

**National Atmospheric Deposition Program (IR-7)**  
**1986 Technical Committee Meeting**  
Atlanta, Georgia  
Minutes

First Session  
Tuesday, October 28, 1986, 8:00 a.m.

Opening

Chairman Dudley Raynal convened the opening session of the 1986 NADP (IR-7) Technical Committee Meeting in Atlanta, Georgia. A list of attendees is attached. Jerry Walker of the Georgia Experiment Station welcomed the group to Atlanta and to Georgia.

Dudley Raynal commented that this is the tenth annual meeting of NADP and enumerated NADP milestones. They include:

1977

- Approval of Plan for Research for NC-141
- First Technical Committee Meeting held in St. Louis

1978

- NADP Coordinator appointed
- Selection of Illinois State Water Survey as Central Analytical Laboratory
- First NADP sample taken at Marcell, Minnesota
- By end of year, 20 stations operating
- Submission of "A National Program for Assessing the Problem of Atmospheric Deposition (Acid Rain):  
A Report to the Council on Environmental Quality"

1979

- EPA established a five-year cooperative agreement with North Carolina State University to coordinate research and support effects research
- 32 stations

1980

- Acid Precipitation Act of 1980 passed
- Interagency Task Force established
- 82 stations

1981

- National Acid Precipitation Assessment Plan (NAPAP) developed at recommendation of Task Force
- 96 stations 1982
  - First continental-scale isopleth map developed
  - Approval of NADP as IR-7 (SAES)
  - 110 stations

1983

- Congress authorized special grants for acid deposition effects research
- Establishment of 150 station NTN network authorized, incorporating 100 existing NADP sites
- NADP designated to coordinate NTN
- Quality Assurance Plan developed
- 141 stations

1984

- USGS designated as federal lead agency for deposition monitoring

- Budget Advisory Committee established
- 177 stations

1985

- NADP brochure, "This Is Our Air - We Should Know What's In It; published
- NADP Annual Data Summary 1982 published
- 193 stations

1986

- CAL published analytical methods compendium
- NADP Annual Data Summary 1983 and NADP Annual Data Summary 1984 published
- NADP Quality Assurance Report, covering field operations, published
- IR-7 extension for five years requested
- 200 stations operational

It is imperative that NADP look ahead as there is much unfinished business.

1. Must continue monitoring wet deposition. Want to establish a data base that is historically and geographically adequate.
2. Dry deposition. Must characterize dry deposition and pursue promise of being able to couple wet and dry deposition monitoring at some NADP sites.
3. Effects research. Despite tremendous progress having been made in effects research, there is much to do. Look for new opportunities to expand effects research.

This annual Technical Committee meeting is characterized by several different approaches. There will be poster sessions rather than contributed papers, but there will be opportunity for discussion in a large forum following each poster session. Another innovation was to develop a theme for the meeting. "Interpreting the NADP Data Base." This theme will be evident in some of the presentations. The Vice Chairman of the Technical Committee and the Chairman of the Effects Subcommittee are the program chairmen for the meeting.

Attendees were asked to introduce and say a few words about themselves.

### **Coordinator's Report**

The Coordinators report was presented by Jim Gibson. He announced that the official number of active sites is 195, with 7 sites pending. Accomplishments for the year include:

