SUMMARY OF THE
TNI CHEMISTRY EXPERT COMMITTEE MEETING

FEBRUARY 28, 2014

The Committee held a conference call on Friday, February 28, 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)	Present
Dan Dickinson, NYSDOH (Accreditation Body)	Present
Mandi Edwards, Envirochem (Lab)	Absent
Tim Fitzpatrick, Florida DEP (Lab)	Absent
Nancy Grams, Advanced Earth Technologists, Inc. (Other)	Absent
Anand Mudambi, USEPA (Other)	Present
John Phillips, Ford Motor Co., (Other)	Absent
Scott Siders, IL DEP (AB)	Absent
Gary Ward, OR DPH (AB)	Absent
Ken Jackson, Program Administrator	Absent

Associate Committee members present: Arthur Denny; Reed Jeffrey; Diana Shannon.

2 – Previous Minutes

In the absence of a quorum, the previous minutes were not considered.

3 – Quantitation Limits

Richard had sent out a list of quantitation limit (QL) options, and John and Tim had submitted comments. A discussion was opened for opinions from the rest of the committee. For the initial determination of QL it was discussed whether calibration based designs should be used or if the laboratory should be free to decide what it needs. Richard clarified, if a laboratory is free to decide, it means the laboratory's QL must be no higher than the lowest reporting level it uses for any client. There was general agreement that the laboratory should be free to decide. Both Brooke and Dan stressed the laboratory must have a valid means of measuring its QL, and Dan stressed its QL must be based on uncertainty. Francoise asked, for new methods developed by a laboratory, if there should be a requirement to determine the true LOQ. The committee next considered what a laboratory must do to prove it can quantitate at its claimed QL. Richard said there must be a calibration standard at or below the QL, and the committee agreed. Arthur suggested there should be a recovery at the QL, so perhaps it should be required to have calibration standards both at and below the QL. It was agreed there should be some number of samples analyzed through the whole procedure at or close to the QL to show

quantitative results can be obtained for samples at that concentration level. Richard pointed out some methods now require spikes close to the QL. Brooke said perhaps that should be limited to poor recovery analytes. It was considered what range of spiking level should be allowed. Options were exactly at the QL, at or below the QL, or some factor/multiple of the QL. Richard thought if a method had only one analyte it would make sense to spike exactly at the QL, but a range might be necessary if there are many analytes. It was decided to come back to this later. On the question of number of replicates for the initial verification of QL, committee members had a range of opinions from 3 to 7 (the current TNI standard specifies 1 replicate). Brooke thought they should be done on different days. Richard suggested, if more than one instrument, it should be considered how many replicates per instrument. Opinions varied from 1 to 4, with John having suggested 3 per instrument with a minimum of 6 total. The on-going requirements were considered next. Although the recent drinking water methods specify 7 replicates initially at the QL, there are no on-going requirements. No one thought there should be no requirement, and others agreed with Richard's suggestion of periodic analysis of samples through the entire procedure at a concentration at or close to the QL. It was decided to consider later whether the allowed range should be at the QL, at or below the QL, or some factor of the QL. After some discussion, most people thought the frequency should be quarterly. Brooke suggested doing the MDL quarterly and only re-run the QL if the MDL changes. It was agreed the MDL spikes could often be used to verify the QL. Instrument frequency was agreed to be 1 and at least monthly. On Francoise's suggestion, it was added that if instrument conditions change significantly, the laboratory should re-verify. The acceptance limits for initial determination were discussed. John and Tim had both said the results should be above the MDL, and others agreed. John had added that qualitative identification criteria should be met and this was agreed. John had put in recovery limits of 50 – 120%, but Richard was concerned there are a significant number of analytes that would not meet that criterion. Anand was concerned with putting in numbers, because they might not be achievable across all methods. Dan thought the limits should be technology based and related to the expected LCS limits for the method. He added the same type of recovery should be expected at the QL as at the mid-level. Richard added that SW846 says the QL level must be no more than +/- 20% wider than the LCS, and perhaps this should be adopted but with a floor of 10 - 30%. John had proposed precision limits of +/- 30% RSD.

4 – Adjournment

The call was adjourned at 3:30 pm Eastern.