

Whole Effluent Toxicity Testing Expert Committee Meeting Summary
April 21, 2021 1:00 pm Eastern

1. Welcome and Announcements

Rami welcomed everyone to the meeting. Attendance is recorded in Attachment 1, below.

The agenda was revised to omit the closed session for new member election. The election will take place at the June meeting. With that change, the agenda was approved by acclamation.

The minutes from April 21 were approved unanimously after a motion by Natalie and second from Sarah.

2. Election of Vice Chair

Mark O'Neil nominated Stephen Clark several months ago, and no other nominations were received. As Stephen agreed to accept the nomination, Sarah moved and John seconded that he be elected Vice Chair. Approval was unanimous.

3. Review and Approval of Revised Charter

The only revision needed to the Charter was to remove the Decision Making item, now that a TNI Voting SOP 1-102 is in place and there is no longer a need for each committee to specify its chosen method(s) for making decisions. Stephen moved and Natalie seconded that the revised Charter be adopted as presented (see Attachment 3, below), and approval was unanimous. The updated Charter has been sent to CSDEC.

4. Updates

Meeting w/ NELAP AC about DOC proposal – Rami and Pete returned to the NELAP Accreditation Council to receive feedback on the committee-approved proposal that was discussed with the NELAP AB representatives at the January meeting. There were no objections expressed, and several AB representatives indicated that they looked forward to reviewing the V1M7 Draft Standard with the proposal included.

Data Interpretation Training (Natalie and Teresa w/ Katie, Rami, Stephen and John) – the workgroup has met twice since the March WET committee meeting, and have adjusted the outline then made content assignments to participants. When those are complete, they will be combined for committee review, probably in June, and Natalie will begin negotiating with TNI Training to set a date in early fall for the training to be delivered.

Method codes and LAMS clean-up – Jerry was able to resolve the concern about method codes that our committee was struggling to figure out, so this item is settled. Lynn had a conversation with TNI's Database Administrator, Dan Hickman, about the LAMS database clean-up, which will require some intensive involvement with the NELAP AC to resolve. Dan would like to get this addressed but is willing to wait until the WET committee has a lighter workload than now, with multiple issues working (V1M7 revision and training preparation).

5. V1M7 Revision

Follow-up to PTPEC/PTEC/WET Joint Meeting

As follow-up to the joint committee meeting at the winter conference, Rami asked for volunteers to translate the six items designated to become part of the WET module V1M7 into language suitable for inclusion in the standard. There were no immediate volunteers, and volunteers are still needed to draft this new section of V1M7. The items needing to be written into “requirements” language are as follows:

1. Require labs to affirm that DMR-QA/PT tests were conducted according to the specified test conditions listed in the PT instructions.
2. Require labs to document if any deviations from required test conditions occurred and whether a deviation invalidated the test or not. Some deviations from test conditions would invalidate a test such as incorrect number of replicates used, incorrect number of test organisms per replicate, incorrect test organism age, etc. would not.
3. Require labs to document each test’s test acceptability criteria data, for example:
 - a. For the negative laboratory performance control in acute tests, document the % survival.
 - b. For the negative laboratory performance control in chronic tests, document the % survival and the mean weight per surviving test organism or the mean 3rd-brood reproduction per surviving *C. dubia*.
4. Require labs to document the sublethal PMSD evaluation for tests where PMSD bounds are established in the EPA test method and when a chronic NOEC test endpoint was reported.
 - a. If a test’s PMSD is less than or equal to the lower PMSD bound for the test method reported, then the lab must document that the relative % difference from the control of each test concentration tested and that the % relative difference reported for the NOEC is greater than the lower PMSD bound.
 - b. If a test’s PMSD is above the maximum PMSD bound for the test method, then the NOEC shall not be reported.
5. Require labs to document the evaluation of interrupted dose-response curves for tests where an interrupted dose-response occurs and an NOEC test endpoint is reported. The lab shall document the statistical significance or non-significance of every test concentration subsequently to the PMSD evaluation in #4 above
 - a. Lab shall evaluate dose-response curves per EPA 821-B-00-004 Method Guidance and Recommendations for Whole Effluent (WET) Testing (40 CFR Part 136).
6. Require labs to document the source of test organisms used in a DMR-QA/PT test.

