

Whole Effluent Toxicity Testing Expert Committee Meeting Summary
February 19, 2020 1:00 pm Eastern

1. Welcome and Announcements

Rami welcomed everyone to the meeting. Attendance is recorded in Attachment 1, below. The minutes of January 15 were approved with Elizabeth and Beth abstaining, and the minutes of February 4 (from conference) were approved by acclamation since no voting members were present for that session.

2. Update from Conference

Katie moderated the session on Tuesday morning at conference. She reported that the first half was a good discussion with about 20 people, many from California, and that the conversation confirmed support for progress made by the committee. See the minutes of February 4 for the presentation and summary. A number of participants returned for informal discussion during the second half of the session, which was not documented.

3. Draft Outline for Training Course in Data Interpretation

Natalie and Teresa have created a draft outline, but Teresa wants to revise it after the SETAC workshop in Toronto, to include proficiency criteria and more. The draft should be ready for review at the March committee meeting.

4. PT Data Request

Katie and Ginger provided a draft letter and list of PT studies for review, to be sent to the TNI webmaster. There were no comments and no additions to the draft, and it was sent on March 9.

Also, during the conference session, a PT provider noted that the 2016 Standard requires that PT data be made available on request, so that the previous ARA, submitted last year, should probably be re-submitted. NOTE: there will shortly be a new Chair for the PT Program Executive Committee, so once that Chair is installed, then the WET committee can resubmit the earlier request.

5. WET Assessor Training Reviews

Stephen Clark, Sarah Hughes, Elizabeth West, Katie Payne, John Overbey and Mike Chanov agreed to review the training slides. These individuals have provided or affirmed their commitment to not further disclosing the information from the course, and have received the full set of slides and the questions asked during the training. TNI's Training Administrator expects to receive these reviews by the end of March.

6. Continuing Work on Outstanding Issues

In addition to those issues above, there are multiple issues to be finalized around revising the WET module of the standard. Over the past year, it has become obvious that addressing every issue with the entire committee at every meeting simply does not make much progress, so that Rami would like to have champions for the various issues, with small workgroups or teams, in order to make more progress on the existing items the committee has been wrestling with, so that we can move forward in addressing the additional issues facing the committee.

Analyst IDOC -- Rami asked for volunteers to help him in drafting a blueprint for the analyst initial demonstration of competency, something that can be provided to the NELAP Accreditation Council as well as labs for their suggestions prior to incorporating it into the draft standard itself. This document will acknowledge the need for compromise on all sides while laying out the paradigm of two SRTs for each analyst IDOC in addition to demonstrated and documented successful training, along with a proposal for “same technology” acceptance (similar species covered by a representative organism). When draft language is satisfactory, it will be brought to the full committee for review. After the meeting, Beth agreed by email to assist Rami with drafting this document.

Several commenters noted that tests where no SRT exists or the reference toxicant does not mimic how the test is performed will need to be addressed, and possibly the non-WET tests as well. Some minimum requirements must be defined, with possibly some acceptable alternatives. It will be important to know what are the “deal-breakers” for state ABs and their assessors, while at the same time, conveying that an individual analyst needs to perform DOCs only for the tasks for which they will be responsible.

QC for Support Measurements – this will fall back to Michele and John, with input from Teresa, Marlene and John, to update the previously agreed-upon language so that it refers to specific methods for QC, methods that are currently considered “approved” or acceptable for use, even though they do not need to be accredited for support measurements. The methods described in the WET Method Manual are generally no longer approved but were replaced by methods identified in 40 CFR 136; participants agreed that the full and extensive QC required for compliance measurements in that cited regulation would not be needed for support measurements.

There is an email from Lem Walker of the EPA Office of Science and Technology in the water program, discussing his thoughts on QC for support measurements and promising to provide more formal clarification. See Attachment 2 for the text of that message.

