

## QAAG Spring Meeting Minutes

Approved unanimously via Survey on 5/16/22

April 1, 2022

### Attendees:

WSLH: Camille Danielson, Martin Schafer, Bob Larson, Richard Tanabe, Katie Blaydes (New QAAG Member), Amy Mager, Christa Dahman (Guest), Dana Grabowski, Wyatt Sherlock (New QAAG Member)

US EPA: Melissa Puchalski, Tim Sharac

NOAA: Winston Luke

EEMS: Maria Jones, Eric Hebert

Wood: Marcus Stewart

ECCC: Jason O'Brien, Cheryl Sue

USGS: Greg Wetherbee

### 1. Site Support (Eric)

- a. **Site Audits** – just starting this option period so on-schedule
- b. **AMNet Plan** – Eric is in Madison picking up equipment and receiving training from Mark O. Will plan to do 3 AMNet audits this year (Beltsville will be the 1<sup>st</sup> audit)
- c. **Lingering field issues** – hoping to be able to eliminate siting criteria that have been identified as unnecessary.
  - i. **Annual Report (Maria)** – Since no decisions have been made on siting criteria EEMS should use existing siting criteria. Emphasis should be placed on updating the criteria. Maria can include proposed changes in the annual report noting that they aren't final. For example, 30 deg violation for trees – it should be a rule, but it's a guideline. They often include guidelines and rules if it impacts data quality (debris in a sample).
  - ii. Tim should do a strawman proposal for updating siting criteria that need to be changed. Tim has time in NOS and should note that he's working on changes.

### 2. Site Operations (Richard)

- a. **Overall Update** – new Instrument specialist in the NED helping Wyatt. Will be training him on repairs (i.e. motor boxes). Well qualified and will free up Wyatt's time to focus on AMNet and data review.
  - i. Requesting AMNet data more frequently – hopefully quarterly
- b. **AMoN Shelter Audits** – Richard developed a plan 2 years ago, but hasn't rolled out yet. Richard is freeing up his time to focus on field survey issues. Update to the 800 number so it rings to Richard, Wyatt and then rolls to voicemail which is emailed to Richard and Wyatt.
- c. **Virtual Site Surveys (Winston & Richard)** – Asking operators to take photos and upload them to the PO to address field issues quickly. Aiming for 10 questions for the operator focusing on issues that aren't captured on the FORF. Richard will send out a test version to operators that are responsive and present results at the spring meeting. Camille suggests including operators that aren't responsive as just seeing the pictures of how the components should look may help them to make improvements.

- i. Thinking about how to use these for troubleshooting issues at the site as well. Having example photos to provide operators of how the photo should be taken to effectively troubleshoot.

### 3. External QA Update (Greg) – 2021 Results

#### a. HAL

- i. Negative bias for the HAL, possibly corrected in November. High variability (~200% higher than other labs). Hg network max contamination 0.09 ng/sample
- ii. Christa: removing an aliquot from the bottle and brominating for PT samples. In November they started brominating in the bottle so hopefully the issue is resolved. Still implications for MeHg and optimistic that it didn't impact MDN samples (brominated in the bottle).

#### b. NTN

- i. Positive, statistically significant bias for H<sup>+</sup> and NO<sub>3</sub>. Low variability for Ca, Na, K, NH<sub>4</sub>, SO<sub>4</sub> and specific conductance, higher for Mg, Cl, NO<sub>3</sub>, and pH. (as compared to labs participating)
- ii. 3-year moving network max contamination: Field audit results show Ca and Mg contamination are up slightly – potentially caused by the bags/handling of the bags. All other analytes are down.
- iii. Overall network variability for OK00 and TX56 was < 10% for all analytes. Co-located sampling ending at these two sites this spring. Some large % differences but for analytes at very low concentrations
- iv. April samples for H<sup>+</sup> were out of control

#### c. Publications

- i. 2021 QA report awaiting approval, USGS Scientific Investigations Map – Atm Deposition of Inorganic N at the Rocky Flats NWR, 2017-2019
- ii. Data are published in USGS database
- iii. Dave Felix has 15N-NH<sub>3</sub> article in preparation

#### d. Transition

- i. Select new USGS project chief & office, training and attending meetings
- ii. FY24 – handing project over to new project chief

### 4. Lab Investigation Projects (Katie)

- a. **TN TP Testing** – SNIpIT negative organic fraction for both total N and total P. located at Duke Forest and arboretum. Katie just analyzed another batch in early March. All came out with negative bias again. Samples may be over-acidified. Will conduct a pH study and hopeful that at the fall meeting there will be better news.

