Whole Effluent Toxicity Testing Expert Committee Meeting Summary
February 4, 2020 8:00 am Pacific, Newport Beach, CA

1. Welcome and Announcements

Katie Payne moderated this public session. Attendance is recorded in Attachment 1, below. Committee members who were present introduced themselves. Teleconference capability was not available.

2. Discussion of Participant Comments about Upcoming Revision of V1M7

The following issues and comments were raised in discussion:

- The scope of what this module covers is not explicitly defined, but should be more clearly specified, with the understanding that most testing covered by this module is directed by NPDES permits from the various states.
- The WET committee should establish liaison with the Quality Systems Expert Committee around the issue of support equipment.
- Some items in the module need to be "modernized" such as the requirement to use "semi-log graph paper".
- The sample handling section needs to be updated and perhaps made more general.
- Should the standard make some or all of the "shoulds" in the methods into "shalls" in the standard? Might this be a way to effectively overrule differences among the EPA regions?
- Toxicity testing is more scientific than chemistry and microbiology testing (e.g., less rote performance, requiring more judgement).
- V1M7 should set minimum requirements, while V1M2 (Quality Systems) establishes the quality management system into which V1M7 must fit.
- Consider defining decision rules for risk management, for toxicity testing.
- What about the role of statistical analyses in initial and ongoing demonstrations of competency (DOCs)? Do the statistical calculations become part of the DOCs? Or do the individuals performing those calculations need DOCs, if different than the analysts performing the tests?
- Should each "batch" of organisms require a standard reference toxicant test (SRT)? Is there some way to address health of the organisms (shipping stress, lab conditions), particularly if they are wild caught? Can this be addressed in the module within the definition of a "batch"?

3. Method Code Discussion

Dan Hickman, TNI's Database Administrator, asked if it were possible to simplify the WET method codes. He proposed that the quality system should allow a lab to choose the best parameters for each method for which they are accredited and NOT have a method code for each possible combination of parameters. He suggested that the parameters could be a footnote to the method designation, and indicated that this would be his preference in order to simplify the number of codes and thus the LAMs database itself.

Dan said that there are 55 WET analytes, each with its own analyte code, in addition to the multiple method codes that now exist for each of the published methods. The combination of method and analyte code defines the specific test performed by a lab. The current variability

comes from the Accreditation Bodies (ABs, state programs) that require specific details (whether or not from NPDES permits), so that the state AB requires an explicit code for each variation.

There was some crossover between this method code discussion and the Proficiency Testing (PT) discussion below, since the variable parameters would then need to be reported with PT data, rather than the method code that specifies the set of parameters used.

4. Discussion of PT Issues

The following issues were discussed:

- Two individuals stated that the new 2016 TNI Standard requires that the PT Program Executive Committee (PTPEC) provide PT data "on request" and recommend that the WET committee resubmit its request to PTPEC now that the PT providers have implemented the 2016 Standard (as of January 31, 2020). Craig Huff (of ERA, a PT provider [PTP]) indicated his continuing interest and investment in method and analyte codes, and in addressing what will meet the needs of the ABs.
- One proposal was to add some specifics about PTs to V1M7, stating that PTs should be treated like client samples – that is, the PTP is the "client" for PTs, so that the lab would need to follow the instructions provided by the PTP.
- Since PTs are available for only about half of the tests typically run in a WET lab, discussion arose about how to get additional PTs made available for an organism. The Analyte Request Application is designed for this purpose (see PTPEC FoPT Table Management SOP 4-107). However, if results a "screening test" organism as freshwater algae are not reported for compliance purposes, for instance (since it is likely not the most sensitive organism), then it might not make sense to have a PT for such an accredited method.
- The DMR-QA is used within the TNI PT program but may not be identical to it.
- PTPs are required to have a process for evaluating small sample sizes. This is particularly applicable to WET labs, where very few labs are accredited for certain of the test method/species combination.

