

# NADP NETWORK OPERATIONS SUBCOMMITTEE MEETING

Ellicottville, NY, Oct. 6 & 7, 1997

Meeting convened at 10:30 am.

## Members present:

Richard Artz  
Scott Dossett  
Joel Frisch  
Cari Furiness  
John Gordon  
Rich Grant  
Lee Maul  
Mark Mesarch  
Mark Nilles  
Jane Rothert

## 1) Officers elected:

- Scotty Dossett, Chair
- John Gordon, Vice-chair
- Jane Rothert, Secretary

## 2) Minutes of previous meeting distributed by John Gordon.

Susan Smith had an amendment to the minutes of the previous meeting. Page 6, item 3, a sentence/line was left out. Scotty Dossett made the motion to add "Discussion ensued and motion withdrawn" to the minutes. Joel Frisch seconded the motion. Amendment to minutes approved. Joel Frisch presented a question to the chairman; what is the status of the revision/review of the Field Operators Manual. This topic was postponed as it was an agenda item later in the meeting.

## 3) Report of spring executive meeting:

There were 18 motions presented to the executive subcommittee from the joint meeting of the Network Operation, Data Management, and Effects Subcommittees. Three of these motions required approval of the Executive subcommittee. The three requiring approval are:

- a) elimination of the "dry-add" samples  
Action taken by the Executive Committee: A motion was made to eliminate analysis of "dry added" samples, effective October

1. These samples will continue to be collected and shipped to the CAL, but will no longer be analyzed. MOTION PASSED.

- b) elimination of hardcopy NADP/NTN annual data report as a cost saving measure amendment

Action taken by the Executive Committee: This motion was amended as follows:

- Amendment #1:

A cover page and explanatory text that is date independent will be added to the current on-line annual summary. The explanatory text will include a description of the program and ~8 pages of text to explain all of the fields in the annual summary.

- Amendment #2:

A limited number of printed copies of the finished on-line report will be provided to the Executive Committee so that they can have something tangible to give to managers and senior staff as needed.

- c) raingage refurbishment once every 5 years

Action taken by the Executive Committee: Decision on the rate at which rain gages are replaced was deferred to the Budget Advisory Committee.

#### 4) Jane Rotherth gave the CAL report (see [Attachment C](#)).

Highlights included the following:

- Changes in personnel at the CAL
- Interlaboratory Comparison Studies results - the CAL looks excellent
- Network Equipment Depot (NED) - Scotty Dossett will discuss more fully
- AIRMoN update
  - Gelman filters (polyethersulfone filters) will be replacing the Millipore filters (cellulose acetate filters) now in use at the CAL for sample filtration as of January 1, 1998.
- New new-bucket cleaning procedures to be introduced at the CAL

5) Gary Lear reported on the new site audit contract put out for bid by the EPA Office of Research and Development, with Tom Lumpkin as the contract supervisor. Advanced Technology Systems, Inc., ATS, in Pittsburgh, PA was awarded the new contract. The contract has been signed and begins Oct. 1, 1997. There is a three-month base period for ATS to learn about NADP and the audit program. The contract will soon be moving into the EPA Office of Acid Rain and Rosemary Wolfe will then be the contract supervisor. Contract is for \$880K over four years. The auditors must visit 100 sites per year with audit results entered electronically in the field. Quarterly reports are to be sent to EPA all other reports to be sent to the Program Office (PO). There will be a one-week special training course with Scotty Dossett at the PO included in the three-month base time. At this time, no one in NADP has seen the actual contract.

6) Scotty Dossett talked about the Network Equipment Depot (NED). The NED has replaced the Coordination Office Equipment Depot (COED). Transfer of material from COED to NED began on 1 June. As of 1 September all replacement components are being sent to sites from the NED. The CAL is working with AeroChem Metrics and 2 local electronic repair companies to provide repaired parts. Stocks are sufficient at this time. Special packing material is being purchased by the PO to expedite shipping of supplies. They will go out when possible in the regular black boxes and inside clean buckets. The packing material and how it would be put together was demonstrated by Scott. Bar coding of all equipment is also on the agenda for the NED. The NED will be coordinated by Scotty Dossett.

