NETWORK OPERATIONS SUBCOMMITTEE MEETING MINUTES

PATRICK HENRY INN, WILLIAMSBURG, VA
21/22 OCTOBER 1996

OFFICERS: Chair- Kenni James, Vice chair- John Gordon, Secretary- Scott Dossett

NOTE: the Monday AM session (described below) was added to the agenda during October after many NOS members and others voiced their concern about meeting time at the Annual Technical Meeting. As it turns out NOS had too little time for its business even after the addition of this time.

Kenni James (chair) opened the meeting at 0935.
Cary Eaton initially took minutes.

Members in attendance:

Kenni James(chair)
Scott Dossett(secretary moving to vice-chair)
Susan Smith(secretary after this meeting)
Rick Artz
Van Bowersox
Cary Eaton
Joel Frisch
John Gordon
Mark Mesearch
Mark Nilles
Jane Rothert
Steve Vermette
Sandy Verry
Molly Welker

MINUTES FROM NEW ORLEANS MEETING-

Accepted. Some problems were voiced with the WWW distribution of the minutes.

Scott Dossett arrived to find that he had been "elected" Secretary for this meeting and would move to vice-chair for the next meeting.

STANDING COMMITTEE REPORTS

RTI- Research Triangle Institute External Site Audit Program- Cary Eaton. See Appendix A.

Cary noted that the audits had been suspended for 9 months due to funding problems. He received funds from EPA in the spring and tried to finish the second round of visits called for by the contract. All sites were visited with the exception of AL99, NC45, TN00, KY22 and PR20.

REPORT OF PROBLEMS FROM THE LAST ROUND OF AUDITS

Siting Violations
Ground cover < 30 m
30 degree rule violated by growing trees
Hardware Problems

pH problems
Aerochem(ACM) hardware degeneration (Waldes ring) These are the rings which hold the counter-weights onto the bottom of the ACM. Some discussion about how to replace them. No resolution was made. (The rings are not "endangering" data.)

2 of 46 failed the 4.9 check target. This was noted to be similar to performance on the 4.7 pH USGS samples.

Joel Frisch asked what percentage of operators (in Cary estimation) had been to CAL training? Cary estimated between 30 and 40% had NOT been trained. Joel though this low.

According to RTI notebook records, 44 of 51 have attended, for a much higher percentage of 86%.

Discussion of the 30 degree rule for tree horizon, the history of the rule, how it has (or why it has not) been policed. It was noted that some sites could easily remove the offending vegetation while others in protected areas (such as parks) can't remove trees easily. Dossett mentioned that in some cases he recalled the NADP sites have been modified rather than remove vegetation.

Discussion about RTI taking or suggesting immediate remedial action. It was mutually agreed that the status quo was OK. This is: if a small problem is noted RTI would help the site personnel fix hardware or help with protocol education. MAJOR items like site moving or severe protocol problems are reported to the CAL and CO for further action. RTI reviews the site objectively taking no account of prior exemptions, the audit is an independent check of compliance.

AIRMON REPORT-Jane Rothert See Appendix B.

Jane noted that the AIRMON subcommittee had been "folded into" the NOS by the Executive Committee (EC). In the future AIRMON would be a "Working group" within NOS and would activate itself (with her as the chair) when necessary.

DATA SCHEDULE

4200 samples processed, the Coordination Office (CO) has data through June 1996. CAL is receiving about 130 samples per month for the AIRMON project. Data turnaround is forecast at 3 months (from CAL to CO).

SITE MISC.

FL18 is last new site.
VT99 was down for 2 months due to funding problems.
MD15 was flooded after Hurricane Fran, but is operational.

TRAINING

3 operators attended last CAL course.

ELECTRONIC FIELD FORM

The eFOF is under beta testing. All sites except MD15 (where phone lines are too noisy) are expected to use.

DISCARDING OLD SAMPLES

The 250 mL bottles which hold samples are clogging up storage and are being discarded (samples through 1993). AIRMoN samples will be kept at CAL refrigerated for a minimum of two years.

MERCURY DEPOSITION NETWORK(MDN)- Molly Welker. See Appendix C.

Molly noted that there would be an MDN meeting Tuesday night, that they had lots of things to discuss and welcomed all to participate. The following dialog inside this meeting therefore was mostly of an advisory nature with Molly and other MDN advocates assuming people with strong opinions about any issues would attend the special MDN meeting.