NOTE: one participant pointed out, after reviewing these minutes, that item 4 (b) that says do not report a NOEC if the PMSD is above differs from what the EPA chronic method instructs. The revised wording for 4(b) as paraphrased from the Chronic Manual should be as follows:

4(b) If the PMSD exceeds the upper bounds and no statistically significant difference is observed, then the test is invalid and must be repeated.

4(c) If the PMSD exceeds the upper bounds and a statistically significant difference is observed, then the test is acceptable unless other review steps raise serious doubts about its validity.

Review/affirm Pete’s Changes to 1.4 & 1.5

After the March meeting, Pete provided additional revisions to the validation section, based on discussion, and those changes were incorporated into the draft V1M7. Pete had asked that committee members review and ponder those changes for the next round

of discussion, especially whether the difficult-to-perform false positive rate determination should be required. Perhaps if not required, §1.5.4 could be retained as a note (unenforceable). Unfortunately, Pete was unavoidably delayed and unable to attend the meeting, so the changes will be addressed in May.

Begin Review of 1.7.1.5, Test Conditions

Chandra was unable to attend this meeting, so this section will be addressed in May, also.

Review 1.7.1.6.e, Support Chemistry QC

Participants quickly affirmed that the most recent revision of this text is satisfactory.

6. New Business

With Steve Rewa now gone from the committee now, Rami and John had agreed to re-draft the Technical Requirements section (§1.7-1.7.1.5), with a focus on WET rather than adapting material from the chemistry module as was apparently done previously. With time remaining in the meeting, Rami asked participants to brainstorm with him about what are the primary QC processes for WET testing. In the order offered and discussed (some duplication, obviously), these were:

- Reference toxicant and SRTs
- Negative controls
- Specifics for cultures (separate from testing)
- History of culture of the organisms
- Then include items from Chapter 4 of the WET Guidance (acute and chronic appear to be similar, but this may need more detailed consideration)
 - Waters
 - Culturing
 - SRTs (likely will need a section on SRTs in the DOC, the QC and the positive/negative controls pieces of V1M7)
 - Negative controls
 - Test sensitivity
 - PMSDs
 - Equipment and calibration
- Variability and repeatability/reproducibility (need specific metrics to be evaluated as well as regular review for conformance with good laboratory practices)
- Test sensitivity (replicates, numbers of organisms – typically specified in permits)
- Reagents and standards (what grade of reagents, for example)
- Positive controls (gives context for assessors, too)

Consensus was that test acceptability criteria (TAC) should be mentioned, but as a requirement, not as QA/QC.

Rami expressed his appreciation for now having the elements of an outline for the Technical Requirements section.

With no other new business, John moved and Natalie seconded that the meeting be adjourned; approval was unanimous.

