National Atmospheric Deposition Program (NADP)
Quality Assurance Advisory Group (QAAG)
Agenda: October 18th, 2024
Co-chairs: Nichole Miller, Martin Shafer

NADP QAAG Agenda
Tuesday, October 15th, 2024
10:00 AM – 12:00 PM Central
Join via MS Teams

Attendance: Greg Beachley, Katie Blaydes, Abby Carr, Noel Deyette, Dana Grabowski, Eric Hebert, Mark Kuether, Winston Luke, 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** – *EEMS/PO*
    a. Update on EEMS Site Audits – Slight delay this past month due to weather and road closures, but getting them rescheduled for later this year. One of the mobile labs also broke down, which took a week out of the schedule to repair. Still on schedule for the year.
    The second quarter 2024 audit data was passed along to Richard T. and EPA for formatting review since it is now in the new database format.
    b. AMNet Audits – Vid has one more site on schedule for the year and is taking care of data review.
2. **Site Operations** – *Richard*
    a. Overall Update – Some delays for site affected by Hurricane Helene and Milton. NC45 lost road access, trying a different route. FL41 all equipment intact, but sending out a replacement battery. Looking to upgrade their shed which houses the power.
    EEMS monthly meetings are being scheduled again.
3. **External Audit** – *Noel*
    External review was conducted on October 1st and 2nd by Ryan McCammon, Noel Deyette, Sarah Janssen, Tracy Dombek, Michael Butler, Kevin Mishoe, Brian Izbicki, and Yongqiang Liu. The group is working to write up the findings and hope to have a draft done by mid to late November.
4. **PCQA Update** – *Noel*
    a. Current and potential future participants – currently 10 NTN participating laboratories, some shipping hold ups with Canadian labs, and 8 MDN participating laboratories.
    Change NTN to quarterly - Proposed change to NTN from monthly to quarterly, the same as MDN. There are some sites that can't get regular shipments so samples are held currently/not being analyzed in a timely manner. This could improve quality of data and reduce shipping costs. Could also increase the number of samples in a shipment to maintain a large sample set. Noel will send out a survey for feedback.
    b. FA/SB programs – Historically we get 50-60% participation in this program. Proposing a change to send to the sites we know will participate, reaching out to operators more, or reducing to sending half.
    c. Wind shield installment – Review sites to see if more need windshields and update the map on the webpage.
5. **Sampler Colocation Update** – *Noel*
    a. Two-week sampling period study – NY20 is actively doing the two-week sampling period and the operator states operations are going well. This was set to last until July 2025. Thoughts on going forward. Select new site? Different climate? Strong interest in continuing the investigation of two-week sampling as a future cost saving effort.
6. **Lab Investigation Projects (current and upcoming)**
    a. Hg Passive Samplers *(Christa)* – Christa will present updates at MELD during the Fall 2024 meeting.

b. TN/TP *(Katie)* – Worked through the over acidification issue on low volume samples by reducing the concentration of the sulfuric acid for pre-charge. This has also allowed us to successfully analyze with a minimum of 20 mls (used to be 50mls) for TN; TP still has some issues. Have switched over to trying to run TP on the ICP-OES and it looks promising. These are unfiltered samples with a full digestion method using nitric acid. Still working on the laboratory comparison study with NPS and CSU.
Greg W. suggested the option of using two SNIPiT collectors at the site to control the acidification issue. Confirmed it is possible to fit them both on the collector. Will look into that option.

c. AMoN Alpha Samplers *(Katie)* – We are starting a collocated study for the ALPHA and Radiello samplers. There will be 10 sites in this study across all climates and one international. Each site will receive a duplicate and travel blank sampler for both supply types throughout this study. The first deployment will be 11/19/2024 and the plan is to continue the study for 9 months to try and capture the seasonality. A rough estimate shows that switching to the ALPHA samplers could save $46,000 in total network costs, $513 per site per year, ~$20 per two-week deployment. Also testing switching from shipping samplers in glass jars to antistatic bags (which have already been approved for use).
Jason O. – Question about sampling rate differences between ALPHAs and Radiellos. ALPHAs sample at about 75 ml/min and Radiello is closer to 200 ml/min. Concerns about the impact to samples around detection limit or raising the MDL. Thoughts on monthly samples?
Greg W. – Concerns with the length of the study and making a decision by Spring 2026 may be too long. Consider bringing data to Spring 2025, making a decision then, and continue the study through August to confirm.

d. MDN Bag Testing – David will discuss this at MELD. Currently in talks with three companies about a bag (Impact, Degage, VINS). Moving forward with Impact.