TNI Method Codes for WET Analyses – at conference, TNI’s Database Administrator, Dan Hickman, asked for help with reducing the excessive numbers of method codes, where each method from the manual has different codes for variations of parameters (temperature, water type) as well as for organism. Dan’s goal is to have only one code for each method/species/endpoint, with the variable parameters listed in the comment field rather than as a separate code. Michele agreed to work on this issue, and possibly Ginger and Teresa will be available to help her.

LAMS Clean-up for WET Methods -- TNI has a request from Mitzi Miller of NV5 to “clean up” the methods listed in LAMS (those which have codes) and to add several for which accreditations are granted but are not listed in LAMS. Michele, Rami and Elizabeth agreed to tackle this task. Lynn will send those details to the three volunteers.

PT Instructions – one way to address the issue of small PT numbers is to have the PT providers specify how the PT samples are to be run. This issue is languishing with the demise of ELAB, and Tom asked whether it would be more efficient to send recommendations to the PT Expert Committee (writing the PT module) or do address it in the WET module, or if there is some faster way. **THIS ISSUE NEEDS A CHAMPION – PLEASE CONSIDER VOLUNTEERING FOR IT!**

Technical Director Requirements – there were multiple conversations about the TD requirements for various types of testing (chem, micro, etc.) at conference and there may be an opportunity to revise the already-agreed-upon WET TD qualifications to somehow address experience more effectively. Beth, Pete and Ginger all volunteered to work on this issue, and they will receive the current and future updated versions of TD requirements for all of the committees.

Review of V1M7 itself AND against the QS Module V1M2 – this task will likely be subdivided into several parts of the QS module, and volunteers will be needed later in the year. All committee members (full and associate) please consider which portion of the WET module you wish to review, and volunteer for it.

7. Next Meeting

The next teleconference meeting will be on Wednesday, March 18, 2020, at 1 pm Eastern. An agenda and any needed documents will be sent in advance.

Attachment 1

WET Expert Committee Membership

Member	Affiliation	Email	Category	Term Expiration	Present
Ginger Briggs	Bio-Analytical Laboratories	bal@bioanalyticallabs.com	Lab	Dec. 2020 (2)	No
Chris Burbage	Hampton Roads Sanitation District	cburbage@hrsd.com	Lab	Dec. 2020 (2)	Yes
Kari Fleming	WI DNR	kari.fleming@wisconsin.gov	AB	Dec. 2020 (2)	No
Amy Hackman	Penn. Dept. Environ. Protection	ahackman@pa.gov	AB	Dec. 2020 (2)	No
Sarah Hughes	Shell Oil Co.	s.hughes@shell.com	Other	Dec. 2021 (1)	Yes
Pete De Lisle (Vice Chair)	Coastal Bioanalysts Inc.	pfd@coastalbio.com	Lab	Dec. 2020 (2)	Yes
Rami Naddy (Chair)	TRE Env. Strat. LLC	naddyrb.tre@gmail.com	Lab	Dec. 2020 (2)	Yes
Teresa Norberg-King	USEPA	norberg-king.teresa@epa.gov	Other (Affiliate)	Dec. 2020 (2)	Yes
John Overbey	American Interplex Corp.	joverbey@americaninterplex.com	Lab	Dec 2020 (1)	Yes
Chris Pasch	Alan Plummer Associates, Inc.	cpasch@apaienv.com	Other	Dec. 2020 (2)	No
Michael Pfeil	Texas Comm. Environ. Quality	Michael.pfeil@tceq.texas.gov	AB	Dec. 2020 (2)	Yes
Michele Potter	New Jersey Dept. of Environ Protect.	Michele.Potter@dep.nj.gov	AB	Dec. 2020 (2)	Yes
Steven Rewa	Environmental Resources Management	steven.rewa@erm.com	Lab	Dec. 2020 (2)	Yes
Beth Thompson	Shealy Consulting	bthompson@shealyconsulting.net	Lab	Dec 2020 (1)	Yes
Elizabeth West	LA DEQ LELAP	elizabeth.west@la.gov	AB	Dec. 2020 (2)	Yes
Associate Members					
Sylvia Bogdan	EPA R6	Bogdan.sylvia@epa.gov	Other (Assoc.)		No
Steve Boggs	CA ELAP	steve.boggs@waterboards.ca.gov	Other (Assoc.)		Yes
Dwayne Burkholder	PA DEP	dburkholde@pa.gov	AB (assoc.)		No
Thekkekalathil "Chandra" Chandrasekhar	FL DEP	Thekkekalathil.Chandrasekhar@dep.state.fl.us	Lab (Assoc.)		Yes