1. Published quarterly reports for third and fourth quarters of 1984.
2. Major effort has been put into getting the annual reports for 1983 and 1984 mailed. The 1985 annual summary is partially finished. The question of how future data will be disseminated will be a subject of discussion in Subcommittee 3. Results of the questionnaire which was mailed indicate that users still wish to receive hard copy data.
3. Have continued the site visitation program through RTI. There will be some modifications to the program.
4. Several quality assurance reports for 1978-83 are published or in process of publication.
5. Requested that sites furnish the original raingage charts to CAL. Seventy-five percent of the originals are now being received; the remaining 25% are copies. This request was made to provide a better quality check.
6. To improve network performance, the Coordinator's Office now provides replacement parts to sites and is maintaining a stock of equipment. The requested part is furnished to the site, the defective part is sent to Aerochem Metrics for repair and is then returned to the Coordinator's Office. This should help prevent data loss from down equipment.
7. Jim referenced the long-standing NADP requirement that all analyses be done at the same laboratory. Due to federal requirement for open bidding, a problem has developed and agencies must go out for bid for analytical work. One agency has done so, but an award hasn't been made. The concern is to insure the integrity of the NADP network, and this is a challenge to the original concept of NADP.
8. Mentioned his activity regarding the question of snow monitoring, particularly in the West. Four new sites, which will be paired with existing NADP sites, will be coming on line. He also mentioned other work being done in the Rocky Mountain region.
9. Announced that people from SURRES are attending the meeting to interview participants regarding data needs.

## **Administrative Advisor's Reports**

Keith Huston, Chairman of the SAES Administrative Advisors commented on one of the most interesting facets of this organization. NADP has pulled together state federal, and private sectors in a voluntary grouping that has been very useful. Currently, NADP scientists are utilizing their talents in analyzing. The bigger challenge is that they now begin to look at the data being collected and analyzed, what that data means in terms of acid rain and what should be done in the future. NADP should now take stock of where they are and where they want to be and get on with it for the next five years.

Jack Barnes of USDA CSRS remarked that we need to make a strong effort for IR-7 renewal. There is a need for data analysis, a need to look at the quality of the data, and a need for interpretation of it, for the kinds of glue that will bring together effects research efforts.

Jack Pickering of USGS commented that the authorized lifetime of NAPAP ends in 1990. Debate is beginning as to whether it should be continued. This will be a decision of Congress. It has been recommended that deposition monitoring, both wet and dry, be continued. Other task groups will be recommending what parts of the effects programs should be continued. Jack sees activities continuing well past 1990, and NADP should look that far ahead.

## **Subcommittee Reports**

### **Network Site Criteria and Standards:**

Dick Semonin, Chairman of Subcommittee No. 1, reported that one accomplishment over the past year was the implementation of the requirement that original raingage charts be submitted to the CAL. He noted that attendance at the Subcommittee meeting has dropped over the past few years. New business for this meeting:

1. Operator's manual revision
2. Frame of reference for what this Subcommittee does in relation to other subcommittees
3. Alterations of sampling protocol
4. Bucket supply problems
5. Site selection criteria
6. Maintaining the site records - how long should they be maintained?

### **Methods Development and Quality Assurance:**

Chairman Jerry Aubertin reported that Subcommittee No. 2 been quite active over the past year.

1. They performed an audit of CAL. All previous recommendations had been implemented. One very notable thing the audit team found is that the data turnaround time has been reduced.
2. The Subcommittee met in April.
  - A. Jackie Lockard was elected secretary.
  - B. At that meeting, it was reported that a positive bias was being detected. An August meeting on the detected bias resulted in a special program being set up to look at what might be causing this problem. Don Bogen will report further on that program.
  - C. Spent time on charges for Subcommittee No. 2.Issues B and C will be addressed in the business meeting.
  - D. Considerable discussion regarding the remedial action plan or lack thereof. This addresses noncompliance of sites in the QA Program.
  - E. Developed a QA protocol flow chart which will be discussed at the Subcommittee meeting.

The Subcommittee meeting agenda is long and will probably require two meetings. One big question is the problem with the buckets.

Don Bogen reported that there was a meeting in August to review the external QA Program. Gary Stensland had reviewed the detected bias, and it was determined that further review and research on the topic was warranted. Three group's (USGS, CAL and EML) results have been obtained. A portion of the time at the Subcommittee meeting will be spent on reviewing these results and determining what they mean.

### **Data Management and Analysis:**

Jim Lynch reported, as Chairman of Subcommittee No. 3, that the following topics would be discussed at their meeting.