7. **Lab Updates** – *Nichole*

a. Future of our FIA instrument – Looking at the SEAL AA-3 segmented flow auto analyzer to replace our FIA Lachat. Purchase has been approved and will likely move forward by the beginning of 2025. Will replace one Lachat to start.

b. Changed the naming system of NTN samples – Starting in March 2024, the nomenclature of NTN samples switched from AA1234SW to T24000000, where the leading two numbers are the year.

c. Implemented rinse on pH probe – We had a few PT samples that were flagged high for pH and they were investigated. It seemed like it was a potential carryover issue since the samples before them were high pH values. When reanalyzed, the PT values were much more in line with the expected value. Did a small study to try and pinpoint the value that causes the issue. Decided to implement a rinse of Type I water after any pH reading of 6.8 or higher.

8. **PFAS** – *Martin*

a. General update – All sites are now using bags. About 13 EPA funded sites, 13 USDS funded sites, 6 NJ DEP sites and a few miscellaneous. So about 30 PFAS sites in total. ~1500 total samples collected over the last couple years.

b. Network Field QA – Continuing with trip blanks, field blanks, and spikes on a quarterly basis. The sites also return the bags on a quarterly basis for analysis. ~500 QC samples of the ~1500 total PFAS samples collected. No concerns with the blanks.
Greg W. – Is there any type of participation in external PT programs?
Martin S. – No. If there is a program that meets our needs (sub nanogram natural samples) we would like to be a part of it.
Melissa P. (chat) – IADN and NC (they have their own precip network) are participating this fall. I think this is an opportunity to talk about lab comparisons.

9. **Data Review** – *Zac/Dana/Mark*
    a. Streamlining NTN data review – Moving away from the linear process to a branched approach. Also reducing the number of samples that are opened for a deeper review. Used to open all of them, now only review B coded samples. At the beginning of April 2024, this new process was started with the August 2023 data set. We have moved through 9 months of data in a 6-month time frame. The process has sped up as more people are trained and become efficient in their roles. It now takes about 2-3 weeks to review a monthly data set. We should be at our 90 day TAT goal by the end of December 2024. Jean Steele (APHL Fellow), Cameron Ritonia, and Maya Giordano are all now involved in this process.
10. **QA Documents** – *Nichole*
    a. NADP Lab QAR 2023 – The 2023 QAR was sent out for external review and approval at the beginning of October and the deadline is November 8th.
11. **Uncertainty Measurements** – *Nichole*

    One of the findings during the internal audit in fall 2023 was the DQO initiative. Trying to get a start on this process by looking at measuring uncertainty. This would involve field (rain gauge) and lab (analytical). Still in the starting phase. Will hopefully have something tangible soon.
12. **Archive Project –** *Nichole*

    The last set of samples from the archive project (fridge/freezer study) were run in April 2024. No trends visible on a broad look at the data. Will run some basic statistics to see if anything pops up. The long-term plan is to get a robust set of statistics on this data set and write a paper. May look to get some help with the statistics from a UW student or APHL.
13. **Additional Discussion**

    Zac N. – FedEx federal rates have been in place since January 2024. From the front end it seems like packages are dropping from $16 to $9 on average. David should know the total cost savings on the back end. Have also seen cost savings on the new AMoN boxes which are hand stamped with our label rather than factory printed. Finally, there has been a change in the PFAS procedure, aliquoting and spiking samples from the 1L NTN sample bottle, so we can now keep those bottles in our rotation for the intended 10 uses. Those bottles cost ~$7.50 each.