



*Office of Laboratory Licensure,
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Jane Dee Hull, Governor
James R. Allen, MD, MPH, Director

DATE: December 23, 1998
TO: Laboratory Director and QA Manager
FROM: Dr. Barbara J. Erickson, Ph.D., Bureau Chief
SUBJECT: Information Update #53
RE: Extension on the implementation of EPA method 5035 and promulgation of Revision 1.0 of 8015AZ.
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1. C₆-C₃₂ hydrocarbons in Soil - 8015AZ has been revised to be consistent with Arizona Department of Environmental Quality (ADEQ) Rules. C₁₀ - C₃₂ hydrocarbons in Soil - 8015AZ, Revision-1.0, dated 9/25/98, was approved by the Director of the Arizona Department of Health Services on 12/22/98. Our Office has assigned a transition period up to 2/01/99 for the implementation of this revision 1.0 for the compliance testing of C₁₀ - C₃₂ hydrocarbons in soil. The laboratories can start to use this revision 1.0 immediately. Please send in a request to include C₁₀ - C₃₂ Hydrocarbons in soil-8015AZ, Revision 1.0, to your license. If you are already licensed for Revision-0, you do not have to send in additional fee of \$69.00. If you are getting initially licensed for 8015AZ, please see the instructions in the [Information Update #41](#), dated 1/23/98. During this transitional period, our Office will accept both the revision-0 and revision-1.0. This method, titled [8015AZR1, is now available on our web site](#). Some of the major changes from the original Revision-0 are:

1. C₁₀-C₃₂ hydrocarbons are for compliance testing. C₆ - C₃₂ and C₆ - C₁₀ are not for compliance testing.
 2. Holding time for the extraction for C₁₀ - C₃₂ has been extended to 14 days and the analysis must be completed within 14 days of sampling.
 3. Minimum Reporting Limit (MRL) for Oil Range organics (ORO) has been increased from 50 to 100 mg/kg. The MRL for C₁₀ - C₃₂ is now 130 mg/kg.
2. Update on the implementation of EPA method 5035 for the extraction of volatile soil samples:

Postponement of the implementation date:

- a. The implementation date has been postponed by two months to March 1, 1999. The purpose for the postponement is to enable each program within ADEQ which chooses to employ Method 5035 for compliance purposes to adhere to the sampling requirements as outlined by method 5035 and to enable ADEQ to prepare and conduct outreach to explain the implications to its consultants, laboratories and other stakeholders.

EPA 5035 method criteria:

- a. Samples with contaminant concentrations <200 $\mu\text{g}/\text{kg}$ must be preserved using one of the following two procedures:
 - Sodium bisulfate preservative is added in the field and a Closed- System Purge-and-Trap system at the laboratory is used for analysis. This technique provides the low level reporting limits of much lower than 50 $\mu\text{g}/\text{kg}$.
 - The sample can be collected using an EnCore™ Sampler and sodium bisulfate added within a 48-hour period after sampling. The sample will be analyzed using a Closed-System Purge-and-Trap system.
 - There are a total of 14 days from the time of sampling to complete the analysis.
 - One of the above two procedures is followed if low level reporting limits of much lower than 50 $\mu\text{g}/\text{kg}$ are desired.
- b. Samples with contaminant concentrations >200 $\mu\text{g}/\text{kg}$ must be collected using one of the following two procedures:
 - A bulk sample may be collected in a vial or other suitable container (brass sleeves, glass jars/vials, etc.) without the use of a preservative.
 - The sample is preserved with methanol in the laboratory.
 - A sample collected may be field methanolic preserved.
 - There are a total of 14 days for the completion of the analysis as referenced in Chapter 4, Table 4-1, SW-846 Update III.

ADEQ can be more stringent than the method requirements:

- a. ADEQ programs have the authority to shorten the holding times, (thereby making the method more stringent), to commensurate with the project's Data Quality Objectives.

Arizona Laboratory Licensure interpretation of 5035 and the requirements (with EPA consultation):

- a. If the reporting limits desired are <200 $\mu\text{g}/\text{kg}$ (~50-150 $\mu\text{g}/\text{kg}$), methanolic preservation, either in

the field or laboratory, is permissible. The following holding times and the sampling containers criteria must be met. The samples can be field preserved with methanol or sub-cored using EnCore™ Samplers and preserved with methanol within 48 hours. The analysis must be completed within 14 days of sampling.

- b. If the reporting limits desired are 200 or >200 $\mu\text{g}/\text{kg}$, then the sampling containers and the preservation techniques are project-specific. **Please note that this is different from the requirement specified in the [Information Update #52](#).** The samples at a minimum have to be cooled @ 40⁰C immediately upon sampling and the analysis completed within 14 days from the time of sampling.
- c. If a Closed-System Purge-And-Trap System is utilized for very low reporting limits (much lower than 50 $\mu\text{g}/\text{kg}$), the samples must be field preserved with sodium bisulfate or sub-cored using EnCore™ Samplers and bisulfate preserved within 48 hours. The analysis must be completed within 14 days from the time of sampling. Sodium bisulfate preservation should not be done for samples containing individual volatile concentrations >200 $\mu\text{g}/\text{kg}$ due to analytical constraints.
- d. A clarification memo from EPA Office of Solid Waste dated 8/7/1998 on the preservation criteria, does not differentiate between <200 or >200 $\mu\text{g}/\text{kg}$. Our Office is enforcing the current promulgated version of the method 5035. The EPA Office of the Solid Waste is projecting a revision to the existing 5035 method in the spring of next year. Based on EPA's requirements of the revised method, ADHS requirements may change in the near future.

Laboratories Concerns:

- a. The method has different criteria for the sampling containers and holding times which are dependent upon both the concentrations of contaminants present in the samples and the reporting limits desired. The laboratories must be made aware of in advance as to the required technique (field methanolic/sodium bisulfate preservation or laboratory methanolic/sodium bisulfate preservation or EnCore™ sampling) and the required reporting limits (>200 $\mu\text{g}/\text{kg}$; ~ 50 - 150 $\mu\text{g}/\text{kg}$; or much lower than 50 $\mu\text{g}/\text{kg}$).
- b. ADEQ program staff must inform the contracted consultants on the requirements of the site-specific projects so the consultants can in turn instruct the laboratories. Examples of the requirements that laboratories must be made aware of for specific projects include:
 - The extent of contamination in the samples (specifically <200 $\mu\text{g}/\text{kg}$ or >200 $\mu\text{g}/\text{kg}$).
 - The type of containers the laboratories need to provide (EnCore™ vs. vials with preservatives).
 - The type of preservation required (sodium bisulfate vs methanol).
 - Communication to the laboratories of any project-specific holding time requirements.
3. If you have any questions regarding the Updates, or if you have any technical questions that need clarification, please call or send [e-mail](#) to Prabha Acharya, Program Manager, Technical Resources and Training at the Laboratory Licensure. A [table of contents](#) to all the Information Updates published

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