Summary of Changes: SOM02.1 to SOM02.2

The following Summary of Changes highlights the major modifications implemented in SOW SOM02.2 compared to SOW SOM02.1.

This is a high-level summary and is not intended to be a complete or comprehensive listing of every modification. Interested parties are strongly encouraged to read the complete SOW and familiarize themselves with all of the requirements.

SOM02.2

Global

The title, roles, and responsibilities of the EPA staff have been updated as follows, throughout the document, wherever applicable:

- EPA Analytical Services Branch Program Manager (ASB PM) has been replaced with EPA Analytical Services Branch Contract Laboratory Program Contracting Officer Representative (ASB CLP COR).
- EPA Contract Laboratory Program Project Officer (CLP PO) has been replaced with EPA Regional Laboratory Contracting Officer Representative (COR).

Exhibit A

- **Section 2.0** – The language has been updated to reflect the addition of 4-Chloroaniline to the Semivolatiles target analyte list.
- **Sections 5.4.4.3 and 5.4.4.4** – The requirements for thermometer accuracy have been updated.
- Requirements for sample pH measurements are specified in new **Sections 5.4.5**, **5.4.5.1**, and **5.4.5.2.**
- **Section 5.5.3.1** – Guidance in selecting QC samples, when none is designated on the Traffic Report/Chain of Custody (TR/COC) Record, has been provided.

Exhibit B

- **Section 1.1/Table 1/Item I** – The statement "Revise within 60 days after contract award" under the Delivery Schedule of the Quality Assurance Project Plan (QAPP) has been replaced with "Submit within 60 days after contract award".
- **Section 1.1/Table 1/Item J** – The Instrument Electronic Data is now to be submitted to the Sample Management Office (SMO) and the EPA Regions "as directed".
- **Section 2.1.1** – The type of deliverable has been specified as a Staged Electronic Data Deliverable (SEDD).
- **Section 2.2.1** – The Contractor's response time to a submission request from an EPA Region has been changed from 6 to 5 business days.
- **Section 2.4.5.3** – The requirements for the submission of example calculations in the SDG Narrative have been clarified.
- **Sections 2.4.8.2.2, 2.4.9.2.2, and 2.4.10.2.2** – Units of "mg/L" have been specified for TCLP leachate samples.

- **Section 2.6.2.1.2/Table 3** – The Child Bookmark associated with "Sample Data" for all five methods has been updated to "Organic Analysis Data Sheet in increasing alphanumeric EPA Sample Number order".
- **Section 3.2.3** – The rounding rules requirements have been updated and the examples revised.
- **Section 3.3.18** – "Instrument ID" has been defined.
- **Section 3.3.24** – "mg/L" has been added to the list of concentration units.
- Instructions for reporting the Deuterated Monitoring Compound (DMC) names and respective QC limits below the tables on Forms 2A-OR and 2B-OR, and for reporting the surrogate names and respective QC limits below the table on Form 2C-OR, are provided in new **Section 3.4.3.2.7**.
- Instructions are provided for reporting the Trace and Low/Medium Volatile target analytes in the "ANALYTE" column on Form 6A-OR, in new **Section 3.4.8.2.7.1**.
- Instructions are provided for reporting the Semivolatile target analytes in the "ANALYTE" column on Form 6A-OR, in new **Section 3.4.8.2.7.2**.
- **Section 3.4.9.2.4** – The Exhibit D reference has been clarified.
- **Section 3.4.10.2.4** – The Exhibit D reference has been clarified.
- **Section 3.4.11.2.3** – Instructions have been added for reporting Toxaphene and the Aroclor target analytes in the "ANALYTE" column on Form 6F-OR.
- Instructions are provided for reporting the Trace and Low/Medium Volatile target analytes in the "ANALYTE" column on Form 7A-OR, in new **Section 3.4.13.2.7.1**.
- Instructions are provided for reporting the Semivolatile target analytes in the "ANALYTE" column on Form 7A-OR, in new **Section 3.4.13.2.7.2**.
- **Section 3.4.15.2.5** – Instructions have been added for reporting the Pesticide and Aroclor target analytes and surrogates in the "ANALYTE" column on Form 7C-OR.
- **Section 3.4.16.2.5** – Instructions have been added for reporting the Pesticide and Aroclor target analytes in the "ANALYTE" column on Form 7D-OR.
- **Section 3.4.17.2.4** – Instructions have been provided for completing the "IS AREA" header field of the table on Form 8A-OR.
- Instructions are provided for reporting the internal standard names, Area, and Retention Times (RT) upper and lower limits below the table on Form 8A-OR, in new **Section 3.4.17.2.9**.
- **Section 3.6.2.1** – The instructions for recording page numbers on Form DC-2 have been clarified.

