

Committee Request for Board Action: None

Regular meeting: 34 attendees via Zoom representing 23 agencies and the Regional Water Board

Ion Chromatography for Anaerobic Digestion Process Monitoring

Dr. Xin Xu, EBMUD, presented “[Developing A Better Method for Anaerobic Digestion Process Monitoring at a Large Wastewater Treatment Plant.](#)” Her presentation covered background information about EBMUD’s facilities, and explained why the laboratory was seeking to find an alternative to SM 5560 for Volatile Acids (the method used by most BACWA member agencies). SM 5560 is time-consuming and produces heated waste and chemical waste streams, requiring 6 hours to process a batch of 8 samples. Earlier in 2022, the EBMUD laboratory performed method validation for a different method to replace SM 5560: Volatile Fatty Acids (VFA) via ion chromatography. While SM 5560 produces just one value for total Volatile Acids, the ion chromatography method for VFA produces separate results for eight fatty acids. VFAs can be used to calculate additional indicators for anaerobic digestion that are particularly useful in thermophilic digestors, which have a shorter digestion time. Dr. Xu’s presentation also covered the following points:

- How EBMUD met the method validation requirements, including sensitivity and accuracy. The VFA method is significantly more sensitive than SM 5560 (MDLs and RLs are more than 10 times lower).
- Analytical workflow for processing samples, which takes about half the time compared to SM 5560
- Tests to determine how often to change the ultrafiltration filter (1/week). Using Cu preservation helps suspended solids removal and extends filter usage.
- EBMUD observed that the quantified value of VFAs was significantly lower than Volatile Acids via SM 5560. The reason for the discrepancy is the subject of ongoing work.

Member Updates

- The group discussed supply chain disruptions affecting helium. Although EPA allows labs to use an alternate carrier gas, hydrogen has additional safety considerations that preclude its use in some labs.
- Several labs are sending samples out for wastewater surveillance of Monkeypox. The group also discussed whether wastewater workers should receive the Monkeypox vaccine.
- A new version of the PET tool is available from the State Water Board. The Excel file (with macros) is available here: [blank_pet_tool_2022.xlsm](#).
- Members discussed reputable vendors for oil & grease extractors
- There was a general discussion about employee hiring and retention.

BACWA Updates (see [slide deck](#))

- EPA approval of the chlorine blanket permit amendment is at least six months away, as the EPA needs to conduct a formal consultation with US Fish & Wildlife Service (USFWS).
- Kerry O’Connor from the Regional Water Board noted during the meeting that the Statewide toxicity provisions are also delayed while EPA decides whether an informal consultation with USFWS is required (Note, the slide deck above has been corrected). Going forward, new NPDES permits are expected to contain the new language, with a trigger that makes the new language effective following EPA approval.
- The administrative draft version of the Mercury/PCB watershed permit will be available for a three-week review starting on August 22. BACWA has submitted a request for a reduced monitoring frequency for PCB congeners.

TNI Training and Implementation

- The 14th TNI training session with Diane Lawver is scheduled for Tuesday, August 16th. Recordings of previous sessions are available through the [BACWA website](#) (password required).
- CWEA Laboratory Committee is hosting an [ELAP TNI Workshop](#) September 12-13 at FSSD, led by Bill Ray.

Next Regular Meeting : October 11, 2022, 10 AM – 12 PM via Zoom

Planned Guest Speakers at Upcoming Meetings:

October 11, 2022 – Diane Lawver, IR Guns