

National Atmospheric Deposition Program (NRSP-3)
Technical Committee Meeting
November 15 - 18, 1993
Nashville, Tennessee
Minutes

Opening and Accomplishments —

The opening session of the 1993 NADP (NRSP-3)/NTN Technical Committee Meeting was called to order at 1:30 p.m. on Monday, November 15, 1993, by Chairman Mike Kelly. Those present were asked to introduced themselves (see attached list).

Mike detailed accomplishments during his year as Chair. Highlights included:

1. Successful maintenance of the network despite financial problems.
2. Proposal to restructure the role of the QA/QC Steering Committee.
3. Composition of the Executive Committee—who belongs and who votes; how decisions are accomplished.
4. Substantial change will be made in the sample collection method during the next few months.
5. Development of a procedure for handling new initiatives.
6. Decision to develop a policy on growth so that there would be a statement to provide to petitioners who express interest in working through the program.

Mike displayed a graphic identifying important deposition needs.

- major cations and anions
- toxic metals
- toxic organics
- urban deposition
- total deposition
- event based deposition (AIRMoN)

Reports —

Reports were given as follows.

- Status of two new initiatives — AIRMoN and mercury.
- Quality Assurance Steering Committee - John K. Robertson, U.S. Military Academy
- AES Administrative Advisors
 - H. R. Lund, North Dakota State University
 - Gerald F. Arkin, University of Georgia
- CSRS Advisor -- J. M. "Jack" Barnes
- NAPAP Representative — J. M. "Jack" Barnes
- Coordination Office Report — Carol Simmons, Colorado State University
- CAL Report — Kenni James, Illinois State Water Survey

Poster Presentation~ —

Estimating Confidence Intervals for Weighted Mean Concentrations — D. F. Gatz, Illinois State Water Survey, and Luther Smith, ManTech Environmental.

Field Tests for the Mercury Deposition Network — S. Vermette, Buffalo State College, and S.E. Lindberg, Oak Ridge National Laboratory

What Is the Effect of Air Pollution on Precipitation — K. Lindberg by S.E. Lindberg, Oak Ridge National Laboratory.

Effects of N Addition and Altered Irradiance on Two Fern Species of Northern Hardwood Forests — A. R. Brach and D. Raynal, SUNY, Syracuse.

The Chemistry of Atmospheric Deposition as Collected from Six Louisiana Sites from 1983 to 1992 — L. West and S. E. Feagley, Louisiana State University.

Acid Rain and Materials Damage — What pH to Pick — G. Stensland, V. Bowersox and N. Song, Illinois State Water Survey.

A Time Line of the National Atmospheric Deposition Program/National Trends Network — K. Douglas, Illinois State Water Survey

Atmospheric Nitrogen Inputs to a Tallgrass Prairie Ecosystem — R. A. Ramundo and John M. Blair, Kansas State University.

Measurements From Collocated Sites: How Do They Compare for Monthly, Seasonal and Annual Summary Periods — G. G. Lear, C. L. Simmons, Colorado State University; and M. A. Nilles, U.S. Geological Survey.

O-³P³osphate “Ph”acts — S. R. Bachman and L. Olszewski, Illinois State Water Survey.

The New NADP/NTN “Bottle Sampling” Protocol — S. R. Dossett, Illinois State Water Survey.

Trend Analysis of Sulfate, Nitrate and pH Data Collected at NADP/NTN Stations Between 1980 and 1991 — W. Baier and T. Cohn, U.S. Geological Survey.

The Character of Precipitation at Guangdong and Guangxi Provinces in China — L. Qi, W. Wang and S. E. Lindberg, Oak Ridge National Laboratory.

NatChem: The Canadian National Atmospheric Chemistry Data Base and Its Products — C. U. Ro, R. Vet, W. Sukloff, and M. Shaw, Environment Canada.

Technical Presentations —

Trends in “Acid Rain” in North America—What Have We Learned?

Trends in Atmospheric Deposition: A National Perspective — J. Lynch, Pennsylvania State University; V. Bowersox, Illinois State Water Survey; E. Corbett, USDA Forest Service, NEFES; and J. Grimm, Pennsylvania State University.

Identifying Trends in NADP/NTN Laboratory Biases — D. Bigelow, Colorado State University; L. M. Olszewski, Illinois State Water Survey; M. Welker, Colorado State University.

Estimates of Bias Introduced During Shipping, Handling, and Processing of National Atmospheric Deposition Program/National Trends Network Samples Based on Results of the Blind-Audit Program, 1982-92 — J. D. Gordon, M. Nilles and L.J. Schroder, U. S. Geological Survey.

Regional Analysis of S and NO_x Emission-Deposition Trends in North America — J. Shannon, Argonne National Laboratory.

The Impact of Changing Regional Emissions on Precipitation Chemistry in the Eastern United States—1977-1988 — T. J. Butler, Cornell University; and G. E. Likens, Institute of Ecosystem Studies, The New York Botanical Gardens.

