

control. In my message to the Congress on Protecting Our National Heritage. I asked Secretary Gardner and the Chairman of the Council of Economic Advisers to explore appropriate measures to encourage industry and local governments to abate pollution. This effort should be expanded to cover the effects of air pollution control on industry and trade, both foreign and domestic."

As a result of these actions, a Federal Committee on the Economic Impact of Pollution Abatement was established with chairmanship in the Council of Economic Advisers. In both of these areas, as in all areas related to science and technology, however, OST has a mixed responsibility: (1) to maintain an overview of programs; (2) to encourage agency efforts directed toward the resolution of all aspects of science-based problems; and (3) to undertake studies in major problem areas involving science and technology, and to assure proper scientific and technologic inputs into studies of economic, social and political implications of environmental problems.

Question 18. In his testimony, Dr. Buckley indicated that of the \$185 million the Federal Government was spending in 1968 related to pollution, about \$5 million was being spent on the social, economic and legal aspects of pollution. Do you believe this is a proper ratio regarding new technology versus assessing the implications of that technology?

Answer. There is inadequate emphasis currently on social, economic, and legal studies related to pollution. In the amended tables, the expenditures for research in this area are \$2.7 million, rather than the \$4.6 million mentioned at the Hearings.

Until comparatively recently, we have had little information on the effects of pollution, this situation is improving. Without these basic data, it has been impossible to evaluate social, economic or political alternatives for developing abatement programs and applying technology for control.

Probably our greatest problems rest in institutionalizing abatement programs. Political jurisdictions usually do not coincide with pollution patterns; and all industries do not pollute equally, which suggests that selective abatement may be appropriate. Inadequate attention to questions such as these may result in economic mistakes of considerable magnitude.

An expansion of efforts in these kinds of areas is undoubtedly warranted.

Question.—Please supply a list of the social, economic, and legal studies which are being undertaken.

The requested list of current studies follows:

Department of Commerce

- Distribution of Expenditures for Water and Sewage Systems;
- Legislative History and Bibliography—Air and Water Pollution;
- Water and Air Pollution Control Programs of the Pulp Industry;
- Research (BDSA-OAAIA) (Projections of value added for 50 major polluting industries).

Department of Health, Education, and Welfare

- Methodology for Studying Socio-Economic Effects of Air Pollution;
- Air Pollution Control Costs;
- Effects of Air Pollution on Optimal Urban Form;
- Effect of Region on Air Pollution Control Programs;
- The Organizational Factors in Air Pollution Control;
- USSR Literature on Air Pollution and Related Diseases;
- Air Pollution Control Political Process Conference;
- Social Consequences of Use of Human Research Subjects—Economic Cost of Employee Illness or Death Caused by Industrial Pollutants;
- Solid Wastes Operations Methodology Research for Optimum Management System;
- Systems Analysis of Solid Wastes Management;
- Cause and Effect Relations by Mathematical Models for Optimal Systems Operations;
- Markets for Solid Wastes and Related Materials;
- Management-oriented Municipal Cost Accounting Procedures for Analysis of Solid Wastes Problem;
- Solid Wastes Cost Indices;
- Funding Guidelines for Solid Waste Activities;
- Cost-Benefit Relations of Solid Wastes Management;
- Manpower Requirements, Union and Organized Labor Relations to Solid Wastes Management Systems;