JULY 25, 2014

The Committee held a conference call on Friday, July 25, 2014, at 2:00 pm EDT. Chair Richard Burrows led the meeting.

1 – Roll call

Richard Burrows, Test America (Lab)	Present
Francoise Chauvin, NYC DEP (Lab)	Present
Brooke Connor, USGS (Other)	Absent
Dan Dickinson, NYSDOH (Accreditation Body)	Present
Mandi Edwards, Envirochem (Lab)	Present
Tim Fitzpatrick, Florida DEP (Lab)	Present
JD Gentry, ESC (Lab)	Present
Nancy Grams, Advanced Earth Technologists, Inc. (Other)	Absent
Anand Mudambi, USEPA (Other)	Present
John Phillips, Ford Motor Co., (Other)	Present
Scott Siders, IL DEP (AB)	Absent
Gary Ward, OR DPH (AB)	Present
Ken Jackson, Program Administrator	Present

Associate Committee members present: Arthur Denny; Diana Shannon.

2 – Previous Minutes

It was moved by Francoise and seconded by Tim to approve the minutes of July 11, 2014. All were in favor except Anand who abstained.

3 – Quantitation Limit Data

John described his analysis of data provided by Arthur. The data were used to study various quantitation limit concepts.

He first described the metals (Method 6010) data, where he had constructed a spreadsheet listing all the parameters needed for calculating the various proposed quantitation criteria. Individual analyses of various spike concentrations were studied (John said he hoped to have summary data available for the meeting in Washington DC). In the spreadsheet he entered "fail" if the criterion had failed the particular quantitation check. Nancy's proposed criteria (99% LCI, 99% UCI, 95% LCI, 95% UCI, 90% LCI and 90% UCI) all showed very few failures. It was noted, however, she would have more failures if the limits were set tighter. Most failures were seen with John's criteria (<30% RSD >50% Recovery and <130% Recovery; and <16% RSD >50% Recovery and <130% Recovery) and Dan's criterion (<30%

RSD). He noted the failure was usually associated with the RSD. (Antimony spiked at 20 ppb had an RSD of 37% and at 2.5 ppb had an RSD of 522%). Richard pointed out the importance of the 2 x MDL_b criterion where a few failures were noted.

John next discussed the organics (BNA) data. Each laboratory had a separate worksheet. For a given laboratory it was assumed all analytes had the same preparative method, but it was not known if the preparative method changed between laboratories. Not unexpectedly there were now failures for recovery (in some cases high recovery). One analyte (1,4-dichlorobenzene) failed due to poor recovery even though the RSD was satisfactory. In several instances a calculation was not possible because there was at least one non-detect in the data. John noted that some poor-performing analytes were not consistent poor-performers from laboratory to laboratory, and Tim commented it could be due to different preparative methods between laboratories.

John described the quantitation limit graphics he had used for setting his own criteria. This justified about 30% RSD as the cut-off for quantifiable values (less for fewer replicates). He recommended changing the cut-off criteria for Nancy's approach and running the data again. Richard said he would like to be able to point to a statistical justification for RSD limits, but these theories assume a constant variance between L_c and the quantitation limit, and assume on average 100% recovery. This would mean using a justification for the quantitation limit that the committee had already said was not viable for the MDL. Richard also stressed it must be kept as simple as possible. He said he would prefer to have a constant RSD and have the procedure specify a minimum number of replicates. Richard also cautioned against making criteria too tight resulting in too many non-quantitative analytes. John stressed that some recovery bounds would have to be established. Richard asked the committee to consider criteria ready for discussion at the Washington DC meeting, bearing in mind the goal of having some criteria that provide a reasonable definition of quantitative along with the risk of going too far in that direction and causing a lot of data to become non-quantitative.

Richard was working on a draft standard, and said he would circulate it before the Washington DC meeting.

4 – Planning for Washington DC Meeting

Richard suggested discussing comments on the Calibration Interim Standard during the first half-day session (Monday), and possibly a discussion of the quantitation limit concepts. The second half day (Tuesday) could then be used for discussing the quantitation limit procedure.

5 – Adjournment

The meeting was adjourned at 3:30 pm EDT.