### 5. DQO Update (Martin)

- a. Identified 5 workgroups after the workshop last year
- b. Overall network uncertainties will start meeting after the spring meeting and pulling together the data in a systematic way. Will also tease out laboratory data to evaluate uncertainties. No plans to collect new data at this point.
- c. Will pull in a statistic group from campus to help with the analysis

6. **Siting Criteria (Tim)** – creating pass/fail criteria. When there is a siting criteria violation does it impact data completeness (data being invalidated). About 12 siting criteria can be evaluated in using this analysis. Finding few differences in % invalid data and siting criteria violations.
  - a. Only statistically significant violation was collector distance to road but only 4 sites failed.
  - b. Found data quality is improving if collector distance to vegetation is violated.
  - c. Found western sites have higher number of invalid data
  - d. Camille suggests using EEMS field knowledge for prioritizing the criteria to evaluate going forward since the statistical analysis isn't providing a 'smoking gun'
  - e. Greg and Tim will spend more time reviewing the plots and conclusions from the statistical analysis. Greg found a similar result with respect to collector distance to vegetation so good case for removing this as siting criteria.
  - f. Important to apply common sense to this analysis to identify the most important criteria to evaluate going forward
  - g. Don't want to go down the path of adding notes codes to the data based on siting criteria
7. **External Review Summary (Camille)**
  - a. Confusion over notes codes on the preliminary reports and what's posted on the website. Identified that the website is actually correct, but they have also been working to improve notes codes and flagging.
  - b. Null data being posted to the web – many updates taking place as they revise the API to push data to the website
  - c. Coding not well defined between PO and lab. Asking for clarification from QAAG on how data should be reviewed. This impacts a lot of samples.
    - i. Need to identify times when event recorder is off or power is off – samples are not representative and shouldn't be "B" coded.
    - ii. May be "C" coding a lot of samples but that's the correct way to do it if the sample isn't collected appropriately
    - iii. Probably 40 sites that don't have ER data being transferred. A lot of samples to invalidate. Often a wiring issue. Harder to get the ER working with the electronic raingage but should focus on this with the field team.
    - iv. MDN – only invalidate if they capture < 10% of the available sample or not enough for analysis, NTN – only invalidate for dry sample. No criteria for missed exposure.
    - v. Can you invalidate before going to the website? DMAG issue? Missing documentation from the transition – data validation procedures were not transferred and things slipped through the cracks. Compare samples from ISWS and WSLH to see where there may be things that are uncaught and not being done (rounding issue).
    - vi. Move to post-NOS or DMAG
  - d. Missing written SOPs for data review – Bob and David are working on a draft document. Share data transfer SOP with QAAG even though it isn't final.
  - e. Missing AMoN data from 2017 – data were not transferred. Trying to find an approach to identify missing data using scripts
  - f. Detailed change log – network changes – conceptual at this point.
  - g. Documentation of the LIMS. Working on SQL code

- h. LIMS in VB.NET – developing in C sharp, will take time to modernize everything.
  - i. PDAs need to be phased out. EEMS is helping with this transition
8. **Lab QA – review major occurrences (Camille)** – tracking issues that occur in the OM System
- a. Should Br data be made available – provide 1-year of data using IC method without interference. Martin suggests making “on request” because not sure how much are above MDL. Greg suggests storing the data and making it available on request because no one has bandwidth to review.
  - b. Having issues with filter blanks – purchased new filter equipment and seems to have corrected the issue.
  - c. Corning 1L PETG not fitting in the thistle tubes
  - d. Unable to get 1L bottles so will exceed the 10 use criteria, similar with pipette tips
  - e. Working on making consistent notes codes for all networks. Present note codes for MLN during NOS. Probably don’t need approval as long as its presented to the subcommittee.
  - f. Camille will send the laboratory QAP for review and approval
  - g. Continuing to deal with supply issues and difficult to predict what will be delayed
  - h. Data should be consistently rounded for all networks (not truncated)
9. **System Blank & Field Audit (Amy)** – lab will send out system blank and field blanks to sites. More efficient if the WSLH sends these samples. Held a training with the operators last week. Using USGS schedule for shipping the system blanks. Hope to have supplies ready to go out by the end of April. Greg will still be reviewing the data and identifying sites that haven’t submitted their QC samples.
10. **Bag Procurement (Amy)** – new bags were shipped today from VINS. Have enough supply through the end of 2022. Testing another version of the sampling bag (thinner and easier to use). Issues with new bags – hoping they were making these bags under clean conditions, but that didn’t happen.
- a. Might be able work with ECCC lab on testing the new bags
11. **PFAS Bag Testing (Martin)** – performed another round of testing on the existing bags for blanks and spikes. In-use bags are clean – none of the 36 compounds are seen in the blanks but do see losses in the current bags.
- a. Some additional testing to look at stability as part of a larger study
  - b. Not feasible to move to bags for the PFAS sites at this time and will have to conduct another study if CAL moves to different bags after testing
12. Field Hold Times & Lab Hold Times (Zac)
13. **Archive (Amy)** – issue in the 5-year cooler (temperature increased). Too many samples so air flow is not great. Potentially reduce the number of years being held.
- a. Next week they will be analyzing the 4-year samples from the stability study
14. **PO Review (Greg)** – trying to do this with the budget committee in July but those may be virtual. Review team could be in Madison for both. Greg will identify people that could do this from the budget committee.