Michael Chanov	EA Eng., Sci. &Tech.	mchanov@eaest.com	Lab (Assoc.)		Yes
Stephen Clark	Pacific EcoRisk	slclark@pacificecorisk.com	Lab (Assoc.)		Yes
Erin Consuegra	ERA LAB	econsuegra@eralab.com	Lab (Assoc.)		No
Kevin Dischler	Element Materials Technology	Kevin.dischler@element.com	Lab (Assoc.)		Yes
Monica Eues	CK Associates	Monica.eues@c-ka.com	Lab (Assoc.)		No
Nicole Fortin	Honolulu City Lab	nfortin@honolulu.gov	Lab (Assoc.)		No
Christina Henderson	Bio-Aquatic Testing, Inc.	chenderson@bio-aquatic.com	Lab (Assoc.)		No
David Johnston	Valero Refining Co - Benecia	david.johnston@valero.com	Lab (Assoc.)		No
Natalie Love	GEI Consultants	nlove@geiconsultants.com	Lab (Assoc.)		Yes
VelRey Lozano	USEPA Region 8	Lozano.VelRey@epa.gov	Other (Assoc.)		No
Marlene Moore	Advanced Systems	mmoore@advancedsys.com	Other (assoc.)		No
Mark O'Neil	Environmental Enterprises USA, Inc.	moneil@eeusa.com	Lab (Assoc.)		yes
Katie Payne	Enthalpy Analytical	katie.payne@enthalpy.com	Lab (Assoc.)		Yes
Christina Pottios	Los Angeles Cty Sanitation Districts	cpottios@lacsds.org	Lab (Assoc.)		No
Greg Savitske	US EPA OECA	Savitske.gregory@epa.gov	Other (Assoc.)		No
Lem Walker	USEPA OW/OST	Walker.lemuel@epa.gov	Other (Assoc.)		No
Craig Watts	Hydrosphere Research	cwatts@hydrosphere.net	Lab (Assoc.)		No
Bruce Weckworth	HRSD	Bruce.weckworth@hrsd.com	Lab (Assoc.)		No
Tom Widera	ERA	twidera@eraqc.com	Other (Assoc.)		Yes
Program Administrator					
Lynn Bradley		Lynn.Bradley@nelac-institute.org			Yes

Attachment 2 – Email from Lem Walker, EPA OW OST

On Jan 22, 2020, at 7:42 AM, Walker, Lemuel <Walker.Lemuel@epa.gov> wrote:

Hello Teresa and Marlene,

I have finally had time to consider the issues inherent in these discussions and I agree with Teresa that there is not a simple answer.

The WET manuals from 2002 have not kept pace with changes to the chemistry methods approved at 40 CFR 136 for a variety of reasons, not the least of which is that even minor changes to the citations in the WET manuals could open the entire set of manuals to unintended comments, and slow down the rulemaking process for little actual benefit.

I reviewed all three manuals and found that they are not consistent on the use of “approved” methods.

The Acute freshwater manual includes the following text on page 68:

“10.2.5 Methods used for chemical analysis should be those specified for Section 304(h) of the CWA (USEPA, 1993b). For salinity measurements, a refractometer may be used if calibrated with a sample of known salinity.”