1. Potential changes in the CAL report to site operators.
2. Annual data summary will be reviewed for any changes that should be made for the 1986 report.

3. Status of quarterly reports. Will talk about electronic transfer, floppy disk, direct computer tie-in, etc.
4. Consideration of data flags.

### **Effects Research:**

Subcommittee No 4. will meet at 7:00 p.m. on Tuesday evening for a brief session then split into four working groups according to Wayne Banwart, Chairman. The Subcommittee will also meet as scheduled on Thursday for business and to elect officers.

### **IR-7 Renewal Activities**

Dave Shriner was asked to describe activities with regard to the IR-7 renewal. We are midway in the preparation of the continuation proposal. Dave provided an overview of the steps remaining.

1. Will attempt to incorporate the comments received here.
2. From the Wednesday evening Executive Committee meeting and the Thursday morning business meeting, Dave hopes to be able to obtain agreement and approval of the concept as it is laid out.
3. Final meeting with representatives of the Administrative Advisors to do the polishing necessary.
4. Beginning in February and through April, the four regional associations of the SAES will be meeting. It is important that at least three of the four regions endorse the continuation proposal. Their recommendations will be passed to the Committee of Nine for their approval, and then to CSRS for final approval. NOTE: Currently, three regions have approved continuation of IR-7.

The Objectives section has been slightly modified but represents the spirit of the original objectives of the program. There are two primary objectives:

1. To measure the supply of beneficial and injurious chemical substances in precipitation across the United States.
2. To determine the effects of atmospheric deposition on the following:
  - A. the productivity of agricultural crops, forests, pasture and rangeland, and wetlands,
  - B. the productivity and chemical composition of soils,
  - C. the productivity of wildlife, fish, and domestic food animals,
  - D. the chemical composition of surface and ground waters, and
  - E. The corrosion of materials, including metals, stone and masonry, and protective coatings.

There are three major area - 1) monitoring, 2) effects, and 3) coordination and integration. The whole exercise of putting this proposal together is one of "taking stock," and the program has every right to be proud of what it has accomplished to date. Dave thanked everyone from the Executive and Technical Committees who have taken time to work on the proposal.

### **Site Operator Recognition**

Dudley Raynal referenced the "unsung heroes" of NADP. The Executive Committee feels that these are the site operators who dutifully and satisfactorily every week go about the business of servicing the collectors. At the recommendation of Subcommittee No. 1, it was decided that those operators who had served for five consecutive years and who had been through the training at CAL should be recognized. About 24 eligible operators have been identified, and Dudley asked any of those operators present to come forward. John Melin from the Georgia Station was presented with a five-year certificate, a letter of commendation, and a round of applause. The remaining certificates and letters will be mailed.

The meeting adjourned for meetings of Subcommittees 1, 2 and 3.

Second Session  
Tuesday, October 28, 1986, 1:30 p.m.

### **Invited Presentations**

Wayne Banwart, Chairman of the Effects Subcommittee, opened the afternoon session. He introduced Ann Cary of the U.S. Forest Service, who spoke on "*Status of the Forest Response Program.*" Invited presentations, '*Advances in Dry Deposition,*' by Steve Lindberg of Oak Ridge National Laboratory, and "*Deposition Monitoring in Norway,*" by Katrin Nodope of the Norwegian Institute for Air Research, followed.

The meeting adjourned for a poster session (see attached poster listings) and discussion.

Third Session  
Wednesday, October 29, 1986, 8:00 a.m.

### Invited Presentations

The morning session convened for invited presentations in the area of Forest Effects. Papers were presented by Al Lucier, USFS, "*Growth Reduction in Natural Pine Stands in the Southeast*," and by Rob Turner of Oak Ridge National Laboratory. "*Forest Soil Sensitivity to Atmospheric Deposition*." Patricia Irving of NAPAP addressed the topic of *Crop Studies*.

The morning session concluded with poster presentations and discussion.