A Comparison of Overall Precision to Laboratory Precision for National Atmospheric Deposition Program/National Trends Network Data, 1988-92 — M. A. Nilles, J.D. Gordon and L. J. Schroder, U.S. Geological Survey.

Detectability of Future Trends by CAPMoN — C. Blanchard, Envair; A. Sirois, D. Whelpdale and Michaels, Atmospheric Environment Service, Canada.

Subcommittee Reports —

- Network Operations — Paul Kapinos, U.S. Geological Survey
- Data Management and Analysis — William Parkhurst, Tennessee Valley Authority
- Environmental Effects — Richard Grant, Purdue University
- AIRMoN — Jane Rothert, Illinois State Water Survey

Technical Discussion —

Changing NADP/NTN Procedures — Where Are We Going?

Comparison of NADP/NTN Samples Shipped in Bottles with Samples Shipped in Buckets from Collocated Collectors —

Results From the Eleven Study Sites — V. Bowersox, Illinois State Water Survey; C. Simmons, Colorado State University; J. Lynch, Pennsylvania State University; A. Morden-Moore, Illinois State Water Survey.

Evaluation of Blind Audit Results — M. Nilles, U.S. Geological Survey.

Evaluation of Field Procedures — S. Pletschet, Colorado State University.

Implementation of the New Bottle Protocol: A Status Report — D. Bigelow, Colorado State University.

Comparison of Samples from 1-week and 2-week Sample Collection Regimes:

Preliminary Results — C. Simmons and G. Lear, Colorado State University.

Technical Sessions —

Trace Elements in Air and Precipitation

Development of a Network of Passive Semi-Bulk Samplers for Measuring Mercury in Deposition, Based on the Swedish (IVL) Design — J. Chazin, Wisconsin Department of Natural Resources; M. Allen, EPRI; B. Rodger, Wisconsin Department of Natural Resources.

The EPRI MASE Project: Application of Micrometeorological Methods to Quantify Air/Surface Exchange of Mercury in Forests — K. H. Kim and S. E. Lindberg, Oak Ridge National Laboratory.

Atmospheric Wet Deposition of Trace Elements to Chesapeake Bay — J. R. Scudlark, T. M. Church, K. M. Conko, University of Delaware; G. A. Cutter and D. J. Burdige, Old Dominion University. Ecosystem Nutrients From Atmospheric Deposition

Regional Nitrate Loading: A Focus Issue — E. S. Corbett, USDA Forest Service, NEFES; and J. A. Lynch, Pennsylvania State University.

Atmospheric Deposition of Nitrogen to the Apalachicola River Watershed — J. W. Winchester and J.-M. Fu, Florida State University.

Determination of Total Phosphorus and Orthophosphate in Precipitation — D. Dolske and V. Bowersox, Illinois State Water Survey.

Assessing Bio geochemical Cycling and Spatial Trends in Deposition in National Parks — K. Tonnessen, R. Herрман, and M. Flores, National Park Service.

Environmental Monitoring and Assessment Program

EMAP: Overview of The Terrestrial Monitoring Program — C. L. Campbell and W. W. Heck, USDA ARS.

Role of Atmospheric Deposition in Evaluating Aquatic Effects in EMAP — S. Paulson, U.S. EPA, CERL.

Effects of Atmospheric Deposition on Painted Metals

Episodic Soiling and Damage by Atmospheric Aerosols — R. G. Draftz, Illinois Institute of Technology.

Formal Actions —

- Approved recommendation for establishing a QA/QC Working Group under the QA Steering Committee.
- Approved switch to bottle protocol, effective January 1, 1994
- Approved CAL training video, detailing procedures for switch to bottle protocol, to be used until a new video can be produced.
- Approved revisions to Section 3 of the Site Operations manual reflecting changes to the bottle protocol.
- Approved analysis of NADP/NTN samples for orthophosphate by flow injection, effective January 1, 1994.
- Approved change to 4.9 check solution for site operators. Date left open due to amount of work required in Coordination Office. Original targets were July 1994 or January 1995.
- Approved new field measurement accuracy criteria to screen field pH measurements, to be effective as soon as possible after January 1, 1994, and by June 30, 1994.
- Approved siting of material exposure platforms at selected NADP/NTN sites by Ocean Research Corporation.
- Approval for the CAL to facilitate battery check procedures at sites with 12 volt batteries in the proximity of NADP collectors.
- Approved distribution of collector ID stickers to all NADP/NTN sites.
- Approved recommendations for AIRMoN procedures and protocols.
 - Subcommittee membership, quorum requirements, and officer structure
 - Tuesday Bucket Change Protocols
 - "Field Blanks" definition, and development of a second definition for differentiating true field blanks from those with lid openings

- Setting of data recorders to Eastern Standard Time across the network. Operators will still operate on local time
- Sample type codes
- Sample storage. First sample per site per month with at least 50 ml will be kept
- Precip log
- FORF
- One or two page short version of operator procedures for quick reference
- Operator's manual
- Approved exploration by Coordination Office of incorporation of NADP/NTN data into a ready-to-use GIS data base with estimates of uncertainty integrated into that data base.
- Approved official name of the AIRMoN network — "NADP/AIRMoN: A Wet Deposition Research/Monitoring Subnetwork."

