

NADP QAAG Minutes
Tuesday October 19, 2021
1:00 PM – 3:30 PM CDT
(11:00 AM PDT, 12:00 PM MDT, 2:00 PM EDT)
Join WEBEX/Roll Call

Members Present: Camille Danielson, Martin Shafer, Mark Olson, Chris Worley, Amy Mager, Richard Tanabe, Bob Larson, Zac Najacht, Dana Grabowski, Greg Wetherbee, Eric Hebert, Tim Sharac, Melissa Puchalski, Greg Beachley, Cheryl Sue, Winston Luke, Marcus Stewart, Jason O'Brien
Minutes by: Dana Grabowski

Brief Updates/Brief Discussion

1. **Site Support** Issues/Questions – *EEMS/PO*
 - a. Update on Site Audits
 - i. Eric noted audits are on track, AK97 will be postponed until next year due to inability to travel there this year.
2. **Wind screens** – should they be allowed around the NTN and MDN collectors to improve capture efficiency. It would violate siting criteria but would it assist very windy sites make the map and therefore negate the siting criteria violation? *Tim/Winston*
 - a. Mark brought up a potential concern for contamination of samples with wind screens, especially for MDN
 - b. Greg asked whether we should make exceptions for certain sites such as CO02 which is already using a wind screen on the collector and gage.
 - c. No motion made but Martin suggested a workgroup, which will consist of Greg W, Winston, Tim, Mark, Martin and Dana.
3. **Siting Criteria** Quick Update - *Tim*
 - a. How can we use the siting criteria analysis to tease out impacts to sample chemistry, collection and/or precipitation capture efficiency, and site operator/equipment malfunction problems.
 - b. How should these non-siting criteria violation problems be sorted out in QAAG?
 - i. Zac mentioned that our new instrumentation specialist, Wyatt Sherlock, will begin working on site operation issues as a part of the data review process earlier on. He has already begun contacting site operators regarding trouble tickets. Weekly precip review also addresses major site and equipment issues.
4. **Lab Investigation Projects** – *Chris*
 - a. TN TP testing Brief Update
 - i. Will be covered in TDEP next week
 1. Chris said the recovery testing is looking good. Twenty plus NTN samples, data looks promising but more work to do.
 2. Deployed SNIpIT at WI06, 10 samples, bit of an issue with negative values for total -minus- (N-NO3+N-NH4) nitrogen that has to be investigated.
 3. Two SNIpITs were sent to John Walker to deploy and send samples to us.
 - b. Radiello re-use – potential study for outside research
 - i. Chris said there has been difficulty with the coating process, big discrepancies with the “Radiello core” vs “CAL-dipped core”.

- ii. Chris spoke to Chris Lehman from Illinois who went to Radiello in Italy and said they have a special process for spray coating the cores.
- iii. Will re-assess how we want to continue – this could be a good research project for students or an agency to lead.

5. **External QA Update - Greg**

a. CAL/HAL Review

- i. Greg said most of the findings were within data review, data coding and transitioning data to the web.
 - 1. Review flagging for AMoN
 - 2. Find and correct Null values for AMoN
 - 3. Disconnect between precip data and coding, if no precip data is available samples are still being coded as valid without knowing the status or quality of the collector.
 - 4. IT – SOPs for database editing need to be created
 - 5. Update LIMs to a newer language
 - 6. Replace PDAs in the field with Androids

b. Other?

- i. Greg said 2 PCQA programs will be transferred to CAL and HAL. Field blanks for NTN and System Blanks for NTN will be transferred to the labs in 2022. NTN about 100 samples/year, and MDN 80 samples / year.
- ii. USGS Water Science Centers in NY or Wisconsin are interested in taking over the intercomparison projects. Possible transition in 2023.

6. **DQO Update – Martin**

- a. Not much progress – plan to restart in 2022
 - i. Martin reported that a summit was held in 1/2021, followed by a survey. A list of workgroups was created. Looking to re-group in early 2022.