Exhibit B – Forms

- **Cover Page** – "Data package" has been replaced with "Complete SDG File" in the statement at the bottom of the page.
- **Forms 1A-OR, 3A-OR, and 3B-OR** – "mg/L" has been added to the list of Concentration Units.
- **Forms 2A-OR and 2B-OR** – The tables have been updated to allow for the reporting of 17 DMCs to account for the addition of 4-Chloraniline-d_4 to the list of Semivolatiles DMCs.

- **Form 5-OR** – An "EPA SAMPLE NO." box has been added in the upper right-hand corner of the form.
- **Form 10A-OR** – "Concentration Units (µg/L, mg/L, µg/kg): _____" has been added to the form header fields.
- **Form 10 B-OR** – "Concentration Units (µg/L, mg/L, µg/kg): _____" has been added to the form header fields.

Exhibit C

- **Table 3** – 4-Chloroaniline has been added to the Semivolatiles target analyte list with CRQLs of 10 µg/L (Low Water), 330 µg/kg (Low Soil), and 10000 µg/kg (Medium Soil).
- **Endnote C** – The statement has been updated to "Toxicity Characteristic Leaching Procedure (TCLP) analyte list. The CRQLs for the TCLP analytes are the "Low Water" CRQLs (Low/Medium Volatiles and Semivolatiles) and the "Water" CRQLs (Pesticides) divided by 1000 in units of mg/L."

Exhibit D – General

- **Section 6.2.6** – Balance requirements have been specified.
- **Section 8.2** – Instructions for ZHE samples have been added.
- **Section 8.2.2** – The leachate sample storage requirements have been clarified.
- **Section 10.2.1.3** – The procedure for determining if particle size reduction is required has been clarified.

Exhibit D – LOW/MEDIUM VOA

- **Section 11.2.2.2** – Equation 6 title has been updated to "Water and TCLP/SPLP Leachate Sample Concentration, and "NOTE: Convert units to mg/L for TCLP leachates by dividing the final calculated concentration by 1000." has been added at the end of the section.
- **Section 11.2.4.1** – Equation 9 title has been updated to "Water and TCLP/SPLP Leachate Sample Adjusted CRQL", and "NOTE: Convert units to mg/L for TCLP leachates by dividing the final calculated CRQL by 1000." has been added at the end of the section.

Exhibit D – SVOA

- **Section 1.3** – 4-Chloroaniline has been added as one of the analytes that can be subject to oxidative losses during solvent concentration.
- **Section 6.1.10** – A requirement to replace the pH reference standards when their expiration dates have passed has been added.
- **Section 7.2.2.1.2** – Target analyte 4-Chloroaniline and DMCs Phenol-d_5, Bis(2-chloroethyl) ether-d_8, 4-Chloroaniline-d_4, 2,4-Dinitrophenol-d_3, and 4,6-Dinitro-2-methylphenol-d_2 have been added to the list of less sensitive analytes.
- **Section 7.2.2.4.1** – The spiking concentration for 1,4-Dioxane-d8 has been lowered from 80 µg/mL to 16 µg/mL, and 4-Chloroaniline-d_4 has been added with a concentration of 80 µg/mL.
- Requirements are specified for the chromatographic resolution capability of the GC system, in new **Section 9.2.4.3**.

- **Section 9.4.5.3** – 4-Chloroaniline has been included in the list of target analytes that are exempt from the closing CCV %D requirement.
- **Section 11.2.1.7** – Equation 6 title has been updated to "Water and TCLP/SPLP Leachate Sample Concentration", and "NOTE: Convert units to mg/L for TCLP leachates by dividing the final calculated concentration by 1000." has been added at the end of the section.
- **Section 11.2.3.1** – Equation 8 title has been updated to "Water and TCLP/SPLP Leachate Sample Adjusted CRQL", and "NOTE: Convert units to mg/L for TCLP leachates by dividing the final calculated CRQL by 1000." has been added at the end of the section.
- **Section 11.3.4** – The language has been updated to specify that the %R for 4-Chloroaniline-d_4 in the samples is advisory only.
- **Section 12.1.2.5.2** – The language has been updated to specify that the %R for 4-Chloroaniline-d_4 in the method blanks is advisory only.
- **Section 17/Table 1** – 4-Chloroaniline and 4-Chloroaniline-d_4, and respective Systematic Name, EPA Registry Name, Synonym, and CAS #, have been added to the table.
- **Section 17/Table 3** – 4-Chloroaniline-d_4 and associated target analytes have been added to the table.
- **Section 17/Table 5** – 4-Chloroaniline and 4-Chloroaniline-d_4, and respective Opening Minimum RRF, Closing Minimum RRF, Maximum %RSD, Opening Maximum %D, and Closing Maximum %D, have been added to the table.
- **Section 17/Table 8** – 4-Chloroaniline and 4-Chloroaniline-d_4, and respective Primary Quantitation Ion and Secondary Ion(s), have included in the table. In addition, the Secondary Ion(s) for 1,4-Dioxane-d_8 have been changed from 51 and 66 to 64 and 34.
- **Section 17/Table 9** – 4-Chloroaniline and 4-Chloroaniline-d_4 have been added to the list of target analytes and DMCs, respectively, associated with internal standard Naphthalene-d_8.
- **Section 17/Table 11** – 4-Chloroaniline-d_4 has been added to the table, with an advisory Percent Recovery for Water Samples of 1-146 and an advisory Percent Recovery for Soil Samples of 1-145.