7) Mark Nilles - Reported on the request to replace raingages in 2000-2001. He has received permission to put together a package to take to the Chief Hydrologist of the USGS to try to sell the budget requirements for the raingage replacement. Getting a budget approved involves several steps and he is progressing in these steps and feels that he is well within time limits to still see this budget approved.

Mon. meeting adjourned at 12 noon.

## **Tuesday NOS meeting, Oct. 7, 1997, 10 am**

1) Report of the NADP Executive Committee meeting that was held on Mon., Oct. 6 was given by John Gordon.

- a) A sub-sampling policy for NADP and AIRMoN samples was discussed. There will be a one-year prohibition for active archived samples. There will be a 3-person committee to decide who gets available samples when there is more than one request for a single set of samples. This committee will be approved annually by the Executive Committee.
- b) The coordinator for the MDN will continue to be Molly Welker until Jan. 1, 1998. At that time the MDN coordination will move to the PO and a new coordinator will be hired.

2) Scotty Dossett continued his report. He discussed equipment retrieval from the Air Resource Services in Fort Collins, CO. According to Jim Wagner of the ARS, the PO has everything and that the PO owes them for three raingage repairs.

3) Winterization Notification update:

- a) Eight sites stay winterized all year long
- b) Five sites never winterize
- c) Eleven sites winterize in Dec. not Oct.
- d) All other sites winterize in Oct.

4) Mark Mesarch has weather statistics at the Univ. of Nebraska. Looking at weather changes in the last 60-80 year record.

5) The Site Operator Manual Revision Project was discussed. The current manual was written in 1988 with revisions for the bucket/bottle protocols in 1993. The personnel and equipment information is outdated. The new version will be in digital format so that it can be put on the World Wide Web and accessed through the NADP homepage. Nick Field has agreed to do a style review for Section 3. A new committee is needed for the overall review.

6) The Raingage Rebuild Project was discussed. Jim Osborne has refurbished one raingage at the PO. He can refurbish about one raingage per week. Currently there is a 25%-50% loss of refurbished raingages in shipping. It is currently premature to get monies for electronic raingages as none have been demonstrated to give measurements comparable to the Belfort gage. Other raingage options need to be looked into.

7) Dossett notes that there is a need to discuss the current siting manual and questionnaire sent out to new sites.

8) Cari Furiness asked why the sites are still doing field measurements. Some Reasons to keep

- 1) useful QA tool. Rothert noted that the CAL relies on the field measurements as an important QA check when verifying and finalizing the data. It is often a very helpful troubleshooting tool when discrepancies are found that need to be resolved.
- 2) because the network is not measuring organic acids pH is subject to change from the time it is collected to the time it arrives at the CAL for analysis.
- 3) site operator interest- Lee Maull, a site operator at FL99, expressed his support for field measurements. Lee said that if site operation was reduced to weekly bucket changing, his interest in the program would be lost, and he felt that many other site operators would feel this way also. There was discussion that the field measurements also provide real-time information to site operators, which is an important incentive to many sites for their continued participation.
- 4) valuable long-term record - Gordon pointed out that the field measurement database is the only long-term pH database for the network not effected by bias and specifically not effected by the step change resulting from the 1994 protocol change.

Mark Nilles moved to make field measurements optional at NADP/NTN sites as of 1 Jan 1998. Scotty Dossett seconded. 4 affirmative, 3 negative, 2 abstained. Passed. (Did not pass at the Technical Meeting on Thurs. night.)

### **NOS joined by Data Management Subcommittee at 11:30:**

Luther Smith expressed concern over the transition period when the CO shifted the data to the PO. Bob Gilpin will be employed at the CO until March. Bob Larson has been hired by the PO to be in charge of the data at the PO. There will be several trips between the CO and the PO for both Bob L. and Bob G. to expedite the transition. Data should in no way be compromised. Luther said he was satisfied.

Joint meeting adjourned at 12 noon.