Fourth Session  
Wednesday, October 29, 1986, 1:30 p.m.

### Panel Discussions

The first half of the fourth session consisted of two panel discussions. The first group, Patricia Irving of NAPAP, Rich Barchet of Battelle PNL, and Jay Messer of EPA, discussed "*NAPAP Use of NADP/NTN Data*." "*Data Trends Analysis*" was the topic presented by a panel composed of Rich Barchet, Battelle PNL; Gary Stensland, Illinois State Water Survey; Tony Olsen, Battelle PNL; and Bob Hirsch, USGS.

A poster session and related discussion followed.

Fifth Session  
Thursday, October 30, 1986, 8:00 a.m.

### Invited Presentations

The Thursday morning session was comprised of a "*Source Receptors*" paper presented by Ken Rahn of University of Rhode Island, and a presentation on "*Aquatic Effects*" by Jay Messer, EPA.

The Effects Subcommittee business meeting, and the final poster/discussion session concluded the morning.

Sixth Session  
Thursday, October 31, 1986, 1:30 p.m.

### Business Session

Chairman Dudley Raynal called together the final session for the purpose of conducting business. The agenda consisted of:

- Subcommittee Reports
- IR-7 Renewal and Action
- Dry Deposition Update
- Conference Sponsorship
- Information Items
- Officer Election
- Future Meetings

### Subcommittee Reports

#### Network Site Criteria and Standards:

Dick Semonin reported that Subcommittee 1 had a full agenda. Old business discussed:

1. Site operator certificates for dedicated site operators.
2. Raingage charts - now being received at CAL. Question was raised of what to do with the raingage charts now being submitted. It was concluded that each site should maintain a copy of the chart for a 12-month period for interaction between CAL and the site from a QA point of view. At the end of a year, they should be turned over to the NADP program to be archived "forever."
3. Operator training. Training approaches were considered. Discussed producing a training film, with copies, in lieu of sending operators to CAL for training.

New business consisted of:

1. Subcommittee officers for 1986-87 will remain:  
Chairman - Dick Semonin  
Vice Chairman - Jerry Walker
2. Revision of operator's manual.  
**MOTION:** Scott Dossett and Dave Bigelow were charged with preparing a revised draft of the site operator's manual. Passed by the Subcommittee.  
This draft will be distributed to the Subcommittee for review and will be discussed by the Executive Committee at their spring meeting
3. Bucket supply problems. The current bucket manufacturer is discontinuing supply of this model, and a new source must be found. New buckets do not fit the sampler, requiring retrofit of either the sampler or the bucket. There are problems in the closure of the lid. The Subcommittee also discussed the concept of changing sampling protocol to daily and going to liners. The consensus was to stay with the buckets and not try to implement a new procedure in the field. The Subcommittee is still pursuing permanent solution to the problem. The interim solution is a bucket fitted with a metal collar which will fit the sampler.
4. Maintaining site records. The four copies of the field form are currently distributed as follows:  
Copy A - At site  
Copy B - At CAL (includes written comments)  
Copy C - CAL - without notations  
Copy D - A copy of the notated copy at Coordinator's Office, with further notations.  
  
**MOTION:** That copies A and C need to be kept by the sites and CAL for one year, then discarded. Passed by the Subcommittee.  
**MOTION:** That copies B and D would be kept "forever." Passed by the Subcommittee.  
This does not preclude their being placed on microfiche or some other permanent medium.
5. An issue was raised regarding subtle changes in the site criteria book and whether data for sites which have been allowed into the network should be "grandfathered" into the data reports even if they might not meet the current siting criteria.  
**MOTION:** In recognition that the site criteria document is an ideal, before any site's data is placed at the back of the report, the matter should come to Subcommittee 1 for recommendation. Passed by the Subcommittee.
6. Discussion of field pH and conductivity measurements.  
**MOTION:** That NADP/NTN protocol be modified to allow sites with 36 months of field pH and conductivity measurements to discontinue these measurements. Passed by the Subcommittee.

