SUMMARY OF THE
TNI CHEMISTRY EXPERT COMMITTEE MEETING

SEPTEMBER 5, 2014

The Committee held a conference call on Friday, September 5, 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 (Other)	Absent
Dan Dickinson, NYSDOH (Accreditation Body)	Absent
Mandi Edwards, Envirochem (Lab)	Absent
Tim Fitzpatrick, Florida DEP (Lab)	Present
JD Gentry, ESC (Lab)	Present
Nancy Grams, Advanced Earth Technologists, Inc. (Other)	Present
Anand Mudambi, USEPA (Other)	Present
John Phillips, Ford Motor Co., (Other)	Present
Scott Siders, IL DEP (AB)	Absent
Gary Ward, OR DPH (AB)	Absent
Ken Jackson, Program Administrator	Absent

Associate Committee members present: Lynn Boysen; Arthur Denny; Reed Jeffrey; Charles Lytle; Diana Shannon; Gale Warren; Colin Wright

2 – Previous Minutes

It was moved by Anand and seconded by Tim to approve the minutes of August 4 and 5, 2014. All were in favor. It was moved by John and seconded by Anand to approve the minutes of August 22, 2014. All were in favor.

3 – Quantitation Limit Data

The latest update of John's spreadsheets on the analysis of Arthur's Texas data was discussed. John presented pooled data from all laboratories for Method 8270. For each analyte the table showed the lowest concentration for a valid MDL, and the lowest quantifiable level for IDE and IQE-30. He explained the test should be quantifiable somewhere around where the IQE-30 falls (though he acknowledged IQE-10 or IQE-20 might be a better number than IQE-30). For this method about 10% of analytes at 25 ppb failed the 30%RSD criterion. For some of the poor-performing analytes with high RSDs (e.g., >60%) it was difficult to say it was quantifiable even at the LCS level (4-aminobiphenyl was not quantifiable at any concentration up to at least 80 ppb). John noted with the simpler criterion of 3 x

MDL, most analytes were quantifiable. Nancy added that 3 x MDL was a good indicator that most of the other criteria would have been in control. Richard suggested, if the committee is happy with a combination of 3 x MDL plus measuring and reporting the precision and accuracy obtained, so the data user would be able to make use of that information, this would be something straightforward enough that it should be relatively easy to get accepted as a standard. A discussion followed on the need to collect and analyze more data, since only two methods had been examined so far. Tim wanted to look at some cases where long-term method blank data were used to generate MDL_b or to revise an MDL because of background contamination. The draft MDL procedure requires periodic evaluation of blanks and, where background is observed, re-setting the MDL to the highest 99^{th} percentile if the contamination was greater than the existing MDL. His point was that, in doing so, quantitation might be easily achievable at or even below the revised MDL (i.e., that contamination is readily measurable and quantifiable). Richard added you would need assurance if you have a true concentration at your quantitation limit you are going to get a result that is above the distribution you are getting from the contamination in your blanks. Otherwise it would not be quantifiable. John questioned if money would be available to give several data sets to a statistician to run them against 3 x MDL and other criteria. He wanted to be able to show 3 x MDL works at least 90% of the time and meets the recovery and RSD criteria for most methods and analytes. He added more data from the TX study have yet to be analyzed (e.g., method 6020). Richard suggested looking at some current MDL data that are relatively available for several different laboratories. Nancy asked if the spreadsheet could be simplified to allow anyone who had data to put them in, and John said he could perhaps make a template to process the data automatically. Rich said he would ask Brooke if she could get any USGS data. Richard, JD and Tim said they would look for data, with Tim saying he could provide data for inorganics. Richard added, if this is to become part of the 2015 standard, a Working Draft Standard will be needed by the end of November, leaving not much time for more data.

Richard described a flow chart he had circulated to the committee, showing what it would like for a laboratory following this procedure and generating both LODs and LOQs. The flow chart showed the initial procedure for running spikes and getting MDL_s, running method blanks and getting MDL_b, and setting the higher of the two as the MDL, and then evaluating whether the spiking level is more than 3x the calculated MDL. If so, the LOQ is set at the spiking level, and if not the LOQ is set at 3 x MDL. The laboratory would then go on to the quarterly verification samples and analyze at least 1 spike on each instrument, would evaluate if the results met the qualitative identification, and repeat if not (or repeat the initial procedure at a higher concentration) . If the results met the qualitative identification, then no further action would be needed for this quarterly verification. For the annual re-calculation the laboratory would collect the spiked and blank data, recalculate MDL_s and MDL_b, and check if the greater of those two was within 3x the established MDL. If yes, the laboratory could leave the MDL where it was or change it to whichever is the greater of those two. If no, the laboratory would change the MDL and that would mean the LOQ may have to be changed to be at least 3 x MDL. Anand added it is important to convey that laboratories will already have a lot of the data. Richard agreed, saying most laboratories start doing their MDLs early in the year and they need to be told they should spread them over at least 3 different batches so their data set will be good for the new procedure. Tim wondered if EPA might include the flow chart with the MDL procedure (perhaps in the preamble).

Richard wanted the committee to vote whether to go ahead with 3 x MDL plus measurement of precision and accuracy. He suggested an e-mail vote, to get the whole committee to vote, and he said he would draft a motion and distribute it. He would then be looking for a mover and seconder for the

motion. Francoise cautioned, before drafting a standard, the committee should approach stakeholders with the proposal and should publish the flowchart to better explain the process.

4 – Adjournment

The meeting was adjourned at 3:30 pm EDT.