SUMMARY OF THE
TNI CHEMISTRY EXPERT COMMITTEE MEETING

NOVEMBER 16, 2012

The Committee held a conference call on Friday, November 16, 2012, at 2:00 pm EDT.

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
Tim Fitzpatrick, Florida DEP (Lab)	Present
Nancy Grams, Advanced Earth Technologists, Inc. (Other)	Present
Anand Mudambi, USEPA (Other)	Absent
John Phillips, Ford Motor Co., (Other)	Present
Lee Wolf, Columbia Analytical Services (Lab)	Absent
Ken Jackson, Program Administrator	Absent

Associate Committee Member present: Arthur Denny

2 – Minutes from November 2

It was moved by Francoise and seconded by Tim to approve the minutes as presented. All were in favor except Nancy who abstained.

3 – Procedure for the Determination of MDL

Scope and Application

John had submitted, by e-mail, the following proposed language to add to the second paragraph of this section, to limit the use:

"The MDL is not applicable to pass/fail, comparative or scalar methods, which do not require sensitivity limit determinations (such as; color, flavor rating assessment, temperature, pH and oxidation reduction potential)."

Lee had commented by e-mail that he would like to see some additional methods, such as solids determinations, in the list. It was decided not to include solids methods for MDL, but titrimetric methods were suggested. However, since titrimetric methods may or may not allow an MDL determination, it was decided to leave it out since this does not need to be an inclusive list. Francoise asked if "scalar" is defined anywhere in the TNI standard, and it was suggested this should be added as a definition.

John's e-mail message also included the following proposed sentence to be added after the 3rd paragraph:

"Data between the MDL and the *level at which the data is quantifiable (within limits of defined precision and accuracy)*, shall not be used for compliance determinations."

John suggested the wording in italics could all be replaced by "the ML" if the ML is redefined as the quantification limit with appropriate properties. Dan asked if it is the current practice in the industry to not use that information for compliance. John replied some regulators do want to use the data in-between, but the EPA Office of Water has been consistent they will not use data below quantifiable values for compliance determinations. Dan cited a situation where there is a limit and data are coming back that it is less than the limit, but you have to report it to your regulating authority who would use it to show you were within your limits. So in that sense it is a compliance determination. Tim added that another example where regulators use it is when you had multiple analyses that over time show you are consistently somewhere between the MDL and PQL and perhaps either over or under a limit. He added the Committee may be exceeding its charge by saying how the data will be used rather than just defining how to establish an MDL. Richard said it could still be put it in and see what EPA wants to do with it. Tim suggested leaving it in, but softening it by saying "recommended", and therefore allowing some flexibility. There followed a long discussion on proposed language, and based on a suggestion by John, the wording was modified to read:

" Data between the MDL and the region of known and acceptable precision and accuracy is not quantitative."

Nancy suggested adding to the scope section that the MDL procedure only has to be done initially and not every year, because some States are requiring it to be done every year and that was not EPA's intention. Richard said that will be in the procedure, but he agreed to come back and consider also adding it here after the procedure section is completed.

Procedure

Richard reminded the Committee that in 1a, one additional way had been added to estimate the DL. Tim reminded the Committee it had been decided previously to change the range in 1b to "3-5".

The paragraph beginning "Prepare reagent (blank) water that is as free of analyte as possible." was discussed. It was agreed to add "and interferences" after "analyte". Nancy suggested the next sentence beginning "Interferences are defined as systematic errors…" was circular. On further discussion it was agreed that people know what interferences are, so the sentence is redundant and was removed. Nancy commented that the above requirement to prepare reagent blank water was followed by an option between reagent water and another sample matrix. Richard suggested leaving it until the final edit.

The sentence "Sample preservatives must be added to these QCs" was discussed. Richard suggested it might be redundant since it says at the start you have to follow all the steps of the procedure, and that would include adding sample preservative. However, Nancy said that is not necessarily done and suggested leaving it in since adding preservative should be required. It was agreed to change "QCs" to "replicates".