#### **Technical Committee Action:**

The Technical Committee was asked for guidance on recommendation No. 6. The original purposes were 1) to motivate site operators in a scientific vein, and 2) to provide QA of differences between measurements in field and lab.

**MOTION:** That the NADP/NTN protocol be modified to allow sites with 36 months of field pH and conductivity measurements to have the option of discontinuing these measurements. Seconded.

A date for this change to be effective was not included.

**AMENDMENT:** That this change would be effective the first collection day of 1987. Seconded and carried.

There was further discussion on the amended motion. Questions regarding the implications on the external QA program and who would evaluate the 36 months of data were raised. It was suggested that the existing data should be examined by someone within the NADP community. With regard to the Quality Assurance Program, it is not certain that these measurements have been of significance to that Program. It was asked if a site wishes to continue the measurements, would they continue to receive the electrode annually? The Subcommittee consensus was yes, they would, and there would not be a differentiation in cost; the charges would be averaged and split across the network

**MOTION:** That the motion before the floor be tabled until the next Technical Committee meeting. Seconded and carried.

**MOTION:** That a committee, with Doug Sisterson serving as Chairman, be created to look at the existing data and report to the Executive Committee at the spring meeting. Seconded and carried.

The members of this *ad hoc* committee will be: Doug Sisterson, Chairman; Gary Stensland; Dave Bigelow; Jack Pickering; and a forestry person, as yet unidentified.

**MOTION:** That the Subcommittee report be accepted. Seconded and carried.

### **Methods Development and Quality Assurance:**

Activities of Subcommittee No. 2 were reported by Chairman Jerry Aubertin. The Subcommittee met on Tuesday and again on Thursday. The Tuesday meeting was devoted to reports and discussion. The Thursday morning meeting consisted of:

1. Election of Officers.  
Chairman - Doug Sisterson  
Vice Chairman - Jackie Lockard  
Secretary - Don Bogen
2. The Subcommittee recommends that the CAL analytical section be given permission to test and evaluate new buckets and report their findings at the next meeting.
3. Phosphate values below detection limit. The Subcommittee recommends:
  - A. That the ortho-phosphate detection limit be raised to 20 micrograms per liter and that analysis be performed only by ion chromatograph.
  - B. That ortho-phosphate data not be made available to the general public except on special request.
4. The Subcommittee recommended that the frequency of intersite comparisons be limited to twice per year with times being determined by the USGS QA Manager.
5. The Subcommittee referred the issue of antifreeze use to Subcommittee No. 1.
6. Problem of snow monitoring. This is an issue which should be considered by Subcommittee No. 1 and others. No action was taken.
7. Discussed the possibility of QA data being compromised by including raingage charts with the blinds audits. Under CAL's current procedures, there is no problem. Request was made to USGS to be sure that the weekly raingage charts accompany the bucket with the site's precipitation even though it is listed as a dummy site.
8. Discussed site performance data provided by Dave Bigelow. These data will be evaluated by Malo and Bogen to see if a specific set of guidelines can be prepared to assess site non-compliance with NADP protocol. A summary report will be presented at the next subcommittee meeting.
9. A tentative flow chart, outlining steps involved in the QA protocol, was discussed. This will be a future item for action by the Subcommittee.

### **Technical Committee Action:**

**MOTION:** That the recommendation that the ortho-phosphate detection limit be raised to 20 micrograms per liter and that the analyses be performed only by Ion Chromatography be accepted. Seconded and carried.

**MOTION:** That the ortho-phosphate data not be made available to the general public except upon special request. Seconded and carried.

**MOTION:** That the third recommendation of the Subcommittee, that the frequency of intersite comparison be limited to two times per year with the time to be decided by the USGS QA project manager, be accepted. Seconded and carried.