7. Move of NTN and MDN **FIELD QC** (DF/DK) to CAL/HAL – USGS will continue to handle the laboratory intercomparison studies. *Camille*

- a. Camille said field QC might not start in January 2022 but in first quarter of 2022

8. **Lab QA Issues Update Camille**

- a. Skipped due to time

9. Litterfall **Oven Drying** Brief Update– *Mark*

- a. Will be covered in MELD
 - i. Oven drying vs freeze drying will be proposed in MELD
 - ii. Sub-sampling was tested but will not be proposed

10. An update on where we are going with **bag procurement** and validation *Chris*

- a. New type of bag that is manufactured differently would save ~\$4,000/yr and be thinner, Chris has ordered 100 bags for testing and we will explore this option
- b. ECCC is ordering this kind of bag as well and their initial studies were shared with the CAL and did not show any major concerns

11. An update on **PFAS bag testing** – *Martin or Mark*

- a. The initial PFAS Bag testing study was inconclusive, one blank was slightly high and one spike slightly low.
 - b. A second study was performed from 10/10 – 10/18/2021. The test consisted of five blanks, three low level spikes and three high level spikes.
 - c. Data will be presented at the Spring meeting
 - d. Martin said the best material for PFAS is polypropylene and glass is not acceptable
12. Heads-up about planned **MeHg motions** – *Mark or Martin*
- a. Monthly subsampling has been replaced with weekly to assess value of Methyl Hg in precipitation.
 - b. About 25% of the data has been analyzed, no motions at the Fall meeting, maybe in the Spring
13. Brief summary of **Hg field QA** experiments – *Mark*
- a. Taking over system blanks for MDN in 2022
 - b. Not any current QA projects due to lack of staff.

Discussion

14. Field Hold Times and Lab Hold Times Changing the coding criteria for NTN, AMoN and MDN – *Zac/CGD Motion*

- a. Current field hold times for NTN and MDN are almost backwards and NTN is lacking a way to automatically code for late field hold times.
- b. The proposal is to add coding and hold times to AMoN, add field deployment times to MDN and AMoN and adjust the field and lab hold times for MDN and NTN
- c. Mark motioned to approve the proposal to add coding and hold times to AMoN, add field deployment times to MDN and AMoN and adjust the field and lab hold times for MDN and NTN per this chart:

PROPOSED					
Network	Preserv.	Prep	Field Deployment Time Flagged	Field Hold Time Flagged Receipt >	Lab Hold Time Flagged Analysis >
NTN	4-6°C (at lab)	Filtration	>194 hours = QRC	>16 days after off date = QRB >30 days after off date = QRC	>30 days from receipt = QRB
AMoN	Frozen (at lab)	Extraction	>360 hours = QRB >720 hours = QRC	>30 days after off date = QRB >60 days after off date = QRC	>30 days from receipt = QRB
MDN	1% HCl (in field)	Oxidation/ Distillation	>194 hours = QRB >360 hours = QRC	>16 days after off date = QRB >60 days after off date = QRC	>60 days from receipt = QRB

- d. Greg seconded, motion carries and will move to Joint
- e. Suggested converting either all times to hours or days

15. **QA Documents** Potential Approvals - *Camille - Motion*

- a. CAL 2020 QAR Approval
- b. HAL 2020 QAR Approval
- c. AMNet 2019/2020 QAR Approval
- d. NADP QMP Approval
 - i. Greg moved to approve all 4 documents with the provision to modify with suggested changes that are received by Camille Danielson by COB 10/22/21
 - ii. Winston seconded and motion carried.