STATUS

17 sites operational (2 Canadian)

16 proposed (FL, 2 in PA, 2 in NH, ME02, 2 in NY, TN00, NMSU (Colleen Caldwell, 5 more Canadian). 5 inactive (mostly lost due to funding problems)

EQUIPMENT QUESTIONS

Sensor Grid Question- Two sensor grids are available from Aerochem. The standard "NADP" 7 grid and the 11 grid. Evidently for all new collectors and rebuilds (everything except NADP repairs) ACM used the 11 grid design. History of the grids was discussed. Dossett noted he'd first seen the 11 grid during EPA's ACID MODES model evaluation project. It appears that some potential cooperators are NOT joining the MDN because of the problems with the ACM sampler in snow.

Splash Question- Molly had some information from a mercury research in Florida who thought he had seen problems with the ACM collector and splash. She briefly showed some data from about 10 samples he'd collected. His data shows that his bulk samplers have lower concentrations than the wet-only ACM. Vermette and Dossett discussed the CAL/ISWS splash project. Dossett confirmed that splash definitely happens, questioned the data presented.

Single Laboratory, Is it good or bad?- Vermette recalled his presentation of the NADP "single lab concept" to another group where it was questioned. Seems as if this group wanted multiple labs with round robins. Some other labs may be interested in servicing MDN type studies apparently. Gordon commented that the use of multiple labs has made the data interpretation problematical for many long term monitoring programs. Discussion of the USGS Inter-Lab comparison and its results followed. In general, the group fully supported the single lab concept.

Dry Deposition- Molly explained that the MDN needs to move toward a method for analysis of Hg in dry deposition. One of the sites coming on line is in Las Cruses NM, where it rains little. The potential cooperator there needs a method for dry depo. Molly and cooperator are working with FGS (the MDN lab) on technique development. Cary Eaton noted, that when designing a collection method, consideration should be given to the particle size distribution.

COLLECTED SITES- Possible network precision sites are Brule River, WI and Acadia, ME.

QA site- Steve and Molly introduced the concept of a QA site for MDN, where new techniques and methods could be worked on. Mark Nilles suggested that it should not be one site but should be moved around to several sites. There is no money for this at this time. Really relates to the equipment and dry depo. discussion previous.

OLD BUSINESS

REPORT FROM EXECUTIVE COMMITTEE- KENNI JAMES

ELIMINATION OF QASC- Kenni explained about the elimination of the Quality Assurance Steering Committee (QASC). During the Executive Committee (EC) meeting in Estes Park, MAY 1996, John Robertson, Chair at the time, asked that the QASC be relieved of its duties and disbanded. The EC agreed to this (whether there was a literal vote was not mentioned) and hence the QASC has been terminated. Kenni noted that NOS could take issue with this and call for floor action if it chose to, no one stepped forward to argue that the QASC had been valuable and should be kept. **No issue made by NOS of the EC QASC action.** Kenni said that the QASC functions would (by direction of the EC) be transferred to in the Coordination Office QA Officer (this role is currently filled by Gary Lear, a full time QA Officer is yet to be hired).

Some QA issues which had been handed from NOS to the QASC were handed back. These included site auditing and siting violations. In the likely event that EPA will NOT fund the current site audit program the EC is unsure how it will be done. Siting protocol violations left over from 1994 committee (in)action must be dealt with by NOS.

ELIMINATION OF SEPARATE AIRMON SUBCOMMITTEE

The EC decision to fold the AIRMoN subcommittee into NOS and allow for a (more or less) continuous working group was discussed. Rothert suspects the committee will meet on an ad-hoc basis as needed and NOS will be kept aware of what is happening.

ISSUES FROM THE INTERIM MEETING IN NEW ORLEANS

"AD HOC" COMMITTEE ON AEROCHEM METRICS (ACM) "REPLACEMENT" Mark Nilles (chair), Dossett, Frisch See Appendix D.

Mark ran down the actions of the committee; including the response to a "spare parts history" questionnaire from Sandy Pletschet (ex-CO Site Liaison). Specific parts were ranked in importance and action was reported. NO action was reported on 5 items: chassis, motor box, peaked roof heated roof and counter-weights. These were discussed individually;

-there are sufficient chassis "out there" to fill our rare need,

-motor box is being worked on with the ARS project,

-peaked roof plans are available at CAL (there is little requirement for these) (Dossett),

-heated roofs are not required and some are available from USGS/Denver (Nilles), and

-counter weights can be manufactured on site from information provided by the CAL Site Liaison (Dossett).