**MOTION:** That the report of Subcommittee No. 2 be accepted. Seconded and carried.

### **Data Management and Analysis Subcommittee:**

In the absence of Chairman Jim Lynch, Van Bowersox reported on activities of Subcommittee No. 3.

- 1.. Discussion of monthly data printouts issued by CAL to the sites. There are currently two reports.
  - A. A "field printout" which lists the data captured at field sites, mixed with CAL measurement of pH and conductance, and
  - B. A "preliminary chemistry" printout which lists the CAL measurements of anions and cations, plus depositions calculated from the product of sample volume and measured concentrations.

These reports will be combined into one to reduce the time lag in data turnaround. Recommendations for format and content of these reports are:

- A. Leave the content of the "field printout" unchanged;
  - B. Leave the chemical concentration measurements unchanged;
  - C. Change the format so that all data appears on a single page, if possible;
  - D. Remove the calculated deposition and possibly replace it with the daily precipitation data;
  - E. Include site operation and sample condition information recorded on the Field Observer Report Form, along with reports of contamination observed in the sample; and
  - F. Continue to print note and error messages (on a separate page, if necessary), as these are the most important to data quality and to the efficiency of site operations.
2. 1985 Annual Data Summary - questions were raised regarding the continued use of the current site completeness criteria. It was suggested that these criteria be evaluated to determine appropriateness. The Subcommittee intends to discuss this topic further at their mid-year meeting.
  3. The Subcommittee also suggested that the 1978-81 annual summary be published. It was suggested that only tabular summaries be prepared. Publication of this report was not given highest priority.
  4. There was discussion of the status of quarterly data reports and whether hard copy reports should be continued. Jim Gibson reported on responses to the questionnaire which was distributed on this topic. A high percentage of users wish to continue to

receive the hard copy reports. It was also felt the reports are important for program visibility. The Subcommittee endorsed the suggestion that time series plots be removed, which would reduce the size of the report by one half. It was also agreed that the reports should be published on a semi-annual basis. The Coordinator's Office was asked to develop "straw man proposals" for developing more efficient and expanded methods of responding to "special requests," e.g., floppy disks, on-line data service, data summarization services. The monies saved from reduced publication and mailing costs could be spent for this purpose.

5. The Subcommittee referred the request to define an appropriate citation to be used for data acquired by tape or disk to the Coordinator's Office for action.
6. The following agenda items were tabled for consideration at the mid-year meeting:
  - A. how to effectively transmit data updates to the user community; and
  - B. standardization of the data flags used by CAL and the Coordinator's Office.
7. The Subcommittee voted to retain the current slate of officers. They are:  
Chairman - Jim Lynch  
Vice Chairman - Van Bowersox

**Technical Committee Action:**

**MOTION:** That the report from Subcommittee 3, be accepted., Seconded and carried.

**Effects Research Subcommittee:**

Subcommittee No. 4 activities were reported by Wayne Banwart, Chairman.

1. The Subcommittee is in the process of formulating a position statement that will provide input to the FY '88 CSRS Special Grants Program and will encourage this program to:
  - A. place strong emphasis on crops research in light of the current imbalance of funding (mostly forests) and consistent with CSRS objectives; and
  - B. recommend use of the Report on the Crop Response Workshop of the National Acid Precipitation Assessment Program as the basis for areas of emphasis.
2. Recommend action that will lead to the addition of one or more descriptors to the NADP data base which will enhance the utility of these data. Input was requested from each Subcommittee chair and from the Coordinator's Office. A progress report will be submitted at the next Executive Committee meeting.
3. The Subcommittee would like to encourage interaction with NE-121. It was suggested that possibly they could schedule their meeting to coincide with the IR-7 Technical Committee Meeting.
4. The Forest Working Group will re-initiate a project, originally proposed in 1983, to develop an inventory of pot-research which has been done with experimental forests and similar landholdings. An initial study of the potential use of this information will be done in Colorado, Maine, Michigan, North Carolina and Oregon. The purpose of this pilot project is to determine what type of information is available and to fine-tune the questionnaire that will be used.
5. Officers for 1986-87 are:

