Questions Regarding UST QAPP Rev. 1 January 2011 received during comment period ending March 31, 2011

1. Page 3 of 194 - Since the data generated needs to be in compliance with the environmental laboratory certification group, why is there no representative listed on the signatory page?
   ANSWER – The Laboratory Certification Regulations (R.61-81) are referenced in the UST QAPP; however, the requirements of R.61-81 are separate from the UST QAPP, therefore, no representation is required.

2. Page 22 of 194 – Ethyl tert-butyl alcohol is listed as a target analyte for gas, diesel, and kerosene testing. ETBA has been pulled from the target list of Oxygenates and replaced with 3,3-Dimethyl-1-butanol presented on pages 53 and 67. Shouldn't the reference on page 22 to Ethyl tert-butyl alcohol be updated to 3,3-Dimethyl-1-butanol?
   ANSWER - Ethyl tert-butyl alcohol (ETBA) is the common term for 3,3-Dimethyl-1-butanol. For the purpose of accuracy, references in the UST QAPP to ethyl tert-butyl alcohol or ETBA will be revised to 3,3-Dimethyl-1-butanol.

3. Page 62 of 194 – There is a reference to the analysis of using EPA method 8015B (DRO). The current method is EPA method 8015C. EPA method 8015C is also listed in the Tables in Appendix E. The reference should be changed to EPA 8015C.
   ANSWER - For the purpose of accuracy, references in the UST QAPP to EPA Method 8015B will be revised to Method 8015C.

4. Page 141 of 194 – The Matrix Spike Samples % Recovery and Relative Percent Difference (RPD) values present in Appendix E are fixed values. Unless Matrix Spike ranges are specified in the referent analytical method, laboratories use historical ranges per SCDHEC certification requirements to evaluate Matrix Spike Recoveries and RPDs. Shouldn't laboratories treat matrix spike recoveries and RPDs the way they are typically treated?
   ANSWER - Yes, unless Matrix Spike ranges are specified in the referenced analytical method, laboratories should use calculated ranges according to the method to evaluate Matrix Spike Recoveries and RPDs.

5. Page 141 of 194 – The Reporting Limit for EDB is 0.005 ug/L. The EPA method 8011 states in section 1.3 that "This method has been shown to be useful for these analytes (EDB/DBCP) over a concentration range of approximately 0.03 to 200 ug/L." Further, the Method Detection Limit (MDL) is listed in the method as 0.01 ug/L. Why is the reporting limit below the method MDL?
   ANSWER – Table E1 will be revised as follows: For Benzene, Toluene, Ethylbenzene, Total Xylenes, and 1,2-Dichloroethane, the reporting limit for drinking water and receptors has been changed to 0.5 µg/L. For Naphthalene, the reporting limit for drinking water and receptors will be

changed to 2 µg/L. For EDB, the reporting limit for groundwater will be changed to 0.05 µg/L, the reporting limit for drinking water and receptors will be changed to 0.02 µg/L, and the matrix spike percent recovery will be changed to 60-140%.

6. Page 142 of 194 – TPH (Oil and Grease) EPA method 9070A. SW846 references EPA method 1664A: N-Hexane Extractable Material (HEM: Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT-HEM; Non-polar Material) by extraction and Gravimetry. Both the TPH and Oil and Grease analysis in an aqueous matrix may be performed by EPA method 1664A. For the sake of clarity, the referenced method should be EPA 1664A.
   ANSWER – 9070A is the method listed in the Federal Register. This reference will remain the same.

7. Pages 143 and 145 of 194 – The "Reporting Limit" title is starred and the footnote states "*…Only linear regression models may be used for calibration curves.". It appears by this statement that linear regression is required for all analytes. Is this correct? (Typically, other calibration models referred to in the methods, such as average response factor, are used before linear regression is considered.)
   ANSWER – To allow laboratories reasonable flexibility, the footnote on both tables will be revised to read: "The use of non-linear calibration models is not acceptable."

8. Page 144 or 194 – **Part 1**: The analyte "TPH (Oil and Grease)" is listed in the Table E2 for EPA method 9071B. Method 9071B is for n-Hexane Extractable Material (HEM) for Sludge, Sediment, and Solid Samples. The method only addresses the HEM or (Oil & Grease) fraction, not the SGT-HEM or TPH fraction as EPA method 1664A does. SCDHEC Laboratory Certification group does not certify for TPH by EPA method 9071B. Is the analyte listed supposed to be just "Oil & Grease" and not "TPH"?
   ANSWER – In Table E2, the analyte for Analytical Method 9071B will be revised to read: "Oil & Grease."

   Part 2: If laboratories are supposed to perform TPH in soil analysis by EPA 9071B or some similar method, the PQL presented in the Table E2 seems very low. It is listed as10 mg/Kg. Is this in error? Note that SC does not offer this certification.
   ANSWER - After consulting with the USEPA, the PQL for Method 9071B will be changed to 20 mg/kg.

9. Appendix E, Table E2 – All soil Reporting Limits appear to be presented as "wet weight" since there is no mention of dry weight in the tables. Dry weight results are required for this program, page 105. Reporting Limits will increase based upon the moisture content of the sample when results are adjusted for dry weight corrections. Are the values in the table meant to be dry weight reporting limits?

ANSWER – Table E2 has been modified. Benzene, Toluene, Ethylbenzene, Xylenes, Naphthalene, MtBE, TPH(GRO), and Oil and Grease are to be reported as wet weight.

10. Page 147 of 194 - The preservation for EDB by EPA method 8011 is listed as Cool to 6 degrees C and adjust pH to less than 2 with HCl. I have provided you with email correspondence between the MICE Service (Methods Information Communication Exchange Service for SW846 questions) and Susan E. Butts of SCDHEC Environmental Laboratory Certification group that was forwaded to us addressing the preservation for EDB by EPA method 8011. Our question was that is preservation by HCl a requirement and is unpreserved with a holding time of 14 days acceptable?
    ANSWER – All historical data in the UST program has been derived from preserved samples. To maintain consistency in the data for this analyte, the preservation requirement will remain. Furthermore, if vials for EDB analysis are preserved, they can be utilized for other parameters requiring preservation in the event that additional sample material is needed.