7. Next Meeting

The next teleconference meeting will be on May 19, 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
Dwayne Burkholder	PA DEP	dburkholde@pa.gov	AB (assoc.)	Jan. 2024 (1)	No
David Caldwell	OK DEQ	David.caldwell@deq.ok.gov	AB (assoc.)	Jan. 2024 (1)	Yes
Thekkekalathil "Chandra" Chandrasekhar	FL DEP	Thekkekalathil.Chandrasekhar@dep.state.fl.us	Lab (Assoc.)	Jan. 2024 (1)	No
Stephen Clark	Pacific EcoRisk	slclark@pacificecorisk.com	Lab (Assoc.)	Jan. 2024 (1)	No
Sarah Hughes	Shell Oil Co.	s.hughes@shell.com	Other	Jan. 2022 (1)	Yes
Rami Naddy (Chair)	TRE Env. Strat. LLC	naddyrb.tre@gmail.com	Lab	Jan. 2024 (3)	Yes
Teresa Norberg-King	USEPA	norberg-king.teresa@epa.gov	Other (Affiliate)	Jan. 2022	No
Mark O'Neil	Environmental Enterprises USA, Inc.	moneil@eeusa.com	Lab	Jan. 2024 (2)	No
John Overbey	American Interplex Corp.	joverbey@americaninterplex.com	Lab	Jan. 2024 (2)	No
Natalie Love	GEI Consultants	nlove@geiconsultants.com	Lab (Assoc.)	Jan. 2024 (1)	Yes
Rosana McConkey	WA Dept of Ecology	rosa461@ECY.WA.GOV	Non-NELAP AB	Jan. 2024 (1)	Yes
Ila Meyer-Fritzsche	VA DCLS	ila.meyer-fritzsche@dgs.virginia.gov	AB (assoc.)	Jan. 2024 (1)	Yes
Katie Payne	Enthalpy Analytical	katie.payne@enthalpy.com	Lab (Assoc.)	Jan. 2024 (1)	Yes
Caitie Van Sciver	NJ DEP	Caitie.VanSciver@dep.nj.gov	AB	Jan. 2024 (1)	Yes
Associate Members					
Travis Bartholomew	ORELAP	Travis.J.Bartholomew@dhsosha.state.or.us	AB		No
Yakuta Bhagat	EnviroScience	ybhagat@enviroscienceinc.com	Lab (assoc.)		No
Sylvia Bogdan	EPA R6	Bogdan.sylvia@epa.gov	Other (Assoc.)		No
Steve Boggs	CA ELAP	steve.boggs@waterboards.ca.gov	Other (Assoc.)		No
Ginger Briggs	Bio-Analytical Laboratories	bal@bioanalyticallabs.com	Lab		No

Chris Burbage	Hampton Roads Sanitation District	cburbage@hrsdc.com	Lab		No
Antoine Chamsi	East Bay Municipal Utility Dist.	antoine.chamsi@ebmud.com	Lab (Assoc.)		No
Michael Chanov	EA Eng., Sci. &Tech.	mchanov@eaest.com	Lab (Assoc.)		Yes
Erin Consuegra	ERA LAB	econsuegra@eralab.com	Lab (Assoc.)		No
Chad Cooper	PDC Labs	ccooper@pdclab.com	Lab (Assoc.)		No
Pete De Lisle	Coastal Bioanalysts Inc.	pfd@coastalbio.com	Lab		Yes
Kevin Dischler	Element Materials Technology	Kevin.dischler@element.com	Lab (Assoc.)		No
Monica Eues	CK Associates	Monica.eues@c-ka.com	Lab (Assoc.)		No
Kari Fleming	WI DNR	kari.fleming@wisconsin.gov	AB		Yes
Nicole Fortin	Honolulu City Lab	nfortin@honolulu.gov	Lab (Assoc.)		No
Amy Hackman	PA Dept. Environ. Prot.	ahackman@pa.gov	AB		No
Kate Hansler	Enviroscience	khansler@enviroscienceinc.com	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
Paul Junio	Northern Lake Service, Inc.	paulj@nlslab.com	Lab (Assoc.)		No
VelRey Lozano	USEPA Reg. 8	Lozano.VelRey@epa.gov	Other (Assoc.)		No
Marlene Moore	Advanced Systems	mmoore@advancedsys.com	Other (assoc.)		No
Linda Nemeth		lkn1304@gmail.com	Other (assoc.)		No
Chris Pasch	Alan Plummer Associates, Inc.	cpasch@apaienv.com	Other		No
Michael Pfeil	Texas Comm. Environ. Quality	Michael.pfeil@tceq.texas.gov	AB		No
Michele Potter	NJ Dept. of Environ Protect.	Michele.Potter@dep.nj.gov	AB		No

