



*Division of Public Health Services  
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**FAX TRANSMITTAL SHEET**

**DATE:** May 15, 2014

**TO:** Laboratory Director and QA Manager

**FROM:** Steven D. Baker, Office Chief  
Laboratory Licensure and Certification

**Subject:** Information Update #119

**Pages:** 5 (including cover)

**NOTE:** If any of the pages are missing, please call (480) 284-6869 or (602) 364-0720.

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***Prabha Acharya at (480) 284-6869***

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***Health and Wellness for all Arizonans***



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**Information Update  
May 15, 2014**

**Update #119**

**1. ADEQ UST Program's New Testing Requirements:**

ADEQ's UST Corrective Action evaluates leaking underground storage tank sites. All of these 24 compounds listed below are found in petroleum, so it is important that they are included as part of EPA Method 8260B target analyte list for both groundwater and soil.

1, 3-Butadiene\*, Cyclohexane\*, 4-Ethyltoluene\*, Methyl Cyclohexane\*, Propylene (Propene) and Dicyclopentadiene\* were added to the 8260B target list in both water and soil by the director approval process. The above five asterisked compounds will be acceptable to ADEQ reported as TIC. Propylene along with the remaining compounds from the 8260B must follow all the QA/QC requirements of the method. ADEQ is interested in the entire 8260B list which should include these 24 compounds.

1,3-Butadiene	Benzene
n-butyl benzene	Toluene
Sec-butyl benzene	Ethyl benzene
Tert-butyl benzene	Xylenes
Carbon disulfide	1,2-4-Trimethylbenzene
Cumene (Isopropyl benzene)	1,3,5-Trimethylbenzene
Cyclohexane	MTBE (methyl tert butyl ether)
4-ethyltoluene	EDB (1,2-dibromoethane/ ethylene dibromide)
Methyl cyclohexane	1,2-DCA (1,2-dichloroethane)
Naphthalene	Dicyclopentadiene
n-Propylbenzene	n-Hexane
Propylene (Propene)	p-isopropyl toluene

## Laboratory Licensing Requirements:

If your lab is already licensed for 8260B method:

- A. Perform IDOC, MDL and update SOP to include the additional compounds;
- B. Have the above documents available for either the next onsite audit or if our office requests a copy to be sent to us;
- C. Perform proficiency sample if available;
- D. Start reporting the additional compounds.

### **2. PAHs for UST Program:**

PAHs (with a soil remediation level) which are required to be reported for ADEQ UST Program are listed below. They can be analyzed by EPA Method 8310 or 8270C SIM.

Acenaphthene	Anthracene	Benz(a)anthracene
Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene
Chrysene	Dibenz[ah]anthracene	Fluoranthene
Fluorene	Indeno [1,2,3-cd] pyrene	Napthalene
Pyrene		

### **3. Director Approvals:**

- 1-Methyl Naphthalene and 2-Methyl Naphthalene was added to EPA Method 8310 to be included as part of PAHs in both soil and groundwater. To be tested only when these two compounds are requested by the client.
- Six compounds were added to 8260B both in water and soil matrices (see item #1above).
- Diffusion step for Ammonia by EPA 350.1 in wastewater, "Determination of Ammonia Nitrogen by Semi-Automate Colorimetry" Revision 2 .0, August 1 993.

### **4. Method 1664 Subcommittee Report:**

- Smaller sample volumes, less than 1 liter, may be used for the extraction. Full volume samples must be used.
- All samples must be associated with an uncontaminated method blank before the results may be reported for regulatory compliance purposes.
- If the smaller volume blank (at the same volume as the smaller samples) has detection above the ML, the detected value is then corrected to 1 liter; the corrected blank value is then subtracted from the samples. A clean one liter method blank must accompany the batch.
- If referencing 1664A (2.1) one must use Sodium Sulfate filtration, but if referencing 1664B (1.7.1.12), the lab has an option of either using Sodium Sulfate or the solvent phase separation paper.
- It is a requirement of the method and clarified by EPA, that sample weight must be re-verified by placing it back into the desiccator for an additional 30 minutes. 1664B does not require

reheating. Auditors will require documentation of the time in and out of the desiccator to ensure that the minimum of two 30 minute drying steps are being performed (1664B, 11.4.4)

- Per ADHS a final report does not have to include the QC results; ADHS requires that the lab is actually performing the required QC per batch and the data is qualified if QC is out.
- Section 11.2 states how to verify the pH of the sample for separatory funnel extraction set up; but not automated SPE (1664B, Section 1.7.1.7 & 8.1.1). For the Horizon system, the stirring rod, after pH verification, can be rinsed into the extract at the same time the cap is rinsed and before the extract is dried. The pH verification is not to be done in the field on the real samples.
- 1664B, Section 8.5 - refers to analyzing within 28 days of the date & time of collection. EPA confirmed that the hold time for 1664 ends at the end of the 28th day. This is in agreement with ADHS requirement if the hold times are in hours samples have to begin the analysis by the end of the hold time hour, whereas methods that have hold times in days can be analyzed up to the end of the day.

**5. EPA 624 and 625 QC Limits:**

As per instructions from EPA, our Office requires the acceptance criteria in Table 6 of Method 625 to be met for MS/MSD recoveries.

**6. QC limits' Requirements:**

In general, the following protocol applies to all the compliance methods:

- a. For the target analytes of the methods, the method specified limits must be followed; it may be certain percentages, historical data or the Tables with the required limits;
- b. If the additional analytes are added to the method target list through the director approval, since the QC limits are not given in the method for those additional analytes, as per R9-615. C.9, the QC limits can be taken from the Default Limits' Table from the Environmental Licensure Rules or control limits can be developed by setting no more than 3 standard deviations;
- c. If additional analytes are added per client's request, not officially added through the director approval process, the final report has to be qualified for those analytes as not for compliance; the lab has the option of using the default limits, control limits or lab/client limits.

**7. EPA Method 200.8 Clarification:**

The usage of the collision cell in the ICP/MS to reduce interferences in the sample has been approved for wastewater; different vendors market the cell under different names but their functions are similar. The compliance method used for the analysis is 200.8 no matter which brand of the collision is used.



**Corrected Page 5 of 5 of Information Update 119.**

**May 15, 2014**

**Please replace the page 5 from the email sent to you earlier with this page. Thank you.**

**8. HACH Method 10360:**

As per an email communication with EPA, the following modification is allowed-

*It is acceptable for laboratories to use the concentration - 3 mg/L each of glucose and glutamic acid that is specified in SM 5210 B provided at they meet the specified recovery results of  $198 \pm 30$  mg/L.*

9. Please contact Prabha Acharya @ (480) 284-6869/ (602) 364-0720 or [acharyp@azdhs.gov](mailto:acharyp@azdhs.gov) for any technical or method related questions. The earlier Information Updates can be accessed @ <http://www.azdhs.gov/lab/license/resources/updates.htm>