

## Joint Subcommittee Meeting

Park City, Utah

October 8, 2013

- Welcome – Mark Olson
  - broadcast and recording of Joint/NOS through anymeeting.com
  - Richard Tanabe will be taking minutes due to NOS Vice-chair and Secretary unavailable to attend due to Shutdown
- ***Motion to approve minutes from Spring Meeting – Madison, WI moved by Chris Lehmann, seconded by Pam Padgett. Minutes approved.***
- Introductions around the room.
- State of the NADP (David Gay)
  - Joint/NOS/Symposium/N Flux Workshop will be on-line

### Financial Highlights - Income and Expenses

FY14 6.2% increase over FY13

- majority of dollars are spent @ labs
- CAL 45%, HAL 24% accounts for ~70%
- Personnel 25%
- Line items 5%
  - o Acid Rain 2015 13% - Combined with Fall Meeting, expected 600-900 attendees for conference

### Network & Site News

#### NTN

- o PA – Integrated the PA State Network 15-18 sites in the state
- o NY – Integrated NY State Network
- o Canada – BC22, SK20, SK21
- o Argentina – still running, some shipping issues
  
- o Since Oct 2012
- o 1 lost, 11 added, 265 sites total
  
- o New map for NTN/AIRMoN – Bromide is the map on the Annual Report Cover

#### AIRMoN

- o VT99 closed on May 31, 2013
- o Down to 6 sites and holding

#### AMoN

Since Oct 2012

- o 1 lost (Kansas), 6 added, there will be 64 sites

- Substantial QA database

#### MDN

Since Oct 2012

- 4 lost, 2 added, 109 sites and some coming
- 16 methyl, 54 co-located, 7 urban, 4 daily
- Great Lakes Atmospheric Mercury Network
  - 9 new MDN sites (2 with continuous funding)
  - Fill in the gap for Michigan, Ohio, Indiana

#### AMNet

Since April 2012

- 3 lost, 7 added, 22 currently

#### Mercury Litterfall Initiative

- successful year 2012
- 14 sites
- 2013 sampling occurring now
  - 13 sites
  - Puerto Rico coming – will be year round sampling

#### Current Electronic Rain Gauge Network

- 260 out of 312
- 10-12 have e-gauges but not operating
- 85% of network is digital

#### Webinar Training

- started 2013
- alternating between the CAL and HAL
- 30-35 people
- a few technical issues early on, resolving issues with new equipment
- saving money
- how effective is yet to be seen
- training more, may not be as good/effective compared to in-person training

#### Recent Travel

- April in Montreal : Tri-national Workshop on Assessment of Monitoring Results from Mexico's PRONAME Program
- May in Chicago: Precipitation Chemistry Science Advisory Group
- May in Phoenix: National Tribal Forum
- Rochester : Acid Rain 2015 scouting trip

- CAL Status Report (Chris Lehmann)

Detailed report available at <http://go.illinois.edu/NADPCALREPORT>

#### New CAL Staff

- Tracey Dombek has left
- Annette Wells (FIA)
- Dr. Sybil Anderson (Special Projects)
- Katie Blaydes (ICP)
- Gustava Hoskins (Technician)
- Will add one more for shipping/receiving
- NADP Graduate Intern: Marcelo Vieira Silva

#### Other Staff changes

- Nina Gartman – CAL QA & Method Analyst
- Lee Green – CAL Lab Supervisor
- Brian Kerschner – Assistant Data Manager

#### Update analytical methods

- sulfite by IC
- Nitrite by Colorimetry
- Using passive samplers for ambient NO<sub>2</sub> and SO<sub>2</sub>
- Total Nitrogen

New reports and data products  
handling of low volume samples  
See NOS for discussion

#### Site Operations and Site Support

- NTN – 11 new, 1 closed, 55 sites with significant issues
- AIRMoN – 1 closed, 1 with significant issue
- AMoN – 6 new, 1 closed, 1 with significant issues

#### CAL site support – Jeff Pribble

- Webinars on-line <http://go.illinois.edu/NADPTraining>

#### Lab Operations

- 2004 266 sites
- 2013 back to 265 sites
- CAL still has the capacity to absorb growth ~ 40-50 sites
- CAL detection limits
  - o Excellent performance
  - o By network and by instrument
  - o Bromide still a concern – don't see it getting any lower

#### AMoN Sampler Issues

- updated cleaning procedures – consulted with manufacturer

- reduced the number of travel blanks
  - o 1 in 4 sets

#### NTN/AIRMoN Archive Sample Distribution

- AIRMoN 3040 (1 research group)
- NTN 6020 (8 research groups)
- 2007 NTN currently being distributed
- 2009 AIRMoN currently being distributed

#### Data Deliverables - Average data lag

- NTN 67 days
- AIRMoN 49 days
- AMoN 79 days

#### Data Receipt Reports

- field forms scanned upon receipt and emailed back to NTN sites
- AIRMoN/AMoN – developing by end of year

