TNI Micro FoPT Subcommittee notes from January call 1/15/14

Subcommittee members present on call: Fred Anderson (Advanced Analytical Solutions), Jennifer Best (EPA), Mike Blades (ERA), Susan Butts (SCDHEC), Bennie Cockerel (SCDHEC), Andy Lincoff (EPA), Jennifer Loudon (Raritan Township Municipal Utilities Authority), Jeff Lowry (Phenova), Pasty Root (IDEXX), Andy Valkenberg (Energy Lab), Viola Reynolds (EPA), Carol Haines (EPA)

Fred Anderson moved to approve the minutes of the December call.
Seconded by Andy V.
Passed. Viola noted she was not on the last call. Mike Blades mentioned that he did not receive the minutes from the last call nor the spreadsheet. Susan re-sent the information to Mike.

Continuing discussion on determining appropriate preparation ranges of qualitative micro samples

Mike initiated the discussion by referencing a question brought up in the December call: "Are there any approved drinking water methods where this range would not be feasible for presence/absence? What about MF methods – TNTC? It was important that the number was never so high that MF plates would be TNTC or require dilution to analyze as labs would have to request additional samples from PT providers." He thought that TNTC meant that the sample would obviously give a positive/present result. Andy V. mentioned that 200 cfu is the maximum countable result for MF analysis before a TNTC designation and that is why 200 cfu has historically been the maximum preparation range. Susan noted that there were many responses within her spreadsheet to keep the 20 - 200 cfu range to maintain consistency with the precedent.

Andy V. questioned whether strain purity mattered. Should PTPs be allowed to mix samples (some coliforms as well as non-coliforms)? Jen Best noted that we are not defining strains. Mike commented that the specific strains are not noted on the FoPT Table (just basic grouping) and Jeff Lowry retorted with the statement that PTPs can't create mixed samples as stated in FoPT Table Footnote #9. Susan agreed with Jeff but said that if there were any further questions, this matter could be brought up to the full Executive Committee since that is where the FoPT Table contents are approved/disapproved.

Susan then noted that the Executive Committee wants defined ranges and a list of the subcommittee's concerns about specifying ranges. She mentioned that most people on the subcommittee were OK with the 20-200 range for Fecal Coliform positive, *E. coli* positive, and Fecal Coliform positive but that there should be a higher range for coliform negative samples in order to truly test the method. Viola concurred. Patsy then questioned the 20-200 range determination method. According to her, methodology is a concern regardless of any/all stages of the process. Would this be a standard change or a FoPT Table issue? Patsy noticed that there are some micro PT providers that don't specify the method. Andy V. stated that the FoPT Table is not currently method specific but Mike disagreed. Carol noted that that the Executive Committee is currently addressing this issue and it will be discussed at the next meeting.

Jen Best brought the conversation back to the specific 20-200 range discussion by stating that the range differs between MF and MPN for enumeration PTs. Jeff suggested that the ranges specified to PTPs for quantitative analysis are not needed for presence/absence determination, but that both methods will work. The notion of false positives and false negatives was briefly brought up but Susan stated that if a false result is being reported, that is another issue. Mike noted that the PTPs just need to make sure they get the range correct. Patsy stated that she would like information from the PTPs on how the range was determined. There was then disagreement on whether that information can be found in the Executive Committee minutes.

Jeff restated that 200 is the highest reportable limit before TNTC for MF analysis. Patsy posed a question regarding how PTPs would respond if their tests showed a result of 19 or 201? She thought it was unrealistic to confine them to 20-200 specifically. Carol stated that she hasn't heard of that problem but that it would be very difficult to get that specific result, especially considering significant figures and measurement of uncertainty. Jeff replied that there are complaints like this from every lab that fails a PT due to that exact reason. Carol then brought back the idea that the method matters.

Andy V. stated that 20-200 is the target as it has acceptance criteria but Susan pointed out that we are discussing qualitative analysis and not quantitative. If we decide on a range for qualitative testing, what range is appropriate? Jeff then called to vote on ranges for Fecal Coliform and *E. coli* presence/absence testing. Carol made the official motion and Fred seconded. There was then a consent vote and Patsy, Andy Lincoff and Jeff abstained. Andy V. called for a roll call vote. There was additional discussion about failure rates at the lower limit of 20 cfu. Jeff mentioned that there have been some failures at 20 cfu but that we do not have PTP data. Andy V. said that the lab needs to change to a different method if they fail at the lower limit, which lead to a brief discussion on what constitutes a high failure rate. Susan declared that 20-200 cfu is a concentration range and that PTPs can put in whatever amount they choose within that range.

There was another request for a roll call vote on 20-200 for Fecal Coliform and *E. coli*. The motion did not pass.
Andy Lincoff- abstain, Andy Valkenberg- yes, Bennie- yes, Carol- yes, Fred- yes, Jeff- abstain, Jen B- abstain, Jen L.- yes, Mike- yes, Patsy- abstain, Viola- yes

Discussion about method used – least selective vs. most selective

There was discussion concerning whether or not 500 as a top limit was too high or not high enough.

Discussion followed about whether or not to specify the method used to validate PT samples. Mike said method should not be specified. Patsy said the method should be listed. Susan asked whether or not technology could be listed, *e.g.*, MF vs. MPN. Andy V. favored the idea of having upper range specified and adding a comment to the bottom of the FoPT Table that states that a PTP must have an established method set for validating samples and have established procedure for determining range.

Jeff stated specifying ranges would put a burden on those PTPs that do not currently have to quantitate the P/A samples.

Mike stated that the FoPT Table already implies criteria, but the PTP has to demonstrate that P/A works for each method. The TNI Standard states that the PT must work for all methods. Patsy asked if all lots had to be tested. Mike responded, ”No.” He indicated that testing was by strain. Jeff agreed with testing by all methods, but if concentration ranges are set, then the best and worst methods would need to be used to test samples.

Susan took a straw poll for TC positive/ *E. coli* negative range being set to 20-200. 7 yes, 4 abstentions.

Fred Anderson moved to adjourn.

Minutes approved by subcommittee on 4/14/14