Laboratory Committee – Report to BACWA Board

Laboratory committee meeting on October 10, 2023 Executive Board Meeting Date: November 17, 2023 Committee Chair: Blake Brown, Central San

Committee Request for Board Action: None

Regular meeting: 45 attendees via Zoom, including representatives from 30 laboratories and 3 guest speakers from the State Water Board and Regional Water Board

Updates on Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Andrew Hamilton (Asst. Deputy Director of the State Water Board's Office of Information Management and Analysis) provided clarifications about differences between the federal and state versions of the Discharge Monitoring Report Quality Assurance (DMR-QA) program:

- California is different from EPA, and is aligned with ELAP. California follows a different schedule than
 the <u>USEPA DMR-QA program</u>. CA has aligned with the requirements of ELAP accreditation, so NPDES
 permittees are to submit data for the DMR-QA program with the proficiency test (PT) study results already
 needed for ELAP accreditation. PT results and any accompanying Corrective Action Reports (including
 repeat PT tests) are due Dec. 31st and must be completed within the calendar year (Jan 1 Dec 31) of the
 DMR-QA study.
- The EPA Checklists are not all-inclusive: If you produce data for your NPDES reporting that is not on the EPA checklist, you still need to report the data (e.g., organics analyses).
- Corrective Action reports. The requirement to submit Corrective Action reports is different from the ELAP requirement; ELAP does not require the Corrective Action report to be submitted, but DMR-QA does.
- Contract Labs. PT and Corrective Action reports for contract / subconsultant labs must also be submitted.
 For contract labs, permittees only need to submit information for the parameters analyzed for that specific
 NPDES permit. ELAP regulations state that labs must report PTs, corrective actions and updated PTs to
 their clients.
- **Switching methods?** Labs that performed multiple PT's to support an amendment application for the 2021 Method Update Rule can submit PT's for new methods, or old methods, or both. Only one is required.
- **How to Submit.** The DMR-QA program staff prefer to receive submittals directly from permittees, <u>not</u> from contract labs or PT providers. Materials should be submitted to QualityAssurance@waterboards.ca.gov

Q&A Session on MDLs, RLs, and MLs

Andrew Hamilton (State Water Board) and Kerry O'Connor (Regional Water Board) hosted a Q&A session on Method Detection Limits (MDLs), Minimum Levels (MLs) and Reporting Limits (RLs). These terms are defined within Attachment A of individual NPDES permits in the region. Additional information on MLs is also found in the 2005 State Implementation Policy, which establishes an ML for each priority pollutant ("SIP ML"). The attached table (pp. 2-3) contains a summary of the Q&A session. A recording is available here.

Member Roundtable Discussion - Standby Policies for Wet Weather

Attendees discussed laboratory staffing policies for wet weather. Some labs pay to keep staff on call during the entire wet season (6 months), while others actively track the weather and only put staff on call when there is a storm predicted. One lab reported shifting to 7-days-per-week staffing instead of using a standby system.

BACWA Updates:

- In September, the State Water Board raised ELAP fees by about 30% (<u>link to revised fee table</u>). ELAP staff
 no longer plan to mandate reporting on the number of regulatory samples, a proposal discussed at the
 August BACWA Lab committee meeting.
- SFEI is working on preparing a final report summarizing the findings from Phase 2 of the PFAS Regional Study. Results were also shared at the <u>2023 RMP Annual Meeting</u> (see <u>slides</u>).
- The <u>Tentative Order</u> chlorine blanket permit amendment is scheduled for adoption at the November 8th Regional Water Board meeting.

Agency Reports and Group Discussion

- Staff from San Jose reported out on recent audits. Some findings from the audit included having a NIST-traceable barometer, putting "Page 1 of 1" on one-page documents, and including five items on DO meters: the ID number, DO calibration date, DO calibration expiration date, barometer calibration date, and barometer calibration expiration date. The group also discussed temperature adjustment factors.
- Central San is recruiting a <u>Lab Program Administrator</u>.

TNI Training and Implementation

• Upcoming TNI training sessions are scheduled for October 17th, and December 19th. The sessions are now in Q&A format; submit your questions ahead of time to Diane Lawver.

Next Regular Meeting: Tuesday, December 12, 2023, in-person holiday luncheon at Central San