Exhibit D – PEST

- **Section 6.1.10** – A requirement to replace the pH reference standards when their expiration dates have passed has been added.
- **Section 9.3.4.4** – Requirements for calculating the $\overline{RTS}$ for surrogates have been provided.
- **Section 9.3.4.6** – The Calibration Factor "CF" term associated with Equation 4 has been updated to "CF_i".
- **Section 11.2.2.2** – Equation 14 title has been updated to "Water and TCLP/SPLP Leachate Sample Concentration", and "NOTE: Convert units to mg/L for TCLP leachates by dividing the final calculated concentration by 1000." has been added at the end of the section
- **Section 11.2.4.1** – Equation 18 title has been updated to "Water and TCLP/SPLP Leachate Sample Adjusted CRQL", and "NOTE: Convert units to mg/L for TCLP leachates by dividing the final calculated CRQL by 1000." has been added at the end of the section.

- **Section 17** – **Table 7** has been updated as follows:
    1) trans-Chlordane, Heptachlor epoxide, 4,4'-DDE, and Endosulfan sulfate have been added with LCS spiking solution concentrations of 0.050 µg/mL, 0.050 µg/mL, 0.10 µg/mL and 0.10 µg/mL, respectively.
    2) The LCS spiking solution concentrations for Heptachlor, Aldrin, and 4,4'-DDT have been removed.
    3) The LCS spiking solution concentrations for gamma-BHC (Lindane), Dieldrin, and Endrin have been lowered from 0.50 µg/mL, 1.0 µg/mL and 1.0 µg/mL to 0.050 µg/mL, 0.10 µg/mL and 0.10 µg/mL, respectively.

Exhibit D – ARO

- **Section 6.1.10** – A requirement to replace the pH reference standards when their expiration dates have passed has been added.
- **Section 9.3.4.3** – Requirements for calculating the $\overline{RTs}$ for surrogates have been provided.

Exhibit F

- **Section 9.2** – The Contractor's response time to a submission request from an EPA Region has been changed from 6 to 5 business days.

Exhibit G

- The definition of "K-D - Kuderna-Danish concentrator" has been provided.
- The definition of "Selected Ion Monitoring (SIM)" has been provided.

Exhibit H

- **Section 3.1.2** – Leachate Extraction Blank (LEB) has been added to the list of samples that require a SamplePlusMethod node.
- **Section 3.1.6** – The instructions for reporting the AnalysisGroup node have been clarified.
- **Section 3.1.7** – The instructions for reporting the Analysis node have been clarified.
- **Section 5.5** – The file format for the electronic deliverable has been updated from "Case number_SDG number_contract number_submission number_DTD used_Fraction" to "Case number_SDG number_contract number_submission number_DTD used_Method".
- **Section 7.0** – "Leachate Extraction Blank (LEB)" has been added to the list of samples.
- **Tables 1 and 4** – '"HandlingBatch" for LEB' has been added to the Instructions for the QCLinkage data element under the SamplePlusMethod node.
- **Tables 1, 2, 3, 4, 5, and 6** – "LEB" has been added to the list of samples in the Applicability field in the header row.
- **Tables 1, 2, 3, 4, 5, and 6** – The Instructions for the QCCategory data element under the SamplePlusMethod node have been updated to also report "Blank" for the LEB.
- **Tables 1, 2, 3, 4, 5, and 6** – The Instructions for the QCType data element under the SamplePlusMethod node have been updated to also report "Method_Blank" for the LEB.

- **Tables 1, 2, 3, 4, 5, and 6** – '"mg/L" for TCLP' has been added to the list of Instructions for all instances of the DetectionLimitUnits, ClientQuantitationLimitUnits, ExpectedResultUnits, QuantitationLimitUnits, ResultUnits data elements.
- **Tables 1, 2, 3, 4, 5, and 6** – The ClientMethodID and MethodID data elements value has been updated to "SOM02.2", where applicable.
- **Tables 4, 5, and 6** – The ExpectedResult, ExpectedResultUnits, PercentRecovery, PercentRecoveryLimitHigh, PercentRecoveryLimitLow, PercentRecoveryLimitType, RPD, RPDLimitHigh, and RPDLimitType data elements are no longer required under the ReportedResult node for the Gas Chromatography (GC) Matrix Spike (MS), Matrix Spike Duplicate (MSD), and Laboratory Control Sample (LCS) analyses.
- **Appendix A/Table A-1** – The reporting instructions for the "MDLAcceptable" and "Replicate ##" columns have been updated.