Minutes submitted by Jane Rothert

## NADP (NRSP-3) COMMITTEE MEETINGS

Ellicottville, NY 6-8 October 1997

### CAL REPORT

#### PERSONNEL CHANGES

##### Chemical Analytical Services

**Mark Peden** is the Laboratory Manager.

**Kenni James Pinkard**, Laboratory Supervisor and Analytical QA Specialist, retired from the ISWS on 6/30/97.

**Karen Harlin**, Laboratory Supervisor, replaces Kenni.

**Pam Scales**, pH/conductivity/sample filtration, returned to graduate school on 8/22/97.

**Laura Zangori**, pH/conductivity/sample filtration, replaces Pam Scales, and she arrived 8/25/97.

**Jane Rothert**, Analytical QA Specialist and AIRMoN Data Manager, takes over Kenni James' QA functions.

**Phyllis Ballard**, Part time employee washing buckets and bottles. Phyllis replaces student employees.

##### Data Validation Services

**Andrea Morden-Moore**, Data QA Specialist, left to go to veterinary school on 8/25/97.

**Karen Harlin**, Data QA Specialist, replaces Andrea Morden-Moore.

**Kathy Douglas**, Data Base Manager, working 25% time for the Program Office.

**Scott Dossett**, Site Liaison, working 25% time for the Program Office.

**Data Technician**, new hire, will assist Kathy Douglas and Scott Dossett.

#### pH ELECTRODE UPDATE

\* 127 new and used electrodes sent from Oct. 1, 1996 to Oct. 1, 1997.

\* Overall turnaround in electrodes ~1.6 years.

## **QA REPORTS**

- \* 1995 at Univ. of IL printers and will be available by mid to late October.
- \* The annual reports are now Jane Rothert's responsibility.

## **TRAINING COURSE**

- \* 12 attendees at the CAL May, 1997 course.
- \* Plans are being made for 1998.

## **INTERLABORATORY COMPARISON STUDIES UPDATE**

### WMO/GAW Intercomparison Study

The 19th World Meteorological Organization (WMO)/ Global Atmospheric Watch (GAW) Laboratory Intercomparison Study was conducted last year by the State University of New York at Albany (SUNYA). In previous years, the samples used in these studies had been made at the USEPA. In 1996, the CAL was invited to prepare these samples, confirm their concentrations, and bottle and package the samples for shipment to SUNYA. In September 1996, the CAL prepared and shipped about 100 bottles of concentrated samples for distribution worldwide.

The CAL was again contracted in 1997 to prepare the samples for the 20th WMO/GAW Laboratory Intercomparison Study. This year ten (10) concentrated and 120 diluted sets of samples were sent to SUNYA. Thirty sets of samples for metals analysis were also prepared. Results of the 20th Study are due at the SUNYA by the middle of November.

### National Water Research Institute (NWRI) Ecosystem Interlaboratory QA Program Studies FP70 and 71 - Rain and Soft Waters

The results of FP70 had the CAL ranked ideal for all components except for pH, Nitrate by IC, and Calcium by AA. One sample was flagged high for nitrate and one sample was flagged low for calcium. Four out of ten samples were ranked high, very high or extremely high for pH indicating that the CAL has a HIGH bias with pH. NWRI uses the laboratory median values as the "true" values for all analyses.

Study FP71 is due to NWRI in Canada by the end of October. In this study, no pH's are below 5.2.

## **pH 4.9 CHECK SOLUTION**

The pH 4.9 check solution has been in use on the network since Jan. 2, 1996. The CAL prepares about 100 liters of 4.9 check sample once every 2 months, or the network uses about 600 liters per year.

### **FIA COMPUTERIZED**

The first electronic data capture for ammonium and phosphate by flow injection analysis was on April 15, 1997. Currently, all analytical measurements except pH and conductivity are captured electronically.

### **NETWORK EQUIPMENT DEPOT (NED) IMPLEMENTATION**

The NED has replaced the Coordination Office Equipment Depot (COED). As of 1 September all replacement components are being sent to sites from the NED.

A new mailing and inventory system (bar code) will be described by Scott in a report to the NOS.