Considered next was "If the MDL is to be determined in another sample matrix, analyze the sample. If the measured level of the analyte is in the recommended range of one to five times the estimated detection limit, proceed to Step 4." Francoise thought it odd that it had never been required to run blanks along with those samples, but Nancy said that did not matter because only the standard deviation was being determined and not the mean; i.e., it did not matter what the concentration was as long as it was not too high. It was discussed if people really use this step, but Nancy said it is important because she had known people to do it, and it is required when the MDL in reagent water is just not effective; e.g., in TOX methods. She said EPA used standard deviation and made the assumption that bias was zero, so the mean was zero. However, you cannot determine the mean without looking at the blank. Richard reminded the Committee that MDL is determined on a sample with something in it and also based on blanks, and you should use whoever is higher. This led to a discussion on what a blank should be; e.g., a reagent water method blank or the matrix without an added spike. Nancy was concerned that a signal in the matrix might be from the analyte or from an interference, but Richard cautioned there are a lot of different scenarios that might be causing the interference, and it would be difficult to explain it in this procedure. On Francoise's suggestion a comment was added to remind the Committee to return to this section later.

At this point the discussion ended, and a note was added to start section 4a next time.

4 – Adjournment

The meeting was adjourned at3:30 p. The next conference call will be on November 30, 2012 at 2:00 pm EST.

LIST OF ACTION ITEMS TO BE COMPLETED

Item No.	Date Proposed	Action	Assigned to:	To be Completed by:
1	1/31/12	Add a definition of Reporting Limit or Quantitation limit to the standard.	Committee	Defer to quantitation sections
2	1/31/12	Continue to consider the concept of routine low-level QC in the standard.	Committee	Ongoing
3	1/31/12	Review Sections 1.5 and 1.6 of the 2009 standard's chemistry module to determine if current calibration requirements are adequate.	Committee	Not determined
4	1/31/12	Spacing of calibration standards will be considered for the guidance document.	Committee	Ongoing
5	2/17/12	Draft language for items in the calibration standard	Richard (Items 1 and 2) Anand (Item 3) Nancy (Item 5) Anand and Francoise (Item 6) Tim (Item 11)	Complete
6	2/17/12	Review Volume 1 Module 4 of the 2009 standard to identify any inconsistencies with the new language	All Committee Members	Complete
7	3/2/12	Add 1-2 sentences under the header 1.7.1 to explain that method is also included in calibration.	John	Complete
8	3/2/12	Clean up the parts of Section 1.7.1 referring to initial calibration and the parts referring to continuing calibration.	Committee	Complete
9	3/2/12	Add criteria for rejection of calibration standards to the guidance document.	Committee	Not determined
10	3/2/12	Add to the guidance document discussion of	Committee	Complete (done in the

Item No.	Date Proposed	Action	Assigned to:	To be Completed by:
		analysts using the most recent calibration rather than choosing which of 2 or more curves to use.		standard)
11	3/2/12	Include a paragraph in the standard that addresses a single-point calibration for P/A testing.	Committee	Complete
12	3/30/12	Check the language does not contradict the existing standard regarding meeting method requirements vs. standard requirements for calibration.	Committee	Not determined
13	3/30/12	Sections 1.7.1.1 j and k will be modified further as a result of the March 30 discussions.	Anand and Francoise	Complete
14	3/30/12	Have the guidance document consider orders of magnitude in deciding the minimum number of standards, and keep a placeholder in Section 1.7.1 to refer to it.	Committee	Not determined
15	3/30/12	Add a definition for threshold testing	Committee	Not determined
16	3/30/12	Richard's, John's and Anand's March 30 changes will be incorporated into a single document.	Ken	Complete
17	5/4/12	Add to the guidance document that Section 1.7.1.1 (g) requirements should also be applicable for average response, when you evaluate with the RSD, and that is numerically the same value as the RSE.	Committee	Not determined

Item No.	Date Proposed	Action	Assigned to:	To be Completed by:
18	5/4/12	Discuss in the guidance document how to check quarterly (ref. Section 1.7.1.1 (j) (i).	Committee	Not determined
19	6/1/12	Bullet points will be drafted for a proposed PowerPoint presentation	Brooke, Richard, Tim, Francoise, Anand	Complete
20	6/1/12	Bullet points will be drafted for a slide that will describe the items to be discussed in the guidance document.	John	Complete
21	7/20/12	Explain in the guidance document the difference between MDL and the true detection limit.	Committee	Not determined
22	10/5/12	A note will be appended to the draft language of Section 1.7.1.1 n until the CCV language has been written.	Anand	Complete
23	11/2/12	For the MDL document, language will be drafted in the scope to limit the use.	John	11/19/12
24	11/2/12	In the Scope and Application section of the edited MDL document, the sentence "To accomplish this, the procedure was made device- or instrument-independent." Will be re-worked.	John	11/19/12