Summary of Changes in DoD QSM Version 4.2

Gray Box 14: Makes clear that both the date and time of preparation and analysis are considered essential information, regardless of sample hold time. Requires that the start and stop times of the batch preparation be recorded.

Gray Box 15: Clarifies training and qualification requirements for personnel performing internal audits and requires that they be documented.

Gray Box 20: Clarifies requirements pertaining to the review of technical and administrative SOPs. Requires that reviews be documented and that documentation be made available to assessors. Moved the "(Guidance)" notation to the front of the sentence and made "Administrative" lower case.

Gray Box 21: Explains that method modifications include a change of technology or quality control acceptance criteria contained in the method or Appendix F of the QSM. Made this a "(Clarification)" instead of "(Guidance)".

Gray Box 23: Explains how laboratories are to determine lists of analytes. Requires laboratories to be accredited for all analytes requested by a project.

Gray Box 24: Modify to make clear the requirements in this box pertain to the demonstration of capability, not to method validation.

Gray Box 29: Clarifies requirements for the documentation of manual integrations, and allows for this documentation to be maintained electronically as long as all other requirements, including signature requirements, are met and the results can be historically reconstructed.

Gray Box 30: Clarifies that commercially available instrument software, including ChemStation, must be validated. Made the sentence starting with "(Guidance)" a new paragraph.

Gray Box 31: Corrects the analytical balance acceptance criteria (should be ± 0.1% or ±0.5 mg, whichever is greater). Allows the use of min/max thermometers for the monitoring of refrigerators and freezers.

Gray Box 36: Moves the second bullet to the end of the box and identified as (Guidance)

Gray Box 37: Clarifies that if a laboratory routinely analyzes two CCVs, both CCVs must be evaluated and if either fails, corrective action and reanalysis of samples is required.

Gray Box 39: Removes the hyphen from "Sample-handling".

Gray Box 43: Allows for practicability to be considered for the timeframe requirements related to both the initial and the continuing PT samples

Gray Box 46: Changes (Requirement) to (Clarification).

Gray Box 47: Corrects the example provided, such that a non-detect would be reported as either <4 or 4U, but not both.

Summary of Changes in DoD QSM Version 4.2 (cont.)

Gray Box C-2: Defines non-standard methods as methods that are not published in Standard Methods for the Examination of Water and Wastewater or by recognized entities such as USEPA, USDOE, ASTM, NIOSH, etc.

Gray Box D-2: Clarifies requirements pertaining to Marginal Exceedances (MEs) of LCS Control Limits. Marginal Exceedances are allowed for the purpose of DoD ELAP accreditation. MEs are not allowed for project-specific target analytes unless specifically allowed by the project. Changed "Avoclor" to "Aroclor".

Gray Box D-3: Explains that a laboratory may use the DoD LCS Control Limits (Appendix G) for the purpose of batch control; however it must also generate in-house limits for the purpose of detecting trends in its processes. Laboratories may use a representative subset of analytes for trend analysis.

Gray Box D-11: Changes (Requirement) to (Guidance).

Gray Box D-13: Revises the spiking criteria used to establish the LOD. For a single analyte standard, the spiking concentration shall be approximately two to three times the detection limit. For a multiple-analyte standard, the spiking concentration shall be greater than one but less than four times the detection limit. Also requires the reporting of the LOD for all methods unless it is not applicable to the test or it is excluded by project-specific requirements. For radiological testing, recognizes the terms and protocols contained in the Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP) with respect to establishing and verifying detection capability.

Gray Box D-14: Clarifies that the calibration range includes the low calibration point. For radiological testing, recognizes the terms and protocols contained in MARLAP with respect to establishing and verifying quantitation capability.

Table F-1: Removes all of the (Modified COE), (COE), (Method), and (Modified QSM) notations out of the "Definition" column.

Page F-9: Changes the second paragraph "F-10" to "F-12".