Chairman - Gary Lovett  
Vice Chairman - Denis DuBay

Aquatics Working Group  
Chairman - Alan VanArsdale

Forestry Working Group:  
Chairman - Ann Bartuska  
Vice Chairman - Ivan Fernandez

Field and Horticultural Crops Working Group:  
Chairman - Denis DuBay

Materials Working Group:  
Chairman - Ray Herrmann

**Technical Committee Action:**

**MOTION:** That the Effects Subcommittee report be accepted. Seconded and carried.

**IR-7 Renewal**

Dave Shriner reported that he has spent much time over the last three days soliciting and collecting comments on the proposal. Most significant are to:

1. Develop a more aggressive posture relative to gaseous pollutant monitoring. Use effects program as a model.
2. Strengthen statements regarding linkages between monitoring and effects research.

3. Strengthen statements relative to the significance of the role NADP (IR-7) has played in the "state of the science" of atmospheric deposition research. (Take credit where credit is due.)
4. Strengthen the Critical Review Section, in particular, and the document, in general, in terms of "what we can/can't say as a result of effects research accomplishments." Reflect more balance between crops, forests and aquatics effects.
5. Update publications list.

Dave asked that the renewal proposal be accepted in principal with the understanding that the items outlined would be addressed in the next few weeks, and that the Technical Committee authorize the Executive Committee to give final approval of the proposal before presentation to the regional advisors. The schedule will be as follows:

- A. obtain approval of the Technical Committee, in principal, for the proposal as revised according to outline;
- B. obtain approval of Administrative Advisors;
- C. mail to the Executive Committee for final approval; and
- D. send to SAES Directors about the first of January, which allows them one month review time prior to the beginning of their spring meetings.

**Technical Committee Action:**

**MOTION:** That the Technical Committee approve the recommendations as stated. Seconded and carried.

**Dry Deposition Update**

Paul Kapinos reported that the dry deposition network will finally be put in place early in 1987. The contract was awarded the last day of fiscal 1986 to ESE of Gainesville, Florida. This is a five-year contract to install and operate up to 100 sites. The work plan has been submitted and calls for the first sites to be in place by March. Thirty sites are planned to be installed in the Northeast over the next year for the model evaluation, which will take place a year from now. Two-thirds of the sites will be at existing NADP/NTN stations and contacts will be made. Sites which are not NADP/NTN will include weekly wet monitors, and the samples will be forwarded to the ESE lab for analysis. The network will basically follow the NADP protocol with the exception of not using buckets. The network itself calls for weekly protocol, Tuesday to Tuesday. An additional 15 sites will be implemented in the next year - 5 in the Southeast and 10 in the West.

**Conference Sponsorship**

Steve Lindberg reported that the Heavy Metals Conference will be held in the United States for the first time next year and requested NADP support. Sponsorship in the amount of \$1,000 was approved by the Executive Committee.

**Other Business**

Jim Gibson's request for sabbatical leave has been approved, beginning in January. The Executive Committee established an ad hoc committee to insure smooth continuation of coordination activities. Jim will remain in contact with his office during this period. NOTE: Due to a change in circumstances, Jim Gibson will not be taking the planned sabbatical.

**Election of Officers**

A request by Steve Lindberg that he be permitted to remain in the position of Secretary for an additional year was approved by the Executive Committee. Therefore, the nominating committee was asked to select a candidate for the position of Vice Chairman. Dave Shriner reported that the nominating committee recommends Wayne Banwart for this office. Don Bogen was nominated from the floor but declined the nomination. No other nominations were received.

**MOTION:** That the nominations cease and that Wayne Banwart be elected Vice Chairman of the Technical Committee for 1986-87 by acclamation. Seconded and carried.

