

NADP QAAG Minutes
Tuesday, April 9th, 2024
11:00 AM – 1:00 PM Central

Join via MS Teams

Attendance: Greg Beachley, Katie Blaydes, Christa Dahman, Noel Deyette, Dana Grabowski, Eric Hebert, Mark Kuether, Amy Mager, Nichole Miller, Zac Najacht, Jason O'Brien, Melissa Puchalski, Martin Shafer, Tim Sharac, Marcus Stewart, Cheryl Sue, Richard Tanabe, Greg Wetherbee

1. Site Support Issues/Questions – *Eric*

- a. Update on EEMS Site Audits
Trying to keep schedule in line with the EPA budget – going well.
- b. AMNet Audits
Vid Grande is on track with these. Working to set up a meeting with David G. and Richard T. to discuss budget to make sure we are okay with the expected cost. There will be some changes from last year, but don't anticipate any problems.
- c. Criteria not evaluated during site audits discussion:
 - Chemical manufacturing facilities within 20 km of the site
 - Electric generating stations within 20 km of the site
 - Major NH₃ emission sources within 20 km of the site
 - Mining operations within 20 km of the siteThese criteria are part of the site initiation process. When the site is installed, the sponsor or supervisor fills out the questionnaire, but we don't go back and check these criteria later on. Discussion on if these points (or any others on the complete list of questions) are in the scope of site audits. Noel D. brought up the point that surrounding spaces can change after the site has been installed, so these should still be criteria to consider. Maybe we can ask site operators about these criteria on some sort of basis. Greg W. agrees and brought up the changes in the data that can occur if these criteria change. Also, discussed possibly having the USGS QA program look into changes to sites' surroundings.
- d. Siting criteria on the web discussion
Tim S. drafted two spreadsheets for the website. One is just criteria violations and the other is all of the siting criteria (pass and fail). Site sponsors/operators can go and check the status of their sites. No edits requested to the spreadsheets and will work with Richard to get them onto the website (done as of 4/12/24).

2. Site Operations – *Richard*

- a. Overall Update
Reduced site support staff by 50% in January. Working on trying to do a better job with identifying sites that are not performing well and may be in jeopardy based on number of samples coming back. Discussing a "prime membership" to get replacement parts out quicker to sites to lessen downtime. Also, considering the maps and how each site will affect the completeness of the map if removed. Tim made some great maps that use Thiessen polygons to measure the distance between each site. The larger the polygon, the greater the impact on the maps if removed.

3. Wind Rose Plot Survey Participation – *Tim*

Virtually unanimous votes across the board (besides MT95). Pass this along to site sponsors (via the PO) so they can see if their site has been granted the option to have a waiver to change the direction of their collector or not. If they get a waiver, will let them know which direction they should face the collector and then Eric (and EEMS) can confirm during site audits. Martin asked if there is a way to let the data users know of this type of change. Could create a separate table/spreadsheet on the data download page logging these changes to the site operations. This spreadsheet could be expanded to include more than just collector orientation changes (examples: ACM to NCON, switched sensors, windshields...). Tim, Greg, Mark K., and Dana will work on this item.

Zac N. brought up a similar item that has been implemented for data. There is now a change log on the webpage that Mark updates anytime he edits data on the web. Greg asked about the frequency of these updates and Mark made the comment that it currently isn't on a schedule it is more of an on demand situation. Large data set changes are accompanied by a listserv email or notice on the website. Smaller edits just go in the change log with more detail of the change.

4. External QA Update – *Noel*

No formal report – still getting data back from a few labs, so no time to compile it. Will have a presentation during the Spring Meeting of last year's data set. There was the loss of one lab for the NTN intercomparison project and loss of one for the MDN project, but gain of two labs for the MDN portion, so a net gain of one lab for the MDN interlab program.

5. System Blank and Field Audit – *Amy/Zac/Noel*

- a. Current operations
- b. Any changes needed?

The first half of the Field audit samples have been sent out for the year from USGS. The remaining half is set to be sent out in July. System blank samples will be sent out soon (mid-summer?) from WSLH.

6. Sampler Colocation Update – *Noel*

Have the data from Mark for the colocation sites; that will be discussed at the Spring Meeting.