Frisch commented that there seemed to be lots of sensors and event recorders (ER) in the field. Can we get these? Smith responded that she will contact sites individually to try to get "lost" components back and that all components are now being sent back to the CO, not to ACM.

Frisch noted that he had ordered 10 each sensors and event recorders from ACM. They have not been received yet.

When the new USGS purchased sensors and event recorders are rec'd they will be sent to Smith for inclusion into the Coordination Office Equipment Depot (COED).

Dossett noted that he had read a recent FAX from ARS (the company now contracted to build 4 prototype motor boxes and deliver a schematic to the CO) from Smith. He considered the state of their progress on sensor and ER repair from that memo to be "infantile". There seems to be very little real progress, ARS comments read just like they did 2 years ago.

By consent it was agreed that this committee would stay active and that JOHN GORDON would act as the chair. Other members will be Dossett, Frisch and Smith.

STATUS OF COLLOCATED SAMPLING- Mark Nilles See Appendix E

The number of sites have been reduced from 4 to 2. USGS had wanted to direct all the money into other new external NTN functions; however, people really like the collocated program so this is the compromise.

Two new sites for 1997 are FL14, OR09. Mark explained rationale for selection.

Dossett asked if individual motor box and sensors used are tracked. Nilles responded no that the sites function like regular NADP sites, if something breaks COED is used. Dossett is interested in how these parts might affect the study.

MOTOR BOX REPAIR- Susan Smith See Appendix F

Reported on the status of repairs. No boxes are being repaired at ARS and she continues (with success) to get repaired ones back from ACM. She was aware that the restrictions about ARS repair were removed during the New Orleans meeting; however, she hasn't needed to use this option. Frisch noted that there are 12 new motor boxes at Ocala (USGS-WRD equipment Depo) "when you really need them". Smith notes she is aggressively auditing the COED system and has let ACM know this is happening. She will call the 18 sites which records show were sent boxes in the past for which no repaired components have been returned. Joel reviewed the situation with ACM regarding stability (owner/operator who is advancing in years). Smith questioned the group as to whether she should pursue REPAIR at ARS vs. REBUILD. The costs for repairs are about $250 while the rebuilds are about $550-600.

The group had no opinion about the repair vs rebuild option.

Dossett noted that in spite of the ad hoc committee on "ACM replacement" the fact was that ACM was NOT replaceable at this time. Even with the ARS redesigned motor unit there is substantial hardware (~40%) which there is no commercial source for and for which ACM is the sole provider. Items include motors, gear reduction units, the outside metal box, etc.

Smith promised a complete inventory of where parts are and who had them for the next meeting.

ARS vs ACM MOTOR BOX COMPARISON- Scott Dossett/Susan Smith. See Appendix G

The CO has been running a comparison of weekly samples at 3 NADP sites (AL99,CO22,and MN16) with standard NADP instruments. The CAL has been running a daily sampling trial with high speed event recorder data at one "backyard" site.

Smith reported that of the three sites, only AL99 was a clean sample. Their graphs looked good, efficiency was pretty good, no significant difference in collection between the two. MN16- We thought the sites weren't comparable, MN16 being enclosed and heated, 16MN not. Sandy Verry corrected this , and said both were. The results looked good for the spring and summer, but winter was extremely variable. The committee didn't seem concerned about this, but it prompted a question of comparing the efficiencies of these boxes to the collocated boxes. CO22 data was no good, couldn't tell anything from it because of all the holes in it. Too many problems with bad sensors and data blocks not filled in.

Dossett reported that he had collected 50+ events and that the variability between the two collectors (one with the ARS box and one with the ACM box seemed to be due to the sensor for the most part although there was a suggestion that the ARS caught slightly less volume (an average of 6.2 grams over the 3 trials) and was open a little more (an average of 14 minutes per sample period). More work will be done to test the sensor hypothesis ;however, he believes the two boxes should be considered equivalent. Dossett noted that the daily sampling he used allowed him to collect 7.1 samples per month during the study and allowed enough samples to do the multi-layered trials. Nilles suggested that the collocated site data should be examined to see of the sample volume results were the in the same ball park as those reported by Smith and Dossett, if so then the boxes should be considered equivalent. The floor agreed without a vote.

Dossett, Nilles and Smith were asked to present the results of an analysis comparing the collocated data to the study results at the next meeting. The current field work will be discontinued.

THIS ENDED THE MONDAY 21 OCTOBER SESSION.