Technical Committee officers for the following year are:

- Chairman .John Robertson
- Vice Chairman .Wayne Banwart
- Secretary .Steve Lindberg
- Past Chairman .Dudley Raynal

Dudley Raynal expressed thanks to John Robertson and Wayne Banwart for a successful meeting and asked for a round of applause for these individuals and for all who made presentations. Thanks were also expressed to Jerry Walker for his efforts locally, along with thanks to the Coordinator's Office staff. John Robertson assumed the chair.

**Future Meetings**

John Robertson announced that next year's meeting will be held in Minneapolis, Minnesota., and the 1988 meeting is scheduled for Champaign, Illinois. John asked to receive suggestions for locations for 1989 and 1990. He also asked that suggestions for next year's program, etc. be provided to Wayne Banwart or himself. Wayne Banwart will set the date for the Technical Committee Meeting. NOTE: The meeting has subsequently been scheduled for the first week in November in Minneapolis.

## On-going Business

1. Warren Knapp has been reappointed Chairman of the Quality Assurance Steering Committee and has been charged with developing a remedial action plan for sites not in compliance with the intercomparison program.
2. There will be a follow-up visit to CAL.
3. Dudley Raynal will chair an *ad hoc* committee to look at restructuring of the existing subcommittees. Outgoing subcommittee chairs will serve on that committee, and would appreciate any input from the group.
4. The *ad hoc* committee to “oversee” the Coordinator’s Office in Jim Gibson’s absence will consist of John Robertson, Paul Kapinos, Wayne Banwart and Jim Gibson. NOTE: This committee has been disbanded since Jim Gibson will not be taking sabbatical.

**MOTION:** That the 1986 NADP (IR-7) Technical Committee meeting be adjourned. Seconded and carried.

## Participant List

<u>Name</u>	<u>Affiliation</u>
Mary Ann Allan	Electric Power Research Institute
Richard Artz	NOAA/Air Resources Laboratory
G.M. Aubertin	Southern Illinois University
Gary Austin	Amoco Production Company
John Duff Bailey	Northrop Services, Inc./EPA
Linda Bandhauer	NADP/NTN Coordinator’s Office
Wayne Banwart	University of Illinois
Rich Barchet	Pacific Northwest Laboratory
John Barnes	U.S. Department of Agriculture, CSRS
Ann Bartuska	North Carolina State University
Berne Bennett	U.S. Environmental Protection Agency
Gerald Bernier	Maine Department of Environmental Protection
David Bigelow	NADP/NTN Coordinator’s Office
Donald Bogen	U.S. Department of Energy
Van Bowersox	Illinois State Water Survey
Gordon Bradford	University of California
Patricia Brewer	Tennessee Valley Authority
Steven Bromberg	U.S. Environmental Protection Agency
Myron Brooks	U.S. Geological Survey
Ralph Bulger	Andersen Samplers, Inc.
Gerald Byers	NADP/NTN Coordinator’s Office
Ann Carey	USDA Forest Service
Deb Chaloud	Lockheed-EMSCO/EPA
Art Chappelka	Virginia State University
Boris Chevone	Virginia Polytechnic Institute and State University
Steve Cline	Northrop Services, Inc./EPA
George Coltharp	University of Kentucky
Edward Corbett	U.S. Forest Service (NEFES)
Terry Dana	Battelle-Northwest
James Davidson	University of Florida
Dieter Deumling	Schloss Schoenstein
Thomas Dreschel	The Bionetics Corporation
Denis DuBay	USDA Air Quality Research Program
Cary Eaton	Research Triangle Institute
David Estano	Wisconsin Department of Natural Resources
Herbert Feely	U.S. Department of Energy

Ivan Fernandez	University of Maine
Elizabeth Field	Florida Department of Environmental Regulation
Richard Flagler	USDA Forest Service
Joel Frisch	U.S. Geological Survey
Eric Fujita	California Air Resources Board
Alan Galbraith	USDA Forest Service
Donald Gatz	Illinois State Water Survey
James Gibson	NADP/NTN Coordinator
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