7. Lab Investigation Projects (current and upcoming)

a. Hg Passive Samplers (*Martin/Christa*)

Recap – low bias, but fairly certain that it is related to the sampling period being too short for the concentration of mercury that we are trying to measure. Gathering all of the information/data from our interlab comparison. Our individual samples were in almost perfect agreement with Winston's measurements. Full presentation in MELD.

b. Two Week MDN Sampling (*Martin/Christa*)

No analytical updates; looking for feedback for next steps or if it is still something the group would like to pursue. Recap – full year of one week vs. two week sampling comparison done at the Arboretum site (WI06). This resulted in great agreement. Need to do additional testing in other climates for analytical validity. Other items to consider/share feedback on:

- Issues with the maps (one weeks vs. two weeks)
- What if there is a mixture of one week vs. two weeks among sites
- How long to do further testing

Greg discussed possibly doing testing at a Colorado site (Fort Collins restart?) – not confirmed. Further discussion in MELD.

- c. **TN/TP (Katie)**
Recap -still troubleshooting the over acidification problem with the low volume samples (below 50 mLs). Currently working on a base titration procedure with NaOH. This process does correct the issue for TN, but has caused issues with TP. Thought it could be some type of contamination or interference in the method. Attempted a dilution correction back up to 50 mLs but not successful due to over dilution. Potential updates to the SNIpIT sampler due to issues with the ACMs. There will be a full presentation during TDep on Monday (Spring Meeting). Noel mentioned to try and run them on a Discrete Analyzer. Greg suggested we run TN on the FIA and find a different option for TP – dry deposition? Katie mentioned the thought that we can just have the caveat that we can only measure TP if the sample is above 50 mLs. Or we can attempt a two week sampling period to increase potential sample volume.
 - d. **AMoN Alpha Samplers (Katie)**
Recap – doing research on the Alpha samplers as a cost saving initiative for AMoN. The supplies are much cheaper and the cleaning process is much less intensive/time consuming. Currently doing some collocation testing at Ag. Having issues producing the results that are in the literature. We have been getting a consistent low bias with the Alphas – anywhere from 18-30%. The literature actually shows the opposite – low bias of the Radiellos. Greg suggested talking with Joseph Felix (Texas A&M) who has experience with the Alphas for measuring isotopes.
 - e. **MDN Bag Testing (Richard)**
Reached out to Degage (who make the NTN bags) and they aren't able to produce what we need. David has possibly found another company that may be able to make them. They specialize in PETG bags. Also it has been discussed that we probably can't make one bag that fits both types of collectors – will need two bag types.
- 8. Lab QA Issues Update – Nichole**
- a. **Future of our FIA instrument**
Katie discussed the options we are exploring for when the Hach FIA is no longer supported (2025). Currently looking at the FIALab and the Seal instruments. Hopeful we can purchase a new system next year. Open to any input from others that use these types of instrumentation.
- 9. PFAS QA – Martin**
- a. **Network Field QA**
Field and lab testing on bag sampling was completed and they performed remarkably well. The implementation of bags also allows operators to get rid of the methanol rinse which reduces the field work. Now all PFAS sites are in bags and there are close to 30 sites across the country at this point. Currently doing a trip blank, field process blank, and spike for QC quarterly. All QC is looking good. Sites will be informed that they do not have to return their sampling bags to the lab anymore. We have over 1400 PFAS collections and 400 QC samples. Data release pretty soon.
- 10. Data Review – Zac/Dana/Mark**
- a. **Streamlining NTN data review**
Working on changing the process of NTN data review. Currently open all samples to confirm coding to validate or invalidate samples. This new process reduces the amount of samples that will need to be opened to review. Not reviewing samples that are coded in such that they will

always remain an A or C – i.e. valid or invalid won't change. Will review those samples that may go from an A or a B to a C – i.e. valid to invalid. The APHL fellow Jean Steele has been working on monthly sets and for one month she only had to open 374 samples out of 1029. This improvement could save quite a bit of time. Currently in the testing phase and we will compare with our old method for a bit to make sure data isn't being affected by it.

11. QA Documents – Nichole

a. NADP Lab QAR 2022

The 2022 QAR has been sent out to QAAG for review and approval. Vote on the report by 5/10/2024.

12. Audits – Nichole

a. Internal Audit (System and Method) – Results

Internal audits were completed last fall/winter and passed around to management for corrective action on a handful of items. Nothing too concerning came from the audit. Examples – update all forms and SOPs used at desktops, updating and writing a few SOPs, delayed data turnaround times into LIMS, and staffing and cross coverage issues. Will share copies if requested.

b. External Audit – 2024?

Working on planning the external audit (lab and PO). Will discuss a good time for the NADP staff and then reach out to QAAG to see if anyone has the ability to come in person for an audit – preferred over virtual audit.

13. MDL Updates – Nichole

No change to the MDLs (both lab and network) for all platforms and networks for 2024.

Minor discussion about USGS sites having to stop using telemetry for their sites due to internal data review publicly availability issues. Greg requested a few data and precipitation review SOPs to share with his management.