Election of Officers -

Following the established policy of rotation from Secretary through Chair, a new NRSP-3 Technical Committee Secretary was nominated and elected. Subcommittees also held elections. Officers for 1993-94 are as follows. (A complete listing is attached.)

Technical Committee —

Chair — Van Bowersox, Illinois State Water Survey
 Vice Chair — James Lynch, Pennsylvania State University
 Secretary — Richard Grant, Purdue University

Network Operations Subcommittee —

Chair — Richard Artz, NOAA
 Vice Chair — Mark Nilles, USGS
 Secretary — Kenni James, Illinois State Water Survey

Data Management and Analysis Subcommittee —

Chair — William J. Parkhurst, Tennessee Valley Authority
 Vice Chair — Gary Stensland, Illinois State Water Survey

Environment Effects Subcommittee —

Acting Chair — Richard H. Grant, Purdue University
 Vice Chair — Evelyn J. Orr, Minnesota Pollution Control Agency
 Secretary — Patricia Brewer, Tennessee Valley Authority

AIRMoN Subcommittee —

Chair — Jane Rotherth, Illinois State Water Survey
 Secretary — Dennis Lamb, Pennsylvania State University

Future Meetings—

Interim Subcommittee meetings will be held in Tucson, Arizona, May 6, 7, and 8, 1994.

The spring Executive Committee meeting will be held in Tucson, Arizona, May 9 and 10, 1994.

The 1994 Technical Meeting will be held the week of October 24-27, 1994, in Annapolis, Maryland.

Closing —

The 1993 NADP (NRSP-30/NTN Technical Meeting was adjourned.

Participant List

Name	Affiliation
Mary Ann Allan	Electric Power Research Institute
Gerald Arkin	University of Georgia
Richard Artz	NOAA Air Resources Laboratory
Sue Bachman	Illinois State Water Survey
William Baier	US Geological Survey
Linda Bandhauer	NADP/NTN Coordination Office
John Barnes	CSRS, US Department of Agriculture
Ralph Baumgardner	US Environmental Protection Agency
David Bigelow	NADP/NTN Coordination Office
Charles Blanchard	Envair
Van Bowersox	Illinois State Water Survey
Ton Butler	Cornell University
C. Lee Campbell	US Department of Agriculture, ARS
Julian Chazin	Wisconsin Department of Natural Resources
Richard Cline	USDA Forest Service
Stanley Coloff	USDI - National Biological Survey
Edward Corbett	USDA Forest Service
Ellis Cowling	North Carolina State University
Don Dolske	Illinois State Water Survey
Scott Dossett	Illinois State Water Survey
Kathryn Douglas	Illinois State Water Survey
Ron Draftz	Illinois Institute of Technology Research Institute
Cary Eaton	Research Triangle Institute
Miguel Flores	National Park Service (AIR)
Joel Frisch	US Geological Survey
Donald Gatz	Illinois State Water Survey
John Gordon	US Geological Survey
Richard Grant	Purdue University
Kenni James	Illinois State Water Survey
Paul Kapinos	US Geological Survey
Michael Kelly	Tennessee Valley Authority

Gary Lear	NADP/NTN Coordination Office
Steven Lindberg	Oak Ridge National Laboratory
Roald Lund	North Dakota State University
James Lynch	Penn State University
Bernard Malo	US Geological Survey
Lee Maull	The Bionetics Corporation
John Melin	University of Georgia
Mark Mesarch	University of Nebraska - Lincoln
Mark Nilles	US Geological Survey
Evelyn Orr	Minnesota Pollution Control Agency
Jim Owens	Oak Ridge National Laboratory
William Parkhurst	Tennessee Valley Authority
Mark Peden	Illinois State Water Survey
Jack Pickering	US Geological Survey
Sandy Pletschet	NADP/NTN Coordination Office
Rosemary Ramundo	Kansas State University
Dudley Raynal	SUNY - Syracuse
Chul-Un Ro	Environment Canada
John Robertson	US Military Academy
Bruce Rodger	Wisconsin Department of Natural Resources
Jane Rothert	Illinois State Water Survey
Amey Finlay Schenck	Hubbard Brook Experiment Forest
Joe Scudlark	University of Delaware
Jack Shannon	Argonne National Laboratory
Carol Simmons	NADP/NTN Coordination Office
Lucinda Smith	USGS - National Biological Survey
Luther Smith	ManTech Environmental Technology, Inc.
Gary Stensland	Illinois State Water Survey
Stephen Vermette	Buffalo State College
Elon (Sandy) Verry	USDA Forest Service
Jerry Walker	University of Georgia
Molly Welker	NADP/NTN Coordination Office
Lois West	Louisiana State University
John Winchester	Florida State University