22 OCTOBER SESSION

QUALITY ASSURANCE PLAN REVISION/PROBLEMS- Molly Welker. See Appendix H

Molly noted that the revision of the QA plan had languished for some time although there had been some comments made. John Robertson and Gary Lear had pulled together some of these comments and had given them to Molly to re-start the task of revision. Molly had read through some of the sections and elected to address the problem of the Remedial Action Plan (RAP) specifically where Siting Violations and Exemptions are concerned. By doing this Molly is starting the task of the RAP and QA Plan rebuild AND trying to address Joel Frisch's concern about some outstanding Siting Exemptions. The RAP is now very much out of date (and was never correctly implemented).

Points of clarity about the new QAP include:

-an executive summary must be prepared to follow the changes, Molly will draft this
-the sections having to do with dryside buckets will be eliminated
-the demise of the QASC will be discussed
-RAP plan needs to be rewritten.

Molly came prepared to offer the committee 5 proposals constituting a new RAP. There was some discussion about whether CAL "granted exemptions" to sites for non-standard procedures. Bowersox and Dossett reminded the subcommittee that the CAL Site Liaison (SL) reports the practice of non-standard procedures to the CO SL. This is done by e-mail and telephone communications as soon as non-standard procedures are discovered. In addition the Data QC officer at CAL reports non-standard practices in her monthly report of final data to the CO. Examples of the non-standard procedures are: Discontinuation of field pH measurements , irregular sample collections practices. The CAL SL reminds site personnel that they are following non-standard procedures and that he will inform the CO of this. Approval of the practice of non-standard procedures can come only from NADP committees (e.g., NOS).

The proposals were finally voted on one by one and passed with the following language:

Prop 1: CAL should continue to make decisions on operational issues and code samples accordingly and enter it (them) into the database. CAL is not empowered nor does it want to be empowered to provide exceptions to sites. The current and future policy is to report any variants to the C.O. Site Liaison and agency sponsors as soon as possible.

Prop 2: CO Site Liaison will try to resolve the chronic siting criteria and operational violations for 6 months after notification of the violation. If they remain unresolved, the violation is documented in the database (how is not specified) and reviewed and reported to NOS "regularly"

Prop 3: We accept the pending site criteria exceptions and document them in the database. (2 NAYS)

Prop 4: As conditions change at established sites, noted by Site Visitation Reports or correspondence with the Site Liaisons, these changes will be reported to NOS in a review manner and documented in the database.

One **Proposal, #5** was referred to the Data Mgt. Subcommittee. It read as offered " A new product will be made available to the data users to allow then to use these deviations from the NADP Siting Criteria for research on their effects on the data quality."

FIELD OPERATIONS MANUAL REVISIONS- Scott Dossett/Susan Smith. See Appendix I

Dossett presented a revised Appendix A. This section of the manual is a preferred equipment list.

Some changes were specified and the Appendix was accepted for use in newly printed manuals and will be distributed to all sites.

Smith presented a revised Section 7. The contains a personnel list for the network complete with phone numbers, FAX numbers and e-mail addresses.

Some changes were specified and the Section was accepted for use in newly printed manuals and will be distributed to all sites.

Discussion followed about whether a new manual revision had been called for previously. Cary Eaton offered to review if he is still working on NADP related activities.

A motion was put forth that Dossett and Smith be tasked to complete a major revision within the next calendar year. The motion passed.

Dossett offered that the next manual should be an HTML compatible document so that it could be

searched via the Internet. In addition he would like to format the manual so that it would fit on a single 3.5" floppy disk with software so that a 486 class PC could read the text. The current paper manual would be fronted with hypertext links into the text.

RESULTS OF DATA LOGGER TESTS-WHERE ARE THEY? Joel Frisch

The original plan for the ARS/ACM motor box study included high resolution event recorder data from computer data loggers. This part of the study was not implemented. Susan Smith explained that there wasn't really anyone at the CO that had the time to set them up, no one knew how, so no one did. The data loggers have been sent back to their owners.

Issue closed.

RAINGAGE AND OPERATOR REMOTE ACCESS PROGRAMS- Van Bowersox

Time ran out and this presentation was dropped from the agenda.

