

Air Force Civil Engineer Center

Integrity - Service - Excellence

Session 5: Perfluorinated Compounds



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PFCs in the news

Are there firefighting foam chemicals in your drinking water?

Dover air base being reviewed for water contamination



State to tackle water pollution in northern New York village

Blood tests planned for those concerned about Pease contamination

Military to sample Lackland for firefighting foam chemicals

Tests ordered after possible drinking water contamination at North Dakota military bases



AF PFC Challenge

- Nearly 190 bases have been evaluated
- Nearly 1700 AFFF release locations identified
 - Fire training areas
 - Hangars
 - Maintenance and testing
 - Emergency response
- Guidance and policy – focused on drinking water
- Method 537
 - What about other media?

The majority of our samples...



Analysis of Perfluoroalkyl Acids

- Only approved USEPA method for the analysis of PFAAs is Method 537 (DW)
- There is no approved method for the analysis of other matrices.
- Laboratories are using in-house “modified 537”
- Lack of standardization or consistency
- Standard analyte list
- Uncertainty regarding use of standards containing linear and branched isomers
- Inconsistent internal standard list
- Impact of matrix on analysis (e.g., co-elutants, ion suppression/enhancement)
- Lack of SRMs or PTs to effectively understand precision and accuracy



Session 5

- **ASTM Standards for the analysis of perfluorinated compounds (PFCs) in multiple matrices by UPLC/MS/MS Analysis**
 - **Lawrence Zintek, USEPA Region 5 Chicago Regional Laboratory**
- **The Analysis of Polyfluorinated Alkyl Substances (PFAS) Including PFOS and PFOA**
 - **Karla Buechler, TestAmerica Laboratories, Inc.**
- **The Analysis of Perfluorinated Compounds - Beyond UCMR3**
 - **Charles Neslund, Eurofins Lancaster Laboratories Environmental, LLC**
- **The Determination of Perfluorinated Alkyl Acids (PFAAs): Practical Answers to Frequently Asked Questions**
 - **Terry Obal, Maxxam Analytics**