Technical Bulletin to Laboratories Reporting PFAS Analysis Using EPA Methods 533, 537, or 537.1

asdwa
Association of State Drinking Water Administrators

The Association of State Drinking Water Administrators (ASDWA) developed this bulletin in partnership with the Association of Public Health Laboratories (APHL) to alert laboratories to inconsistencies when reporting analytical results for per- and polyfluoroalkyl substances (PFAS).

EPA Methods 533, 537, and 537.1 specifically provide a chemical abstract number (CAS) and PFAS names that must be used when reporting analytical results. **Laboratories must ensure that all test reports and electronic data deliverables (EDDs), including those submitted by subcontracted laboratories, are following the EPA Reference Methods naming conventions. Analytical results should report each PFAS form specified in the reference method along with the exact chemical name and CAS number.**

State drinking water programs have identified numerous instances where laboratory test reports and EDDs produced by subcontracted laboratories have used anionic and acid form names incorrectly, and sometimes interchangeably (e.g., perfluorooctane sulfonate (PFOS) and perfluorooctanesulfonic acid (PFOS) are not the same compound and their names cannot be used interchangeably). Adding to the confusion, different PFAS forms can share a common acronym or conversely, the same PFAS are named with different acronyms.

The inconsistent use of PFAS names and associated CAS numbers is problematic for several reasons:

1) PFAS results are being reported in a form that is inconsistent with the requirements of EPA Methods 533, 537, and 537.1;
2) PFAS with different names and CAS numbers are different in terms of physical and chemical properties, so it is important to know which form is being measured and reported;
3) The name of a PFAS often does not match test report CAS numbers and the subcontract laboratory-generated EDDs;
4) PFAS analytical results are being reported using chemical forms that are different than state drinking water standards or guidelines; and
5) The reporting of PFAS using multiple chemical names and CAS numbers create a significant database management challenge. This often results in inaccurate query results because multiple forms of similar PFAS are within the same dataset.

ASDWA recommends laboratories review their procedures and adopt additional quality control measures where necessary to ensure:

1) The correct form of PFAS as specified by EPA Methods 533, 537, and 537.1 are being reported to the data users;
2) Laboratory test reports and EDDs use the chemical names and CAS numbers of PFAS specified by EPA Methods 533, 537, and 537.1 when the data user's data quality objectives explicitly require their use;
3) Subcontracting laboratories only accept subcontracted laboratory final test reports when the proper PFAS forms and chemical names required by the data users are accurate; and
4) As a last resort and when it is not possible to include the data-user requested names, test reports include an additional table or reference to correlate the laboratory-reported PFAS synonyms.