16. Propose moving toward **consistent web reporting** of all networks – report all as either Valid or Invalid with notes codes for ALL samples (as applicable) to indicate any issues with the sample. *Camille - Motion*

- a. Propose no reporting on the web (or preliminary reports eventually?) of A, B C codes – for any network – instead Valid (former A and B) and Invalid (former C) with clear application of the notes codes for all samples – so even Valid samples will have notes codes “Qualifiers”
 - i. Camille noted that this would be more clear to customers who use the data
 - ii. Greg would like to have more data available via the web, such as precip type and other data that would be useful to the data user
 - iii. Bob said we do not provide precip type because daily precip is not currently reported on the web and there are two different precip systems between NTN and MDN. Daily precip with precip type will be released on the web in the future.
 - iv. The preliminary reports will stay the same for now with A, B, C codes
 - v. Bob mentioned that the new website has invalid data as an option.
 - vi. Camille motioned to approve Reporting all data on the website for all networks as Valid or Invalid and to present all qualifiers (notes codes) for all samples (both valid and invalid) so that data users have information to make decisions on usage of the data.
 - vii. Greg seconded
 - viii. Motion carries

17. **AMoN Field QC Reduction** – *Camille - Motion*

- a. Camille mentioned 95% of duplicates had Absolute Difference (AD) $< 0.25 \mu\text{g}/\text{m}^3$ NH_3 , has been consistent the last 3 years, all below $0.4 \mu\text{g}/\text{m}^3$ Ammonia criteria.
- b. There is a possible seasonal variation between core blank prep and travel blanks
- c. The new plan is for minimum of three duplicate sets, 3 travel blanks per site per year, sites can pay extra for more. This should save ~\$10,000 on supplies per years and add the capacity for 10 new sites
- d. New criteria to assess duplicates – 90% must have AD $< 0.1 \text{ mg}/\text{L}$ NH_4 . New criteria to assess travel blanks – 90% concentration $< 0.1 \text{ mg}/\text{L}$ NH_4 . Criteria will be evaluated quarterly.
- e. Jason mentioned that for the travel blanks CAPMoN blank corrects the actual sample using the blank seasonal average loading and does not temp. correct

- f. CAPMoN does temperature (and pressure) correct the sampling volumes. $\text{Conc.} = (\text{Sample loading} - \text{blank loading}) / (\text{temperature and pressure corrected volume}) \times \text{temp correction of travel blanks}$
- g. Camille motioned to approve three duplicate sets and three travel blanks per AMoN site per year. New criteria to assess duplicates – 90% must have AD < 0.1 mg/L NH₄. New criteria to assess travel blanks – 90% concentration < 0.1 mg/L NH₄. Criteria will be evaluated quarterly.
- h. Martin seconded
- i. Motion carries

18. Changing Review Schedule *Camille - Motion*

- a. The following schedule for NADP laboratory and Program Office reviews was proposed.

	External NADP Review	Internal NADP Review
Laboratory	2021	Year 1, Year 2
Program Office	2022	Year 2
Laboratory/Program Office	Year 3 (2024), combined	

- b. By combining the external review into one period, we will spend less money and overall reduce the time commitment of volunteers to perform the laboratory/PO review. In the out years, the internal WSLH laboratory review will proceed as normal with an additional PO audit component. And in year 3, the duplicate review will not be done, which will save time and effort by the NADP QA staff.
 - i. Camille motioned to approve the schedule outlined in the table.
 - ii. Greg seconded
 - iii. Motion carries

19. Using Site History at CAL/HAL Data review to assess potentially contaminated samples in combination with observed contaminants in the field or lab – *Camille, Zac*

- a. How do we determine at what point the result is too high in combo with contaminants? What should cutoff be?
- b. Need to determine what length of time to compare
- c. Dana said MDN previously had no way to look at historical data in order to determine if a sample should be invalidated based on contamination along with a high Hg value. Casey has added the ability to look at site historical data, currently in test, but it's still a manual process.
- d. Martin suggested instead of data being invalidated a qualifier should be added
- e. Will need to set up a follow up meeting to discuss further

20. Rounding versus truncating on the web, from the CAL/HAL Review *Greg*

- a. Should we standardize for all data?
 - i. Labs are rounding results but when it goes to the web the data are truncated
 - ii. Bob said he is rounding as well but if there are too many digits, it automatically gets truncated.

iii. Bob said he will look into the issue more

21. Propose new column formatting of **website data** for all networks with more information. *Camille*

a. Is meta data the only way to achieve this>? See attached example of potential improvements to presentation of the data

i. Item skipped due to time

Motion to adjourn seconded at approximately 15:30.