#### Other Activities

- Total Nitrogen Deposition Study
- Total/Elemental Carbon Deposition Study
- Metro East St Louis Study completed
- Passive sampling of SO<sub>2</sub>/NO<sub>2</sub>
- Pursue as an expansion of AMoN Network
- Intern Ammonia Flux Study

#### Posters

- Sample Dilution Study
- AMoN 5 year Trends
- Training Webinars

- HAL Report (Bob Brunette)

- review of Mercury Regulations

#### MDN Site Startup/Shutdowns in 2013

- LADCO support of ~ 20 MDN sites (~8-10 new)
- Approximately half can get up and running quickly with existing sites/operators
- High altitude locations – higher precipitation and higher Hg wet deposition
- Makah MDN (WA03)
  - o On life support from the HAL
  - o Important site due to offshore flow
  - o North American input, mostly non-US source influenced
- proposal to monitor high altitude sites
- high Hg deposition region not monitored

- corresponds to high inland lake and fish monitoring data (high fish Hg)

#### MDN Network Operations

##### Equipment Modernization

- ACM 56 (-5)
- NCON 52 (+5)
- Belfort 11 (-1)
- E-gage 97 (+1)

##### Site Liaison Activity

- 307 technical support calls
- 186 e-mails

##### Equipment Failures

###### N-CON

- 12 Thies sensors, 1 motor, 3 relays, 1 power cord/ 1 event recorder cable

###### ACM

- 14 motor boxes, 4 sensors, 4 heater, 1 thermostat

###### Ott Pluvio

- 1 gauge sent to Hach

###### ETI

- none

New staff - Dave Wunderlich – QA Manager since Oct 2012

##### HAL 2012 Lab Review

- specific recognition 11
- Findings 9

##### HAL database conversion

- Access to SQL conversion
- Submitted Nov 2012, original and new and compared
- Submitted to Program Office QA – 1<sup>st</sup>/2<sup>nd</sup> round
- HAL to submit response to 2<sup>nd</sup> round of comments

##### Data Deliverable Schedule

- submitted annual 2012 QA Report
- need to respond on comments

##### Commission new instrument

- automated Total Mercury Instrument
- comparison looks good, not final values
- close to green light to move forward

HAL proposal for NOS for collocated MDN/NTN site precip depth data

- when the gauge fails and no backup data, currently use bottle catch/bucket catch, may produce 2 different values
- there is a concern if challenged in court

HAL Sample Evaporation Study

- follow up from PO report Spring/Fall 2012 – PO data showed ACM evaporation with fan on
- HAL ran an 8 month study using 2 MDN ACM
- Not seeing losses so far

Trace Metal Initiatives

- 12 point plan – further discussion 2014
- 7 new Trace Metal Sites in 2013

Total Mercury Deposition at MDN sites

- estimate Dry Deposition of RGM (reactive gaseous mercury)Hg monitor
- passive system to supplement wet deposition
- HAL selected to support Natural Rivers and Streams Assessment 2013-14
- Measuring fish tissues

- QA Report (Mark Rhodes)

2012 QA Reports

- Field Survey – in progress
- HAL – comments from external reviewers received
- CAL – in progress
- AMNet – in progress

2013 QA Reports

- start working on reports

External Reviews

2013 Program Office – Aug 2013

- Gary Lear – USEPA (Team Leader)
- Kristi Morris – NPS
- Amy Ludke – USGS
- No report at this meeting as all reviewers are federal employees

2014 CAL

- Greg Wetherbee – USGS (Team Leader)
- Eric Hebert – EEMS
- Richard Tanabe – Environment Canada
- Chemistry person - ?

#### Site Survey – June 2013 (# completed)

- AIRMoN – 0, MDN – 18, NTN – 38, Collocated – 9
- AMNet – 2, AMoN – 5

#### Training Webinars

- CAL/HAL on alternate months
- AMNet pending USGS Field Audit Program recorded and posted in August

#### Updates in NOS

- SOP approval
- Revision to Site Selection and Installation Manual
- NTN Bag Sampling
- Sensor Study
- AMoN Travel Blanks
- Belfort Rain Gauge
- Methyl Mercury
- MDN Evaporation

SOP usage citation and disclaimer – other agencies/networks are using but not crediting NADP

Breakout to sub committees and meet back after lunch for continuation of Joint Sub-committee Meeting.

Call to Order – Mark Olson @ 13:39

- Sub-Committee Reports
  - See each sub-committee's minutes for details and highlights from the individual meetings
- Webinar Training (Jason Karlstrom)
  - NADP Site operations On-Line Training Sessions
    - using anymeeting.com
    - Since the Spring meeting there have been 8 sessions
    - MDN 18-22 attendees
    - NTN 21-34 attendees

#### Technical issues

- YouTube is often blocked on attendees computers
- YouTube videos are not viewable in recordings
- Live demos not best due to lack of multiple viewing angles
- Significant audio issues – USGS webinar in August and MDN sample change webinar
- Upcoming webinars 2013-10-30 AMON and 2013-11-13 NTN FORF
- After the audio is resolved, need to redo the sample change
- Other topics monthly data review, MDN overview
- Sample video was played