Christina Pottios	Los Angeles Cty Sanitation Districts	cpottios@lacsdsd.org	Lab (Assoc.)		No
Greg Savitske	US EPA OECA	Savitske.gregory@epa.gov	Other (Assoc.)		No
Justin Scott	Cove Sciences	justin@covesciences.com	Lab (Assoc.)		No
Lem Walker	USEPA OW/OST	Walker.lemuel@epa.gov	Other (Assoc.)		No
Craig Watts	Hydrosphere Research	cwatts@hydrosphere.net	Lab (Assoc.)		Yes
Bruce Weckworth	HRSD	Bruce.weckworth@hrsd.com	Lab (Assoc.)		Yes
Elizabeth West	LA DEQ LELAP	elizabeth.west@la.gov	AB		No
Tom Widera	Pace Labs	Thomas.Widera@pacelabs.com	Lab (Assoc.)		No
Program Administrator: Lynn Bradley, lynn.bradley@nelac-institute.org					

Attachment 2

Meeting Agenda for April 21, 2021

- Welcome and Roll Call
- Approval of Agenda
- Approval of Minutes (March minutes attached)
- Review and Approval of Revised Charter*
- Election of Vice Chair
- Updates
 - Meeting w/ NELAP AC about Analyst Initial DOC Proposal
 - Data Interpretation Training
 - Method Codes and LAMS Clean-up
- V1M7 Revision (latest draft attached)
 - Follow-up to PTPEC/PTEC/WET Joint Meeting (see attached meeting summary)
 - Review/affirm Pete's Changes to 1.4 & 1.5 (latest version of draft V1M7 attached)
 - Begin Review of 1.7.1.5, Test Conditions (Chandra's edits in latest V1M7 draft)
 - Review 1.7.1.6.e, Support Chemistry QC, time permitting (Michele and John's most recent)
- New Business, if any
- Adjourn

*added at beginning of the meeting

WET Expert Committee

Charter

Approved: April 21, 2021

Mission

Update and maintain the whole effluent toxicity (WET) testing Standard (TNI Environmental Laboratory Standard, Volume 1, Module 7) based upon public comment, provide technical assistance on issues related to whole effluent toxicity, develop tools to aid implementation and facilitate the implementation of the Standard.

Composition of the Committee

This is an Expert Committee with balanced membership representing TNI's three categories of stakeholders – laboratories, accreditation bodies and other. A number of associate members also participate.

Objectives

1. Standardize Proficiency Testing conditions and endpoints
 - **Success Measure:**
 - Standardize test conditions required for PT/DMRQA WET studies, rather than the current practice of conducting multiple tests using different NPDES permit test conditions, so that a statistically significant number of comparable sample results are available.
 - Improve the statistical power and evaluation of WET data sets and results in PT/DMRQA studies by selecting one statistical method to calculate the test endpoint and eliminating the use of hypothesis test endpoints.
2. Offer expert assistance to TNI on WET testing methods, quality control and data interpretation.
 - **Success Measure:**
 - Educate assessors on IC25 vs. NOEC for PT/DMRQA endpoints.
 - Work with PT providers and assessors to consolidate, clarify, and improve the guidance on acceptable and unacceptable corrective actions for laboratories when a PT/DMRQA study result is outside of the acceptance limits.
3. Revise and maintain the WET module of the TNI standard.
 - **Success Measure**
 - Improve the way initial demonstration of capability and continuing demonstration of capability are handled specifically for WET testing.
 - Clarify the appropriate QC for WET supporting chemical analyses.
 - Offer expert assistance to TNI, auditors and laboratories on interpretation of the Standard as it pertains to WET.
4. Work Plan: the committee will create or review the Work Plan on at least an annual basis and as part of any internal audit process.
 - **Success Measure:**
 - Work plans are presented to the TNI Board for review on at least an annual basis

Available Resources

- Volunteer committee members
- TNI Infrastructure
- Environmental technical community
- Teleconference services
- Administrative support
- Technical editor support

Anticipated Meeting Schedule

- Teleconferences: regular schedule of calls to be published on the TNI website.
- Occasional additional calls and subcommittee meetings as needed.
- Face-to-face meetings as needed at TNI conferences.