Whereas, page 34 of the Chronic Freshwater manual makes no mention of 304(h) (or 40 CFR Part 136) when it states:

“8.8.5 At a minimum, pH, conductivity, and total residual chlorine are measured in the undiluted effluent or receiving water, and pH and conductivity are measured in the dilution water.

8.8.5.1 It is recommended that total alkalinity and total hardness also be measured in the undiluted effluent test water, receiving water, and the dilution water.”

The Chronic Marine manual contains the same text on page 35 that is silent on the need for a Part 136 method.

Even where the Acute manual makes reference to approved chemistry methods, it includes the ambiguous “should be” language that can hard to enforce in such situations.

Beyond discussion of the actual use of approved methods, all of the manuals predate our promulgation of 40 CFR 136.7 that calls out the minimum QC requirements to be met for chemistry procedures. We intended that subsection to apply to primary measurements required for NPDES permits. We never considered whether or how it might apply to the ancillary water quality measurements involved in WET testing. However, we also did not consider applying 136.7 to ancillary measurements involved in some chemistry methods. For example, a common part of the extraction procedures for many organic parameters listed at Part 136 is the adjustment of the sample pH to less than 2, or greater than 10, to facilitate partitioning of those organics into the extraction solvent. Nowhere in those chemistry

procedures is there a discussion of the use of an approved method or the QC requirements for pH, nor is there any need for one, as those ancillary measurements are not reported with the actual results for the permitted parameters. Most laboratories use pH paper to test the pH adjustments.

In an ideal world, it would be great if WET labs employed the methods currently approved at Part 136 for these water quality parameters. However, even then, I question the utility of imposing any substantial QC requirements on those measurements.

In the case of the Acute manual, pH, conductivity, and total residual chlorine are called out as the minimum supporting water quality measurements for the undiluted effluent, and only pH and conductivity are called out for the dilution water. The methods for pH are not amenable to a number of the QC elements in 136.7, a fact that is noted in that subsection. For example, there is no counterpart to a matrix spike for pH.

A greater practical concern than the associated QC elements would be the precision of the test procedure relative to the specifications for a water quality parameter that are given in the WET manual in question. For example, Section 8.8.9 of the Chronic Marine manual discusses the effects of metals and other toxicants as a function of the sample pH. It describes the performance of parallel tests with and without pH adjustment and calls for adjusting freshwater samples to pH 7.0 and marine water samples to pH 8.0. Therefore, whatever pH method the WET lab uses, it has to be able to read pH to at least one decimal place. That specification would rule out the use of wide-range pH paper, but it would not require performing all of the QC testing described in 136.7.

I realize that the water quality results are reported along with the toxicity test results in order to facilitate interpretation of the toxicity results. However, barring any clear evidence that there are actual issues associated with a lack of QC results for those water quality parameters, I do not see a need to impose a substantial QC burden on those measurements at the national level under the guise of 136.7.

Rather, whatever WET labs have to do for testing, they need to record the method used, whatever method that may be, and must maintain those records for as long as they are required to maintain the actual WET test results. They also must have SOPs for the water quality measurements and those SOPs must include some discussion of the need (or lack thereof) for calibration of the test procedure at whatever frequency is required by the manufacturer or the methods that they are citing. That discussion can recognize the specifics of 136.7 that do apply to the specific parameter, as well as those that do not (e.g., matrix spikes and pH, as noted above).

Of course, authorized states have the right to incorporate additional requirements in either a given discharge permit, or in their accreditation requirement for WET labs. However, in doing so, I would hope that they would consider the relative benefits of such additional requirements versus the effort required.

As Teresa stated, she will organize a meeting with EAD's method team (Meghan Hessenauer is the designated WET contact) and OW NPDES contacts for a collective 'EPA viewpoint' later this

month. Thanks for keeping this issue at the forefront, following the excellent WET session at NEMC 2019.

I hope your new year is off to a great start.

Lem

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