

US EPA ARCHIVE DOCUMENT

Date

Dr. Dallas Wait, Chair
Environmental Laboratory Advisory Board
Gradient
20 University Road
Cambridge, MA 02138

Dear Dr. Wait:

On behalf of the Forum on Environmental Measurements (FEM), I would like to again thank the Environmental Laboratory Advisory Board (ELAB) for your efforts to improve laboratory method harmonization across the US Environmental Protection Agency. We appreciate ELAB's review of 14 test methods that might lend themselves to harmonization.

As noted in our June 30, 2016 letter, the FEM membership shared ELAB's letter with key individuals to further discuss method harmonization across the Agency. They reported that EPA Program Offices have worked to improve harmonization when technologies are similar. However, there are many situations that hamper harmonization including:

- different sample matrices;
- different target compounds;
- different quality assurance and quality control needs; and/or
- updated technologies and method techniques from those available when the methods were developed.

Harmonization is complicated by different data quality needs, organizational processes, and method update schedules of the offices involved. A few specific comments to the test methods reviewed in your letter are attached. EPA will continue to strive for comparable criteria, where appropriate, and I encourage ELAB to provide recommendations for further method harmonization.

Thank you and the other members of ELAB for your assistance to the Agency for improving EPA methods. Please continue to send us your comments and suggestions, as we believe that ELAB serves as an important mechanism for the FEM to keep abreast of important issues facing the monitoring community. If you have any questions, please feel free to contact me at 202-564-5700 or shapiro.mike@epa.gov.

Sincerely,

Michael Shapiro
Chair, FEM

Attachment

Cc: Lara Phelps, OSA
FEM Membership (individual names are available)

ATTACHMENT: Some Specific Comments to Methods by Office**OFFICE OF LAND AND EMERGENCY MANAGEMENT (OLEM) / OFFICE OF RESOURCE CONSERVATION AND RECOVERY (ORCR)**

The two major Update VI organic methods (8260D and 8270E) that are being currently working on, we will strive to harmonize the QC requirements, to the extent possible, with those in similar EPA methods (524.4/624.1 and 525.3/625.1, respectively).

Some specific comments involving the examples ELAB provided in their report:

Attachment 2 - LC/MS/MS Methods (537, 1694 and 6850):

These three methods use the same measurement technology (LC/MS/MS), but many differences exist.

These three methods are used to 1) analyze different analytes in different matrices (i.e., 537 – 14 PFAAs compounds in drinking water; 1694 – 70+ pharmaceuticals and personal care products in water, soil, sediment and biosolids; 6850 – 1 chemical in water, soils and solid wastes; 2) require a different level of sensitivity (ppt vs. ppb); and 3) different identification and confirmation techniques.

Harmonization of the three methods is not recommended.

Attachment 3 - Chlorinated Herbicide GC methods (515.4, 615, and 8151A)

Method 8151A was developed in 1996. The target analyte list for method 8151A does not reflect current herbicide usage. An LC/MS method may be more appropriate to capture a broader class of herbicides including those that are not detectable using GC/ECD. For water samples method 515.4 may be used.

Competing projects make this revision to 8151A a low priority.

Attachment 6* – Metals by ICP Methods (200.7 and 6010C)

Method 200.7 (Rev. 4.4) was published in 1994; the QC requirements listed in Attachment 6 for Method 6010C were from an older 2007 version. An updated version, Method 6010D was published in July 2014.

Attachment 7* – Metals by ICP/MS Methods (200.8 and 6020A)

Method 200.8 (Rev. 5.4) was published in 1994; the QC requirements listed in Attachment 7 for Method 6020A were from an older 2007 version. An updated version, Method 6020B was published in July 2014.

* The Test Methods for Evaluating Solid Waste, Physical/Chemical Methods Compendium (SW-846) is a "living document" that changes over time as new information, analytical technologies, and data are developed and made available. We continually review advances in analytical instrumentation and techniques and periodically incorporate such advances into SW-846 as method updates.

OFFICE OF WATER (OW) / OFFICE OF GROUND WATER AND DRINKING WATER (OGWDW)

Attachment 2 contains 3 methods that use LC/MS/MS technology. However, the methods cannot be harmonized. For example, EPA Method 537 uses direct SPE for extraction, EPA Method 1694 uses

acid/base fractionalization SPE, and Method 6850 is a direct injection. These different methods are justified based on the compounds of interest in each.

Another reference to the comparison of Methods 300.0 and 300.1 were made. However, one would not expect complete harmony from a revision of the same method, vs. the previous. Usually, methods are updated to add more compounds, improve QC, take advantage of new technology, etc. If all aspects of the method were the same, there would be no need to update/revise.

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Many of our methods are contained within 40 CFR Part 136, they cannot be revised without a rulemaking.

Method 1694 is not an approved method for NPDES permits, and was only single laboratory validated. This method receives a lot of questions from the laboratory industry, so EPA developed an FAQ webpage for this method at: <https://www.epa.gov/cwa-methods/method-1694-frequent-questions>.