Presenter notes that the time to put over heads together for this discussion was considerable. He requests time on the agenda for the next meeting

NEW FIELD BLANK- John Gordon

Review of design and reasoning was presented. Three different chemical matrices, and 3 different sample volumes are being used. The program uses a paired sample design. Instructions have been authored with external review and 9 sites have been sent the instructions and solutions. To date 2 have been rec'd at the CAL. John noted that there had been a breakfast meeting of some of the principals involved Monday. They considered some questions and problems having to do with CAL processing and the "blindness" requirements of the study. Gordon has set up the pilot study such that for half the sites, a "dry" bucket is defined as no rainwater and no rinse water is present in the bucket exposed to field conditions for 1 week. For the remaining sites a bucket is considered dry if there was CAL rinse water in the bucket when it was installed, and rinse water remains at the end of the week, but no additional rain or dryfall had an opportunity to enter the . bucket. John has had some feedback from sites already including comments from a site operator in Louisiana who questioned the protocol regarding NO collector openings. Evidently their collector opens almost every week due to humidity. Gordon said that there needs to be an allowance to allow sites with conditions like this to be able to submit a field blank sample.

MINUTES ON THE WEB PAGE- John Gordon

John related his experience as the first person to put the minutes on the Web. He recalled that at the last NOS meeting, there was a lot of hesitancy regrading the idea of posting minutes on the Web; people thought it would be too hard. Gordon said the benefits outweigh the costs, including reduced mailing costs, ability to reach a much larger audience, and facilitation of key word searches. He offered USGS space if needed to keep them up. He suggested that they could be keyword searched and that the prior two meetings should be kept on line. Presenters should give the secretary their overheads as HTML text with gif/jpg graphics. Gordon also proposed that a resolution page be made to track each NOS motion. The NOS chair would update the resolution page.

MOTION: to keep minutes on the WEB passed.

NEW CHECK SOLUTION UPDATE- John Gordon

Site operators have been using the 4.9 check solution since January. John analyzed all of the available check solution data to determine if there were any trends in the operators values. The median pH varied between 4.90 and 4.91 each month except May which had only one week of data. The median conductance varied between 14.0 and 14.1 each month.

COMMON TRACKING DATABASE (CTDB)- Scott Dossett See Appendix J.

Dossett presented the work to date on this "long discussed" CAL/CO Site Liaison tool. The CAL programmer Greg Dzurisin has configured the hardware and the CAL databases "SITES" and "AUTOLAB" are up and running on a dedicated CAL Pentium Pro Windows NT server. The CO has logged on. Development of CO use for the CTDB is pending. Since the database software used at the CO and CAL are different the CTDB gives the CO extensive browsing and sorting capabilities NOT the full current functionality of their Ingress system. The RBASE DB software on the CTDB does use SQL, as does Ingress. Once the database schema is learned, SQL queries can be written by the CO. Both SITES and AUTOLAB will be updated daily and represent the most current data at CAL.

EXEMPTIONS TO FIELD CHEMISTRY AT TX10- Susan Smith

The site is experiencing personnel problems. They approached the CAL about temporarily stopping field chemistry. The CAL SL relayed this information to CO SL and the site sponsor, USGS. Smith asks for a 6 month exemption from field chemistry measurements for the site. After this time she will revisit them and see what's happening.

MOTION: Allow temporary suspension of field pH and conductance measurements. Agreed.

AIRMON/NOS RELATIONSHIP- Kenni James/Jane Rothert

Working group will be lead by Rothert.

FOAM PAD CHANGE- Scott Dossett See Appendix K..

Change was done this year on 23 July. Returned foam pads look OK. All but 7 sites have responded. More clean up to follow. Two classes of condition were singled out for a note. Dirty seal-23 observed with notes to 10 sites. Off center seal-23 observed with notes to 13 sites. Smith and Dossett discussed the foam supply (which may become a problem). Dossett recollected that the CO had ordered two years worth. A comment from the floor asked whether the foam was in a low light area so that it would not degrade.

Smith offered to check and report on the foam supply currently at the CO

REPAIR OF ELECTRIC CLOCKS- Joel Frisch

He has found a person in his locale who can fix them. Evidently the CO has had some luck repairing same.

The CO will begin supplying electric clocks through the COED to sites and repairing the old ones.

NEXT MEETING: John Gordon

Monterey CA. Pacific Grove. Local hotels and a conference center.

The group seemed agreed to go there.

SPECIAL THANKS TO JOHN GORDON- Scott Dossett

John has stepped in wonderfully during a rather hectic time to help the NOS out a great deal with organization through acting as secretary for 3 straight meetings. We thank him.

OFFICERS FOR NEXT MEETING-

Kenni James- Past Chair
John Gordon- Chair
Scott Dossett-Vice-Chair
Susan Smith- Secretary

Respectfully submitted,

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Appendixes