## Discussion

- Are other technologies available [Cari Furness]
- Possible to have operators watch every few years, customize a DVD eventually [Jason Karlstrom]
- host on NADP server [Chris Lehmann]
- consider production options [Cindy Huber]
- may be training the same people every time [Jason Karlstrom]
- are operators/supervisors notified [Mark Rhodes]
- for MDN note goes in coolers, e-mails also go out for both NTN and MDN [Jason Karlstrom]

- Mercury Litterfall Report (David Gay)

- second year – 13 sites, in 2012 there were 14 sites
- data in on time
- data is not released on web
- some numbers are quite large
- moving along quite nicely
- advertised this year and got some more sites

- AMNet Report (Mark Olson)

### 2013 Progress Report

- 18 to 22 sites up 20%
- OH02 back on line
- OH52, Toledo, Lake Erie
- Soon to add AK03, first GEM only site
- Presque Isle, Maine on-line in November 2013

### Site Visits

- 13 in 2013
- 4 for the first time
- 9 repeat
- next up is NS01, MD08
- NYSDEC site visits – shuffling of equipment at sites
- NYSERDA supports 3 NY sites

### AMNet Data Availability

#### Data Posting Lag Times

- Reduce lag between collection and submission
- Work toward real time data submission
- Collocate 2537X and speciation at WI07 (Aug 2013)

### What's next?

- expected data transfer
- site visits
- expansion to Asia



- NY State relocation of 3 sites
- Continue collocation in WI

#### Questions

- Is Tekran providing new instrument for approval [Mark Rhodes]
- 2537X – NADP is in possession at WI07, rest of Speciation system from Florida DEC [Mark Olson]

- Shutdown Samples (Chris Lehmann)

- there were 47 NTN site changes on September 30
- 194 hours? Once sample exceeds, what to do with the data? Invalidate?
- Pam Padgett – NPS asked for furlough exemption for CA94
- Will have to look at on a case by case basis

- AMoN Status Report (Chris Lehmann)

- 64 AMoN sites
- 3 new Canadian sites

#### Average Concentrations 2012

- time weighted mean
- quarterly relative concentration

#### Independent Audit Program

- 8 sites participated in independent audit program

#### Passive Sampler Precision

- 2007-2010 triplicates on all deployments
- 2011-present triplicates on 5%
- Precision data quality 20%

#### Travel Blanks

- remains an interesting problem
- the lab continues to test, including staff lunches

#### QA – DQO – Spring Meeting

- Sigma-Aldrich coupler – drilled & tapped for 5/16" – #18 bolt
- Why Radiello PDS (passive diffusion sampler)?
  - o Comparison with Alpha, Ogawa
  - o Collocated at Bondville
  - o Not sure if Alpha is still available
  - o Ogawa – not sure if still a US distributor

#### Current AMoN Research

- MARGA comparison

#### Planned Activities

- collocate IL11 Pranalytica NH3
  - NH3 Chamber Exposure Study
  - AWMA – 5 year trend test
  - Significant trends ( $p < 0.1$ ) at 8 sites, no trend at 6 sites
- Nitrogen Flux Workshop Update (Chris Rogers for John Walker)
    - update on the block agenda on web
  - Wednesday Symposium Start time at 9:15 am
    - “1<sup>st</sup> Deposition Dash” will start at 7:00am, meet in the lobby for a walk/run
    - 3 miles or 1 hour
  - Spring 2014 Meeting – Ft Lauderdale, FL  
April 14-17, 2014  
Sheraton Ft. Lauderdale Beach Hotel  
Reservation Deadline: March 14, 2014
  - Fall 2014 Meeting – Indianapolis, IN  
Date: TBD (maybe in September)
  - NADP Secretary Nominations – Andy Johnson for Kathleen Weathers  
-recommended nominee: Emily Elliott from University of Pittsburgh
  - Other Business  
Chris Rogers
    - what to do with MeHg database
    - very close – have something for spring
    - move forward

***MOTION: Pending HAL and Program Office resolving questions arising from Mark Rhodes' study, that the recalculated Program Office Methyl Mercury data be made available on the website as soon as practical.***

*Moved by Chris Rogers, seconded by David Gay*

#### Discussion:

- HAL reports already available [Mark Olson]
  - o If the published values are different, is it a problem
  - o Reports are stamped preliminary
- If significant differences at site, what is the correct value, look to see why there is a difference and if significant, which is correct? [Bob Larson]

- Rounding issues when blank correcting [Jason Karlstrom]
  - o thresholds for differences
- posting subset not all the data, why not accept HAL values as is the case with total Hg [Mark Rhodes]
- Moving forward is PO doing calculation [Mark Olson]
  - o historical calculated by PO
  - o accept HAL values moving forward

***Friendly Amendment's***

- 1. 2002-2012 use Program Office data***
- 2. Going forward the HAL's values will be used***
- 3. Provide data advisory***

***Abstain: Mark Rhodes***

***Motion passed with friendly amendments***

- ***Motion to adjourn moved by Pam Padgett, seconded by Tom Butler. Motion Passed.***