



Division of Public Health Services

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FAX TRANSMITTAL SHEET

DATE: December 08, 2006

TO: Laboratory Director and QA Manager

FROM: Steven D. Baker, Office Chief
Laboratory Services
State Laboratory Services

Subject: Information Update #93

PAGES: 5 (including cover)

NOTE: If any of the pages are missing, please call 1-800-952-0374, (602) 364-0734 or (602) 364-0733.

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*THIS MESSAGE AVAILABLE IN ALTERNATIVE FORMAT UPON REQUEST, BY CONTACTING:
Prabha Acharya AT (602) 364-0734.*

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Leadership for a Healthy Arizona



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Information Update

December 08, 2006

Update #93

1. The rules for licensing of environmental laboratories were approved by the Governor's Regulatory Review Council on December 5, 2006, and became effective the same day. For updated information on the rules, including a link to an unofficial copy of the rules, please go to:

http://www.azdhs.gov/diro/admin_rules/envlabs.htm

A number of methods that were approved under the old rules, to analyze environmental compliance samples for the State of Arizona, are no longer approved in the revised rules. Those obsolete methods will be removed from the individual lab's list of licensed parameters. These deletions were mainly based on the recently approved Methods Update Rule for the 40 CFR, Parts 122, 136, 141, 143, 430, 455, and 465.

<http://www.epa.gov/waterscience/methods/update2003/index.html>

Please compare your list of licensed parameters against Exhibit I to determine which methods are no longer approved. Laboratory submitted changes received prior to 12/5/2006 will be made as time permits and will be certified as of 12/5/2006. All others will be certified as of the date they are received.

2. The following are the common questions we have recently received from the laboratories based on the rule change:

Q: In the drinking water section of Exhibit 1, only Total Coliforms by Colilert and Colisure are listed, and E. Coli is no longer listed. Will our lab still be certified for Total Coliforms and E. Coli by Colilert (or Colisure)?

A: An error was made in leaving out the E.coli portion for those methods. The Department has done a Director Approval to include E. Coli to those methods, so that labs remain certified for the equivalent method.

Q: In the wastewater section of Exhibit 1, the *Escherichia coli* (NPDES) by Colilert MPN by 9223B, is specified in conjunction with SM 9221B and 9221C.

A.: Since the original ADHS Director Approval did not state, in conjunction with SM 9221B and 9221C, this requirement will be removed from the application form, to eliminate any confusion.

Q: Under Hazardous Waste, 8260B is not being updated to 8260C; are we supposed to use 8000B or 8000C for our QC reference?

A: You would refer to 8000C. Since the analytical methods don't specify the version for the QC method, you would use the most current method approved by ADHS. In our new rules, 8000C is specified.

Q: Under Waste Water Program, why EPA methods are no longer approved for Residue, nonfilterable (TSS), only SM2540D or HACH8158 are allowed?

A: For WW, the EPA residue methods were deleted (except for 160.4) from the EPA's Methods Update Rule (<http://www.epa.gov/waterscience/methods/update2003/index.html>), the reason why we no longer have them listed in our new application form.

Q: Most of the methods referencing Standard Methods will now require the 20th edition, except for metals. Do we have to have a copy of the 20th ed as well as the 19th ed, or can we simply go to the 21st ed, since it is easier to get a copy of that edition?

A: The 21st ed. is not currently promulgated by EPA for either DW or WW, so it was not included in the ADHS revised rules. The lab will have to maintain a copy of the method from the edition of the SM that is referenced in the new rules. The Exhibit 1 of the rules specifies the 19th ed. of SM as Reference C, while the 20th ed. of SM is specified as Reference C2. Please ensure that the applicable QC sections are also maintained from the appropriate edition.