5. Next Meeting

The next teleconference meeting will be on Wednesday, February 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
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)	No
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)	No
Pete De Lisle (Vice Chair)	Coastal Bioanalysts Inc.	pfd@coastalbio.com	Lab	Dec. 2020 (2)	No
VelRey Lozano	USEPA Region 8	Lozano.VelRey@epa.gov	Other (Affiliate)	Dec 2020 (1)	No
Rami Naddy (Chair)	TRE Env. Strat. LLC	naddyrb.tre@gmail.com	Lab	Dec. 2020 (2)	No
Teresa Norberg-King	USEPA	norberg-king.teresa@epa.gov	Other (Affiliate)	Dec. 2020 (2)	No
John Overbey	American Interplex Corp.	joverbey@americaninterplex.com	Lab	Dec 2020 (1)	No
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)	No
Michele Potter	New Jersey Dept. of Environ Protect.	Michele.Potter@dep.nj.gov	AB	Dec. 2020 (2)	No
Steven Rewa	Environmental Resources Management	steven.rewa@erm.com	Lab	Dec. 2020 (2)	No
Beth Thompson	Shealy Consulting	bthompson@shealyconsulting.net	Lab	Dec 2020 (1)	No
Elizabeth West	LA DEQ LELAP	elizabeth.west@la.gov	AB	Dec. 2020 (2)	No
Associate Members					
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.)		No
Stephen Clark	Pacific EcoRisk	slclark@pacificecorisk.com	Lab (Assoc.)		No
Erin Consuegra	ERA LAB	econsuegra@eralab.com	Lab (Assoc.)		No
Kevin Dischler	Element Materials Technology	Kevin.dischler@element.com	Lab (Assoc.)		No
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.)		No
Marlene Moore	Advanced Systems	mmoore@advancedsys.com	Other (assoc.)		Yes
Mark O'Neil	Environmental Enterprises USA, Inc.	moneil@eeusa.com	Lab (Assoc.)		No
Katie Payne	Enthalpy Analytical	katie.payne@enthalpy.com	Lab (Assoc.)		Yes
Christina Pottios	Los Angeles Cty Sanitation Districts	cpottios@lacsd.org	Lab (Assoc.)		Yes
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.)		No
Program Administrator					
Lynn Bradley		Lynn.Bradley@nelac-institute.org			Yes

Attachment 2 – Outline from PowerPoint Slides used in presentation

- ☐ **WET Expert Committee**
  Rami Naddy, Ph.D., Chair
  Moderator: Katie Payne, Enthalpy Analytical
- ☐ **Forum on Environmental Accreditation**
- ☐ **Newport Beach, CA**
- ☐ **February 4, 2020**

- ☐ **Whole Effluent Toxicity Expert Committee**
- ☐ Welcome and Introductions
- ☐ Meeting time
  - Third Wednesday of each month
  - 1300 hrs ET
  - ~ 1 - 1.5 hr
  - TNI Members are welcome to participate

- ☐ **Committee Members**
- ☐ Rami Naddy (Chair; Lab) – TRE Environmental Strategies
- ☐ Pete De Lisle (Vice Chair; Lab) – Coastal Bioanalysts Inc.
- ☐ Ginger Briggs (Lab) – Bio-Analytical Laboratories
- ☐ Chris Burbage (Lab) – HRSD
- ☐ Kari Fleming (AB) - Wisconsin DNR
- ☐ Amy Hackman (AB) – Pennsylvania DEP
- ☐ Sarah Hughes (Other) – Shell Health
- ☐ Teresa Norberg-King (Other/Affiliate) – U.S. EPA - Duluth
- ☐ John Overbey (Lab) – American Interplex
- ☐ Chris Pasch (Other) – Alan Plummer Associates Inc.
- ☐ Michael Pfeil (AB) – Texas CEQ
- ☐ Michele Potter (AB) – New Jersey DEP
- ☐ Steve Rewa (Lab) – Environ. Resources Management
- ☐ Beth Thompson (Lab) – Shealy Consulting
- ☐ Elizabeth West (Accreditation Body, AB) – Louisiana DEQ
- ☐ Program Administrator: Lynn Bradley

- ☐ **Associate Members**
- ☐ Sylvia Bogdan
- ☐ Thekkekalathil Chandrasekhar
- ☐ Michael Chanov
- ☐ Steven Clark
- ☐ Erin Consuegra
- ☐ Nicole Fortin
- ☐ Christina Henderson
- ☐ Natalie Love
- ☐ Marlene Moore
- ☐ Greg Savitske
- ☐ Craig Watts

- ☐ Tom Widera
- ☐ Steve Boggs
- ☐ Kevin Dischler
- ☐ Monica Eues
- ☐ David Johnston
- ☐ Linda Nemeth
- ☐ Mark O'Neil
- ☐ Katie Payne
- ☐ VelRey Lozano
- ☐ Christina Pottios
- ☐ Justin Scott
- ☐ Jordan Thorngren
- ☐ Bruce Weckworth

- ☐ **Agenda**
- ☐ Accomplishments
  - ➢ Webinar available on TNI website Understanding WET Testing
- ☐ Activities Underway
  - ➢ Revisions to Module 7
    - ✦ Challenges in addressing DOCs
  - ➢ 2019 Activities
- ☐ New Business?

