

NOS Sub-Committee Meeting

Truckee, CA

October 19, 2010

- 1. Motion to Approve Spring Minutes, moved by Mark Nilles, seconded by Kristi Morris, motion carried**

2. NTN N-Con Collector Status – Mark Nilles, Greg Wetherbee, and Mark Rhodes

Reasons for needing a new collector:

MDN has two collectors approved: N-CON MDN and Modified ACM
NTN still only has the NTN collector.

In 1998, NOS prepared a white paper on modernization, requesting that network equipment be updated.

Early N-Con prototype and YES Inc. TPS-3000 were tested. Neither were approved.

Some sponsors would like to add new NTN sites. Some sites are interested in modernizing their collectors at current sites.

We have two modern rain gauges to offer new sites, however, only one outdated collector to offer.

N-Con Bucket collector Test was performed at IL11 and VT99.

N-Con Bucket collector meets or exceeds for all performance criteria. Equipment scoring was 4 of 6. Precision is yet to be determined.

Sometimes seal of lid seal pad on bucket isn't perfect due to bucket variations. Possible fix could be some plastic wedges that operator would place under bucket to raise it up to the ideal height.

Continued testing will continue at other sites co-located with NTN ACM collectors for at least two more years.

Motion:

Part 1

The N-Con NTN bucket collector, with a Theis sensor only, is approved for the use the NADP/NTN.

Part 2

New sites may purchase the N-Con NTN collector. Identification of a second collector for NTN shall continue.

Part 3

Sites with ACM collectors may retrofit with a new N-Con NTN collectors, but they shall not be required to retrofit to a new collector at this time

Moved by Bruce Rodgers, seconded by Matt Layden, motion carried.

3. Equipment Testing Update – Mark Rhodes

ACM ice problem: 4 options tested, liked the option of Delrin washers with grease.
ACM washer replacement packages have been sent to sites (159 sent, 40 installed).

N-Con Dual chimney collector additional testing is occurring in WA, WI. PA testing to start soon.

Bottle leaks testing continuing:

Tested parafilm and rubberbands, neither helped to prevent leaks.
Geographic analysis didn't show any significant trends in leaks.

MDN Collector Evaporation tests:

No sensor on collector, collector remains closed throughout the week.
N-Con collector loses very little sample per week.
ACM collector shows that if the cooling fan is running, there is significant loss of sample.
Chemistry appears to be impacted; there could be significant Hg loss after the week.
Questions were presented as to how to proceed with handling ACM temperature issues.
Additional discussions were postponed until the spring meeting after further testing is completed.

N-Con systems will be submitting a rain gauge for testing.

4. Bromide Results for NTN Samples – Tracy Dombek and Lee Green

Testing NTN samples for Bromide via IC since 2009 through present .

Linear range is from 0 to 4 ppm, 0.3 ppb MDL.

Significant Br concentrations are seen in the western states.

What further testing is needed at the CAL?

It doesn't really add any required effort by CAL staff.

External quality assurance might be difficult because comparison labs won't measure as low as the CAL.

Should the NADP introduce this as an official analyte?

To re-engage our Ag supporters for NADP, Br results would be of interest due to use continued use of methyl bromide as fumigant.

Do brominated compounds found in fire retardant products get released into the atmosphere and then washed out?

There is enough interest to have the CAL to continue to store the data, discussion will continue at the spring meeting.

5. USGS External QA Program: 2010 Summary and Plans for 2011 – Greg Wetherbee

Co-located equipment studies to continue.

No changes for FY11 – NTN.

No changes for FY11 – MDN.

Plans for 2011: USGS Web site automation in progress, USGS Special Study Fact Sheets, Assist Program Office with DQOs, continue to analyze Br samples, Neutron Activation analysis of NTN filters, submit 2009-10 QA Report, Greg to attend Mercury 2011 in Halifax and Acid Rain 2011 in China.

Other Projects: Evaluate error of IDW interpolations, revisit CAPMoN/NADP triennial comparison?

6. AMNet Update – Mark Olsen

Became official network in October 2009, holding at 21 sites.

Documents: field form is completed, field sops are in final review.

Training: Training session for Env. Canada and USEPA, training course for WI DNR.

MET Data: AMNet to house MET data at sites, QA done by site liaison.

Database: Automated QA Program developed and tested, AMNet vs Env. Canada comparison completed, 7 of 57 years reviewed by site liaison.

Siting Criteria is done and ready for the web.

Misc. Projects: Presentation at Ole Miss, Special session in Halifax, Trip to Taiwan.

No site visits performed in 2010 due to budget constraints.

New Business model in place; site visits will resume in 2011.

AMNet Operator Call (10/12/10): all sites represented, feedback was positive, sites will be invoiced this month.

7. HAL Update – Bob Brunette

Next year, MDN will be 15 years old.

New sites started up by the HAL in association with EPA Region 9 Tribal Air Monitoring Support Center.

14 sites started since the fall of 2009, 13 shutdown.

Equipment modernization: New collectors and gauges are becoming a larger percentage of the network.

HAL staff has combined ~30 years of experience with MDN.

Kristina Spadafora, HAL QA Officer, joined QAAG and will be at next meeting.

There is a slight increase of A qualified samples from 2008 to 2009.

HAL initiatives: Trace Metals in Wet Deposition, High Hg deposition in rain forest throughfall, Passive Reactive Gaseous Hg study with EPA.

Frontier is working with Industrial Stormwater Management Workshops on stormwater regulations in urban centers.

Intercomparison study of dual chimney N-Con collector at WA18.

HAL intends to submit 12 step process to NADP for Trace Metal Network in Spring 2011.

HAL working with Program Office on potential impacts of Gulf Oil Spill on Hg Deposition.

8. AMoN Update – Melissa Rury

4 new sites, 2 closed sites.

Siting Criteria document is completed.

Single Radiello sampling is sufficient, with 5% of sites sampling in triplicate.

Recommend going to one travel blank per 4 sampling periods, not currently correcting for travel blanks.

Data from CASTNET/AMoN site show NH₃ deposition contributes 19% to 60% of the total measured wet and dry N deposition.

Discussion for specific protocols for travel blank correction and frequency was tabled for the spring meeting.

9. CAL Update – Chris Lehman

Written CAL report was distributed.

Tracy Dombek apprenticing to be AIRMoN Site Liaison.

Slight increase in variability in pH measurements, increases in variability of ammonium and orthophosphate concentrations.

New Flow Injection Analysis (FIA) Colorimeter in evaluation, online on or before 1/1/11, data to be reported in the spring.

Archive Sample Distribution: over 9000 samples distributed in the past 12 months.

Bromide by IC measured since June 2009.

Total Phosphorous by Lachate Method.

All CAL SOPs are available on the web.

Supplies Tracking: CAL losing 1 L bottles during dry weeks, unique identifier provides for chain-of-custody.

Turbine installation at Bondville IL11, site runs on wind and solar power.

Carbon in Precipitation Study using wet deposition samples from IL11. Preliminary results show total and inorganic carbon can be quantified.

10. NOS Secretary Election

Mark Olson nominated to be NOS secretary, elected to position.

11. Adjourned at 12:30, 10/19/10

Motion to adjourn moved by Gary Conley, seconded by Jason Karlstrom, motion carried