- 3. Since the Office of Lab Licensure is now requesting the electronic data to be mailed to our Office, at least two weeks prior to the audit, several laboratories have asked us to explain in greater detail what we mean. by an “electronic data”; it means all the data taken directly from the instrument, in the software the laboratory uses to generate the data. This would be in the form of method and data files for both Organic and Inorganic methods, i.e., .m and .d files using Enviroquant. The Department has the ability to pull up data from the softwares such as Enviroquant, Peaknet, Target, Turbochrome, Chromeleon and many more.**
- 4. Please see attached a memorandum from USEPA regarding the allowable modifications to Method 625.**
- 5. Please contact Prabha Acharya @ (602) 364-0734 or acharyp@azdhs.gov for any technical or method related questions. The earlier Information Updates can be accessed @ <http://www.azdhs.gov/lab/license/tech/infoup.htm>**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MEMORANDUM

SUBJECT: **Recommended Approved Modifications to EPA Method 625**

OFFICE OF
WATER

FROM: Richard Reding, ^{Chief}
Engineering & Analytical Support Branch, EAD, OST

TO: Quality Assurance Managers
ATP Coordinators
NPDES Coordinators

DATE: November 1, 2006

The 304(h) methods branch recommends allowing several modifications to EPA Method 625 for environmental permitting and compliance monitoring under the EPA's Clean Water Act (CWA) programs. This memorandum does not address laboratory certification requirements that states have mandated.

The text in "Protocol for EPA Approval of Alternate Test Procedures for Organic and Inorganic Analytes in Wastewater and Drinking Water" Section 1.3.2 allows flexibility in the modification of "front end techniques" of the test method provided all criteria in this section and **all QC in the method are met and documented**. This protocol can be downloaded at <http://www.epa.gov/waterscience/methods>.

Recommendations on Method Modifications to EPA Method 625 when Capillary Columns are used:

1. Combining sample extracts before analysis

If the analytes can be reliably identified and quantified in the combined extracts, the extracts may be combined. If, however, the identification and quantitation of any analyte is adversely affected by another analyte, a surrogate, or an interferant, the extracts must be analyzed separately. If there is ambiguity, the extracts must be analyzed separately.

2. Reverse order of pH extraction

The pH extraction sequence may be reversed to better separate acid and neutral components. Neutral components may be extracted with either acid or base components.

Previously, neither of these modifications has been used with Method 625 primarily because of limitations of the resolving power of the packed columns used. In 1985, EPA Region 3 Central Regional Lab requested a modification to method 625 as an alternate test procedure (ATP). Although the approval was for limit use by EPA's Region 3, Central Regional Laboratory only, this modification has come to be used throughout the laboratory community (see attached memo).

Why allow these modifications? Following the base-neutral than acid extraction sequence of method 625 in some cases demonstrated the decomposition of some analytes under basic conditions. Organochlorine pesticides may dechlorinate; phthalate esters may exchange; phenols may react to form tannates. These reactions increase with increasing pH. Reversing the extraction pH sequence may better separate acid and neutral waste components.

Other Recommended Modifications to Method 625

A smaller sample volume may be used to minimize matrix interferences provided matrix interferences are demonstrated and documented.

Alternate surrogate and internal standard concentrations other than those specified in the method are acceptable provided that method performance is not degraded;

An alternate calibration curve and a calibration check other than those specified in the method;

A different solvent for the calibration standards to match the solvent of the final extract.

Other Method Flexibility News

We are revising the "Guidance on Evaluation, Resolution, and Documentation of Analytical Problems Associated with Compliance Monitoring" often referred to as the "Pumpkin Book". Many of the recommendations in the revised "Pumpkin Book" cover ways to mitigate matrix effects.

More explicit flexibility to make changes in approved methods without prior EPA approval is now described at 40 CFR Part 136.6. Such changes are only allowed if the modified method produces equivalent performance for the analyte(s) of interest, and the equivalent performance is documented. It is essential to consult the full text at 40 CFR 136.6 before undertaking method modifications.

Please feel free to forward this information. If you have any questions regarding this memorandum, please contact Lemuel Walker of EASB/EAD/OST by email at walker.lemuel@epa.gov.

cc Lemuel Walker
ATP Coordinator