

Website

Notifications

1

Finding:

The laboratory has implemented inappropriate procedures to prepare matrix spiked samples (laboratory fortified matrices) for analyses of solid and chemical materials for hexavalent chromium using SM 3500-Cr B. Spiked samples are routinely prepared by adding the spike to the liquid extract rather than spiking the solid material prior to extraction.

Root Cause Analysis:

AnalySys Inc, was not spiking the QC samples during the extraction phase rather they spiked the liquid supernate. Soil/solid waste residues are leached in DI water, and the leachate is filtered or centrifuged prior to analysis by the water method. Per AnalySys Inc.'s SOP: When specifically requested, an alkaline digestion procedure may be used as an alternative to the DI water leachate procedure.

Corrective Action:

AnalySys Inc, will revise the soil hexavalent chromium SOP to EPA 3060A (Alkaline digestion for Hexavalent Chromium). Training on the SOP, a new MDL (Method Detection Limits) study, and DOCs (Demonstration of capability), will be required.

Impact:

The Hexavalent Chromium results have not been impacted; although, the batch quality control is not in accordance with EPA 3060A. The Associated QC for Soil Hexavalent Chromium were spiked after the extraction phase, during the supernate phase.

2

Finding:

TNI Ref: VIM2 5.9.3.a.vii Checklist Ref: 718 The laboratory does not evaluate all quality control measures on an on-going basis, and such data are not used to determine the usability of the data. Requirements appearing in section 11.6.1.4 of Method 8270D for the minimum chromatographic resolution of isomeric compounds (specifically benzo(b/k)fluoranthenes) are not included as part of the evaluation of data acceptability. While the laboratory was aware of the requirement, records were not available to document compliance with the requirement. Note: Examination of the current calibration data and subsequent calculation of the resolution for file 0731CCVI.D showed the valley height was above the 50% limit (58% observed).

Root Cause Analysis:

This method requirement was not identified in the SOP because we do not report method 8270D we report 8270C. Benzo(j/k)fluoranthenes and Benzo(b)fluoranthenes are reported individually. SOP S-0067 Semi-Volatiles states, "5) Structural isomers must have a baseline-to-valley-height of less than 25% of the sum of the two peak heights to be reported individually. If they cannot be resolved within these requirements, report as isomeric pairs. [NOTE: The analyst may override the above listed qualitative requirements and specify a peak match if it is determined that a sufficient match exists between the peak in question and tabulated reference data, but that conditions exist such that the deviation from qualitative criteria is reasonable (i.e. "dirty" sample causing retention time shift, the presence of interfering compounds/ions, etc.)]".

Corrective Action:

AnalySys Inc, will revise Logbook to record the isomer resolution percentage for every sample reporting Benzo(b)fluoranthenes and Benzo(j/k)fluoranthenes, as per 8270C. The logbook revision and training will be conducted. If the parameter is reported as a sum and is not meeting client or permit limits, the sample will get logged in for a SIM analysis.

Preventative Action:

The semi-volatiles parameters have been checked to evaluate if there any other isomeric pairs. ASI will go through 2 years of data (04/2015-Current) , if it is determined benzo(j/k)fluoranthenes and

benzo(b)fluoranthenes are not meeting the method requirement of <25%, sum of the two peak heights and we cannot identify the peak using reference data (Qualifying Ions), ASI will report benzo(b/j/k)fluoranthenes as a sum.

Impact:

The benzo(b)fluoranthenes and benzo(j/k)fluoranthenes results have not been impacted; all sample results reported are less than the reporting limit or have been verified through reference data (Qualifying Ions).

3

Finding:

TNI Ref: VIM2 5.10.11.c Checklist Ref: 796 Laboratory reports which include results for Silica Gel Treated n-Hexane Extractable Material (SGT-HEM) by EPA Method 1664A do not indicate these results as analytes for which the laboratory is not accredited. The laboratory has, and uses, a procedure to identify unaccredited analytes when reported, but has not applied the procedure to reports with these analytes.

Root Cause Analysis:

SGT-HEM was not data-qualified as not being certified by TCEQ using a "N" data qualifier.

Corrective Action:

AnalySys Inc, has completed and passed two PT studies for SGT-HEM. The certification package was submitted to TCEQ and has been approved. The Quality manager changed the data qualifier in the LIMS to show the parameter was not certified pending certification and will reissue, by request, reports that do not have the data qualifier on the report for Petroleum Hydrocarbons/1664(time frame April 2015-May 2018. ASI was certified for SGT-HEM August 3rd, 2018.

Preventative Action:

The Quality Manager will go through TCEQ approved Fields of accreditations (FOA) parameters and confirm that the data qualifiers for every parameter are correct. If more parameters are found not being correctly data qualified, corrective and preventative actions will be initiated. Clients will be notified, if found, and ASI will submit to TCEQ additional FOAs to be accredited.

Impact:

The Petroleum Hydrocarbons/1664 results did not contain a "N" data qualifier, indicating that AnalySys, Inc. was not certified for this parameter.

4

Finding:

Test results are not reported with appropriate the units of measurement. For example, B. Tests reports for pH in soils and solids matrices include only the pH results. Section 7.3.5 of EPA Method 9045D requires the results be reported as "soil pH measured in water at °C" where "°C" is the temperature at which the test was conducted.

Root Cause Analysis:

pH soil template will be revised to report soil pH measured in water at (temp)°C or waste pH measured in water at (temp)°C. Sample results already reflected the temperature.

Corrective Action:

pH soil template will be revised to report soil pH measured in water at (temp)°C and waste pH measured in water at (temp)°C. Training will be given on the changes.

Preventative Action:

The Internal Audit Checklist F-0082 will be revised to include a check for method reporting language requirements. If found to have a finding, the SOP and/or Calculation template will be revised as necessary and training will be given on the revisions.

Impact:

The pH results have not been impacted; although, the reporting format is not in occurrence with EPA method 9045D, if requested, AnalySys Inc will revise and re-issue reports