."
- **Response:** The PQL proposed for PFOA is consistent with NJ statewide occurrence investigations conducted by the Department and other environmental groups. The data used in the PQL calculation is presented in the testing subcommittee recommendation document.
    - Both raw and finished drinking water matrices were investigated in these studies.
    - Literature review of analytical methods for PFOA is consistent with the recommended level.
    - Analytical Methods performance databases contain MDLs that are within the range of 1/5 the PQL recommended in the testing subcommittee document.

Chemistry Council of New Jersey Comments received regarding the PFOA PQL Recommendation (Cont.)

Comment: "The proposed PQL of 6 ppt, which was derived with an ideal matrix in the laboratory setting, does not account for the real-life challenges of obtaining representative samples at ppt levels for PFOA"

Response:

- As indicated in the subcommittee's report, the proposed PQL was derived from the laboratory data using actual samples.
- PFCs are susceptible to background contamination during collection due to the widespread variety of products containing PFCs. With PFOA, there is the additional possibility of background contamination due to its analysis since the instrumentation used contains PTFE (Teflon) tubing and other parts.
- To avoid potential contamination during sample collection, EPA 537 includes specific instructions for the collection of the water samples.
- To determine if contamination occurred in the field, a Field Reagent Blank (FRB) must be collected at each site.

Delaware Riverkeeper Network Comments

- **Comment:** The Delaware Riverkeeper Network comments received stated that laboratories can achieve more sensitivity than was recommended by the testing subcommittee.

- **Response:**
  - The PQL derivation is and always has been an interlaboratory (more than 5 certified laboratories) derived number.
  - Laboratories are contacted by phone from a list of NJDEP/OQA certified laboratories. The performance information collected by the Department is voluntary.
  - The Department collects four (4) types of performance data : Method Detection Limit, Method Reporting Limit, Low Point on the Calibration Curve, MDL Spike level.
  - Analytical capability is determined at the time of request.

Delaware Riverkeeper Network Comments received regarding the PFOA PQL Recommendation (Cont.)

- **Comment:** The method that the Department uses is a non-parametric statistical approach that uses the pooled median MDL values reported by the laboratories and multiplies it by a factor of 5.

- **Response:**
  - This approach was described in the literature and presented to USEPA as the New Jersey approach to calculating a PQL.
  - The factor of 5 was derived by considering the statistical spread of all Department regulated parameters from a DSREH research study that involved the Montgomery Watson Laboratory network and principal investigator Dr. Andy Eaton.
  - In addition, Dr. Michael Miller of NJDEP OQA and Dr. Lee Lippincott calculated PQLs for the remainder of the regulated parameters not investigated in the research study.

Delaware Riverkeeper Network Comments received regarding the PFOA PQL Recommendation (Cont.)

- Another comment referred to the list of MDLs from laboratories in the PQL document where they contend that 8 ng/L and 9.79 ng/L should be removed because they were unusually high.

- The PQL document shows that these two MDLs were “removed” from consideration when performing the Bootstrap analysis.

DWQI Testing Subcommittee- PQL for PFOA

- Due to their hydrophobic and oleophobic properties, the PFCs are found in a wide variety of products. As such, there is the potential for cross-contamination during sample collection.

- PFOA is unique in that in addition to the potential contamination by PFCs during sample collection, there is the additional possibility of PFOA background contamination as a result of its analysis.

- For the successful regulation of PFOA in NJ, it is essential that PFOA is analyzed with reliability and consistency using Method 537.

DWQI Testing Subcommittee- PQL for PFOA

- In order for NJ to regulate PFOA effectively, there must be a sufficient number of laboratories available to analyze PFOA reliably and consistently for NJ public water systems at the frequency determined in the rule (once the MCL for PFOA is approved).
- Public water systems rely on laboratories for analyzing their samples and reporting those results on a timely manner in order to avoid Monitoring and Reporting Violations.

Testing Subcommittee's Recommendation

- While it may be true that certain laboratories can achieve more sensitivity than what was recommended by the Testing Subcommittee, the proposed PQL of 6 ng/L for PFOA meets the Data Quality Objectives of being able to detect PFOA at its proposed Health-Based MCL of 14 ng/L.
- Since the recommended PQL is lower than the recommended Health criteria level, the criteria becomes the enforceable standard and the proposed PQL is adequate to quantitatively assess occurrence reliably and consistently below the Health-Based level.