### **11-GRID VS. 7-GRID SENSOR TEST**

An experiment comparing an 11-grid with a 7-grid precipitation sensor was completed in the ISWS back yard. Scott Dossett will present the details of the experiment in a poster.

### **EPA SITE AUDIT PROGRAM/TRAINING NEW SITE AUDITORS**

Scott Dossett presented a draft schedule for training new site auditors to Thomas Lumpkin at the USEPA. Scott discussed with the EPA the possibility of the new auditing firm operating a "site" and supplied the EPA with cost information.

### **OPERATORS MANUAL REBUILD**

Progress on organizing and writing a revised NADP Operators Manual has slowed due to the Coordination Office move to the ISWS. Pictures and schematic diagrams in the manual are being digitized. The goal is to develop a document that is accessible via the Worldwide Web.

### **ANNUAL LID SEAL REPLACEMENT**

- \* Lid seals were changed on June 24, 1997.
- \* To date all but 10 sites have had confirmed changes.
- \* 4 sites were sent letters about especially dirty lid seals.

\* 20 sites were classified as having off center lid seal impressions.

## **AIRMoN**

\* Archival Samples were sent to Tyler Coplen of the USGS in Reston, VA for analysis of radioactive isotopes. 1118 bottles were shipped.

\* The e-FOF is in final testing. The rules will be added the first of November. By the first of the year, all but one site should be using the e-FOF on a full time basis.

\* New site - there is a potential new site in Sarasota, FL.

\* NGS KidÆs Network - pH data are still being sent to NOAA for the National GeographicÆs KidÆs Network. Jane Rothert reviewed new text that describes pH measurements of acid rain and general information about acid deposition and collection.

\* The AIRMoN Site OperatorÆs Manual was published as a NOAA Technical Memorandum in April.

\* The AIRMoN QA Manual is in the process of being rewritten using Data Quality Objectives (DQOÆs).

## **SPECIAL RESEARCH PROJECTS**

### Gelman Filters

A new type of Gelman filter was tested to see if the positive bias for sodium seen with the Millipore filters is better or worse. Preliminary results are very positive.

### New new bucket cleaning procedures

New buckets have been cleaned using various combinations of prewashing, acid leaching, and check solution/blank verification. We would like to standardize the procedure and incorporate it into the regular bucket washing protocols. The new method will formalize how new buckets are introduced into the system.

### new pH meter/computer - Orion

The CAL is currently a Beta lab for testing OrionÆs new pH meter in a computer. This is a regular computer with a special attachment and software that turns the computer into a pH meter.

### Ammonium stability study

Sue Bachman, Van Bowersox, and Pam Scales have begun exploring various ways to study the degradation of ammonium and other biologically sensitive constituents in acid precipitation.

### Omnimark pH meter



Omnimark Instrument Corp. has a new electrode out, the IQ200 pH system. It is an electrode/meter combination. The electrode is stainless steel rather than glass. The CAL is in the initial stages of testing this new type meter and probe.

### **UPS STRIKE AND ITÆS AFFECT ON THE CAL AND SAMPLE SHIPPING**

On August 5, the UPS went on strike. The majority of the sites, about 90%, sent the samples using US Postal Service with the rest using Federal Express. Thirty sites did not send samples at all during the strike period, approximately Aug. 5 through Aug. 20.

During the strike period, approximately 500 mailers were sent from the CAL. The normal cost for sending these mailers would have been \$3000 when sent by UPS. The cost during the strike was \$6500 or an increase of 117%.

With the strike over on Aug. 20, the CAL thought they would be back to normal within a week or so. On Sept. 8, the CAL received 115 mailers and sent out 88. On Sept. 9, the CAL received 68 mailers and sent out those 68 plus the 27 left over from the day before, making a total shipped of 95. The two-day total was 183 samples! By weeks end, 275 samples were received and processed and all sites were caught up with their backlog of samples from the strike.

### **IN-HOUSE TECHNICAL REVIEW**

Mark Peden, Karen Harlin, and Jane Rothert will be conducting an in-house technical review of the CAL laboratory and shipping and receiving operations in November.