Summary of Q&A Session on MDLs, RLs, and MLs

#	Question	Answer
1.	Some contract labs would like to report a non-detect (ND) to the RL instead of the MDL. Is it acceptable for contract labs to report a non-detect at the reporting limit instead of reporting the MDL?	ELAP requires contract labs to report based on their client's needs. Permittees have to report the MDL per Attachment E of their permits (see example language in Attachment E, Section 7.2.5 of Order R2-2023-0008) Therefore, contract lab should report this way; they should report the actual MDL. If you encounter a contract lab that is hesitant to do this, ELAP or Regional Water Board staff can provide assistance.
2.	How is the SIP ML applied if the laboratory selects to have an RL <sip (even="" and="" are="" calibrated="" can="" detect="" labs="" lower)?<="" ml="" ml?="" raise="" rl's="" should="" sip="" td="" the="" their="" they="" though="" to=""><td>For reporting, permittees should report the actual RL, not the SIP ML. The same guidance applies to contract labs.</td></sip>	For reporting, permittees should report the actual RL, not the SIP ML. The same guidance applies to contract labs.
3.	Do the SIP ML requirements apply to all treatment plant and collection system samples, or only to final effluent?	The SIP ML requirements apply to all NPDES permit samples, including influent and pretreatment samples. Water Boards staff understand that it may not always be possible to achieve the SIP MLs due to matrix interference.
4.	How does implementation of 2016 TNI-2 standards impact a laboratory's determination of RLs or MDLs?	Within the parlance of TNI-2 standards, MDLs are the Limit of Detection, and RLs are the Limit of Quantitation (LoQ). Determination of MDLs is straightforward and should follow the TNI-2 standards for the Limit of Detection. The initial LoQ demonstration requires seven spikes to demonstrate abundance above a background level. After the initial demonstration, ongoing LoQ verification is required to be performed at least quarterly with one sample spike at the LoQ per instrument. Labs should make sure to use a clean wastewater matrix (such as final treated wastewater) to create the spike matrix blanks, not clean laboratory water. The LoQ is technology-specific, method-specific, and matrix-specific. The TNI-2 process sets the lower threshold for the LoQ. Drinking water or recycled water samples will have their own LoQs that differ from wastewater sample LOQs.
5.	Does the Regional Water Board expect DNQ reporting for pre-treatment, raw influent and final effluent samples? Or only for final effluent samples where there is very little matrix interference?	The Regional Water Board expects DNQ reporting for all sample types per Attachment E of NPDES permits. They understand that not all MLs will meet the SIP standards due to matrix interference.
6.	Is the "ML" nomenclature necessary? Could the Regional and State Water Boards simplify and just use "RL"?	The State Water Board may revise the SIP in the future; until then, we are stuck with the existing nomenclature.
7.	Could the ML be interpreted as the base-RL (at a dilution of 1), where the RL is the base-RL multiplied by the dilution factor?	This description is consistent with 40 CFR 136, where the ML and the RL are essentially the same and they are determined by multiplying the MDL by a factor of 3. The RL will shift depending on the dilution factor. Typically (though not in the SIP), the ML is defined as the lowest point of the calibration curve. The definition of RL doesn't have that same stipulation.
8.	If a sample is diluted and the analysis is run with an ML that meets the SIP ML criteria, but the RL is raised due to the dilution (and the result is ND) is the result still acceptable?	This is acceptable. Regional Water Board staff understand that dilution is sometimes necessary. Attendees noted that laboratory reports should always contain an explanation if a sample is diluted. When there is dilution, the MDL and the RL should both be multiplied by the dilution factor.

9.	If a sample is diluted, does the Regional Water Board find it acceptable to adjust the MDLs?	Yes, same answer as #8, above. When there is dilution, the MDL and the RL should both be multiplied by the dilution factor.
10.	Should permittees be asking their contract labs to raise their RL's to the SIP ML (even though they are calibrated and can detect lower) to align with the SIP ML?	No, all labs (including contract labs) should use and report the lowest RL that they can.
12.	If samples are sent to two different labs with different RLs/MDLs, how should the maximum be determined?	The answer depends on the context in which the sample results are being reported. If the results are being used to assess compliance with effluent limits, then the maximum is the highest <u>detected</u> value (0.007 in the example). If the results are being used for a Reasonable Potential Analysis in an NPDES permit reissuance, then the highest value <u>including estimated values</u> would be used (DNQ 0.02 in the example).
	Lab 1: RL = 0.005, MDL = 0.001, result is 0.007	
	Lab 2: RL = 0.05, MDL = 0.01, result is 0.02(DNQ)	
	SIP ML for analyte is 0.06	
11.	What is the procedure for developing an ML/RL for an on-line chlorine residual analyzer?	The blanket permit amendment for residual chlorine requires that the minimum level be no greater than 0.05 mg/L (see Tentative Order). Section 4.2 of the Regional Water Board's November 2020 Final Staff Report contains some guidance, stating that "To derive a ML where promulgated MLs are not available, [use] a multiplication factor of 3.18 and the method detection limit (MDL)."
12.	Which MDL, RL, and/or ML values should be reported in electronic self-monitoring reports?	Although CIWQS can accept either an RL or an ML, reporting requirements are based on your permit. Most NPDES permits contain a requirement within Attachment E to report the MDL and RL , not the ML (sample language from Order R2-2023-0018: "The Discharger shall report with each sample result the Reporting Level (RL) and Method Detection Limit (MDL) as determined by the procedure in 40 C.F.R. part 136.")
		Report the actual laboratory RL with every sample result. Do not report the SIP ML.