- ☐ **WET 2020 Plans**
- ☐ Revising the Standard Module V1M7
  - ➢ DOC for Analyst (separate from those for the laboratory)
  - ➢ Publish Outline, Receive and Address Comments (?)
  - ➢ Possibly Publish Voting Draft (?)
  - ➢ Including non-WET toxicity tests
- ☐ Continue Efforts to Improve Utility of PT Results
  - ➢ Work with PTPEC and EPA
- ☐ Continue Interaction with Field Activities Committee
  - ➢ Ensure that WET Testing is Appropriately Addressed in Revised FMSO Standard

- ☐ **DMR-QA for Proficiency Testing**
- ☐ What is the purpose?
  - ➢ run it as the NPDES permit (i.e., permit compliance) OR
  - ➢ run PTs for data comparability (i.e., laboratory evaluation)

- ☐ **Module 7**
  Quality Systems for Toxicity Testing
- ☐ Scope of Module 7
  - ➢ Not only aquatic toxicity (WET)
  - ➢ Sediment (burrowing organisms) and benthic region
  - ➢ Drilling fluids and other potentially toxic materials.
  - ➢ Soil toxicity
- ☐ Revisions to Module 7

- Reasonable QC for chemistry support measurements
- Demonstration of Competency concepts

☐ **WETT CHEMISTRY**
☐ *What QC procedures should be required of chemistry performed in support of WETT analyses?*
☐ WETT Chemistry:
☐ Analytical procedures are required as supporting chemistry for WETT.
  - i.e., pH, D.O., temperature, alkalinity, hardness, specific conductance or salinity, TRC, and ammonia.
☐ Calibration performed per instrument instructions or per QA section of method and must be documented.
☐ Should be traceability of standards to national stds
☐ Additional QA/QC per Module 4 not required
  - These are support measures only
☐ WETT Chemistry: DOC clarification
☐ Separate Demonstration of Capabilities (DOCs) for the chemistry support measurements are not required when included with the overall training and WET DOC. Specific States may require accreditation for the support measurements. If accreditation is required for the chemistry support measurements, the laboratory must follow the requirements listed in the chemistry module

☐ **WETT IDOC / CDOC**
☐ *What should be required for laboratory vs analyst for WETT analyses?*
☐ IDOC – CDOC
  - DOCs / IDOCs well defined for Lab
    - General consensus on these
    - Described in module 7
  - DOCs / IDOCs for analysts
    - Less well defined
    - Not included in module 7
    - Handled differently among ABs

☐ DOC Language in 2009 and 2016 TNI
☐ Initial Demonstration of Capability (IDOC).
☐ Each analyst shall meet the quality control requirements as specified in Section 1.7.1.2.
  - NELAC 2003 Appendix D2 or TNI 2009 V1M7 §1.6 (EL-V1M7-2009).
☐ Positive and Negative Controls.
  - SRTs and control organism performance.
☐ Continuing DOC (CDOC).
☐ Documented procedure describing ongoing DOC.
☐ Analysts must meet QC requirements of the method, Lab SOP, client specifications, and the standard.
☐ QC sample data must be reviewed to identify patterns for individuals or groups and make correct actions.

☐ **Proposed Changes to V1M7**
  - IDOC/DOC:

- Flexibility in the use of various tools to demonstrate capability (SRT, QC Controls, PTs)
  - Concern that flexibility puts too much responsibility on auditor – how to address?
- Tests performed as teams;
  - the individual rarely performs the whole test
- Differentiate between laboratory *vs* analyst IDOC/DOC.
- Many phases (e.g., sample prep, water quality measurements, solution renewal, etc.) common to different toxicity tests.
  - Analyst demonstrates competency in test phases, i.e., "demonstration of same technology"

☐ Proposed Changes to V1M7

- IDOC:
  - Several ideas are presented below on what might form the basis for language in the eventual revision
- Consensus that proficiency in chronic WET studies of one species demonstrates proficiency in acute WET studies of the same species.
- In its quality system, the lab shall identify and train to "essential skills" for conducting tests and then demonstrate those skills in one or more standard reference tests.
- Possibility that proficiency in one test method (e.g., *D. magna* acute) could verify skills for other tests with different organisms (e.g., *D. pulex*), since procedures are identical except for organism. Other examples as well.
- Proposed Changes to V1M7
- IDOC continued:
- To add this to Module 7 to be consistent with other modules:
  - An individual who performs any activity involved with preparation and/or analysis of samples must have constant, close supervision (as defined in the laboratory's training procedure) until a satisfactory initial DOC is completed.
- Proposed Changes to V1M7

Questions?
For more information, contact:
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