



## Project Summary

# Proceedings: First Annual Acid Deposition Emissions Inventory Symposium

James B. Homolya, Compiler

A 2-day symposium, on the progress of implementing the National Acid Precipitation Assessment Program (NAPAP) Task Group B's emission inventory programs, was intended primarily for government, academic and private sector individuals involved in either the development or use of atmospheric emission inventories for acid deposition and air quality research. Topics included the development of emission factors for a wide range of pollutant emissions and the use of detailed emission inventories for atmospheric transport, transformation, and deposition modeling.

The meeting: (1) provided detailed presentation and information transfer of the NAPAP emission inventory program; (2) illustrated and strengthened the relationship between the emission inventory data base and its users; and (3) compared and contrasted the NAPAP emission inventory with other on-going emission inventory development programs.

*This Project Summary was developed by EPA's Air and Energy Engineering Research Laboratory, Research Triangle Park, NC, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).*

### Background

The proceedings document presentations during a symposium (cosponsored by EPA and the Department of Energy), held December 3-4, 1984, in Raleigh, NC. In 1980, Congress established the Nation-

al Acid Precipitation Assessment Program (NAPAP) to coordinate and expand research relevant to the problems posed by acid deposition in and around the U.S. The program is organized and managed through the Interagency Task Force on Acid Precipitation (ITFAP) and 10 subordinate task groups coordinating specific technical areas of research. One of these 10 groups is Task Group B, Man-Made Sources, chaired by a representative of the Office of Fossil Energy, Department of Energy (DoE). The task group includes members representing the Environmental Protection Agency, the Tennessee Valley Authority, and the National Laboratory Consortium. Major objectives of Task Group B are to:

1. Provide an accurate and complete inventory of emissions from anthropogenic sources believed to be important in acid deposition processes. The inventories are to be provided with adequate geographic, temporal, and sectoral resolution.
2. Provide models which predict how acidic and acid-precursor emissions may be altered by factors such as economic growth, fuel supply, emissions regulations, and control techniques. These models will have the capability to permit the calculation of alternative control strategies.

The 2-day symposium discussed the progress in the implementation of the Task Group B emission inventory programs. J. David Mobley of EPA's Air and Energy Engineering Research Laboratory was Symposium Chairman, with planning

and coordination support from John Fink, of EPA's Office of Air Quality Planning and Standards, and Edward Trexler, of DoE's Office of Fossil Energy. The symposium focused on the National Acid Precipitation Program Task Group B's development of a comprehensive emissions inventory for use in acid deposition research. The meeting was intended primarily for government, academic, and private sector individuals involved in either the development or use of atmospheric emission inventories for acid deposition and air quality research. Topics included the development of emission factors for a wide range of pollutant emissions and the use of detailed emission inventories for atmospheric transport, transformation, and deposition modeling. The following presentations were made on NAPAP emission inventory activities, application of emission inventories for scientific purposes, and related emission inventory development projects.

### ***Session 1: NAPAP Emission Inventory Activities***

Michael A. Maxwell, EPA/AEERL  
Session Chairman

- Current Task Group B Emission Inventory Activities, J.D. Mobley, EPA/AEERL
- Overview of 1980 NAPAP Emission Inventory, D. A. Toothman, Engineering-Science
- Utility Point Source Emission Inventory, E. H. Pechan, E. H. Pechan and Associates
- Development of Temporal, Spatial, and Volatile Organic Compound Allocation Factors for the NAPAP Emission Inventory, F. M. Sellars, GCA Corporation
- Stationary Source Emission Factor Development, J. B. Homolya, Radian Corporation

### ***Session 2: NAPAP Emission Inventory Activities (continued)***

John C. Bosch, EPA/OAQPS  
Session Chairman

- User's Guidelines for Access of the 1980 NAPAP Emissions Inventory, C. O. Mann, EPA/OAQPS/MDAD
- Historical Emissions Inventory Development, G. Gschwandtner, Pacific Environmental Services

- Development of a Monthly Historical Emissions Inventory, D. Knudson, Argonne National Laboratory
- Summary of Quality Assurance and Peer Review Program for NAPAP Task Group B Emission Inventory Development, E. C. Trexler, DoE
- Estimation of Uncertainty Within NAPAP Emissions Inventory, C. Benkovitz, Brookhaven National Laboratory
- Volatile Organic Compound Speciation, M. P. Papai and J. C. Dickerman, Radian Corporation
- NAPAP Emission Inventory Development for FY 85-86, J. D. Mobley, EPA/AEERL

### ***Session 3: Application of Emission Inventories for Scientific Purposes***

Edward C. Trexler, DoE  
Session Chairman

- Sulfur Deposition Modeling with the NAPAP Emission Inventory, T. L. Clark, EPA/ASRL
- Emission Inventory Applications to Regional Acid Deposition Modeling, J. H. Novak, EPA/ASRL
- The Use of Emission Inventories for Effects Studies, A. M. Bartuska and W. R. Alsop, North Carolina State University

### ***Session 4: Related Emission Inventory Development Activities***

Edward C. Trexler, DoE  
Session Chairman

- Canadian Acid Deposition Emission Inventory Development, F. Vena, Environment Canada
- Emission Inventory Requirements for EPRI Acid Deposition Model Development, S. L. Heisler, Environmental Research and Technology
- Development of the Natural Sources Emissions Inventory, D. L. Albritton, National Oceanic and Atmospheric Administration

### ***Session 5: Panel Discussion***

John B. Fink, EPA/OAQPS, Moderator

- Emission Inventory Applications, J. H. Novak, EPA/ASRL

- Emission Factor Development, J. B. Homolya, Radian Corporation
- Historical Emission Inventories, G. Gschwandtner, Pacific Environmental Services
- Quality Assurance and Estimation of Uncertainties, C. Benkovitz, Brookhaven National Laboratory

The meeting was attended by 104 people, representing an excellent cross-section of the target audience. Foreign representatives to the meeting were from Canada, the Netherlands, and the United Kingdom. The meeting:

1. Provided detailed presentation and information transfer of the NAPAP emission inventory program,
2. Illustrated and strengthened the relationship between the emission inventory data base and its users, and
3. Compared and contrasted the NAPAP emission inventory with other on-going emission inventory development programs.

Handout material provided at the meeting included a brief summary of each presentation. Copies of the papers are available as the meeting proceedings, along with a list of registrants.

*J. Homolya is with Radian Corporation, Morrisville, NC 27560.*

*J. David Mobley is the EPA Project Officer (see below).*

*The complete report, entitled "Proceedings: First Annual Acid Deposition Emissions Inventory Symposium," (Order No. PB 85-200 004/AS; Cost: \$14.50, subject to change) will be available only from:*

*National Technical Information Service*

*5285 Port Royal Road*

*Springfield, VA 22161*

*Telephone: 703-487-4650*

*The EPA Project Officer can be contacted at:*

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*U.S. Environmental Protection Agency*

*Research Triangle Park, NC 27711*

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