

educational programs for these individuals. Since this is a multi-discipline effort, there is also a pressing requirement for greater depth of knowledge and understanding on the part of all of the disciplines involved, not merely those concerned with the physical and biological attributes of the environment. While much progress has been made in this regard, much remains to be done. In particular, if the Federal Government's departments and agencies are "to exert leadership" considerably greater attention must be given to the manpower and personnel policies designed to equip the individuals and agencies with the highest level of professional talent.

Insofar as the Department of Defense is concerned, there are numerous problems with regard to personnel policy pay and compensation which are currently being given extensive study. It is anticipated that these specialized task requirements will be given recognition in whatever recommendations are finally submitted to the Congress.

Local and Federal cooperation

Suggestions regarding division of responsibility for evaluation of pollution situations between local and Federal technical groups are more properly within the province of the Division of Air Pollution, U.S. Public Health Service and the Federal Water Pollution Control Administration and the Solid Waste Division, U.S. Public Health Service. However, the subordinate activities of the Department of Defense are faced with the necessity as previously cited in this report for complying with both local and Federal regulations and enforcement authorities' requirements. Accordingly the department has a vested interest in this sphere of activity. Based on some of our experiences, some observations and recommendations are hereby submitted.

a. There is an obligation on the part of the Federal departments and activities to work in consonance with local and other Federal agencies on those problem areas arising from new research and development programs. As indicated previously, often the agency responsible for the program or project has more knowledge about the subject than the administrative or regulatory authority. The efforts exerted by representatives of the U.S. Public Health Service, the Department of Army, Department of Air Force, and the State of Utah Public Health Department in dealing with propellant waste disposal problems in that State, as reported in last year's hearings on the Clean Air Act, exemplifies the type of cooperative effort which can be undertaken by the Federal Government, State and local authorities, and civilian industry.

b. There is a manifest need for improving the paths of communication between the various professional disciplines involved in pollution and abatement in both the Federal and in local authorities and between the pollution expert and those concerned with the development of administrative regulations. The efforts currently being exerted within the Federal establishment to bring together the views of those in the departments affected by pollution abatement rules with the representatives of the enforcement agencies such as the U.S. Public Health Service and the Federal Water Pollution Control Administration give an indication that such cooperative efforts can be fruitful and provide for a more rational approach as to who shall do what to whom and under what circumstances. There does exist a need for better education of State and local officialdom of the intricacies of the budgetary and appropriation procedures of the Federal Government. The necessary long and involved arrangements and the many steps between establishment of a project and ultimate approval by the Congress and appropriations of the funds simply is not well understood. The military construction program cycle normally requires something over two years from time of initiation of a project to allocation of funds for implementation. The Federal departments and agencies under existing procedures may be less able to respond promptly to local and State requirements than civil industry or municipalities. This situation is another cogent reason for the establishment of national plans for the Federal departments.

Consideration of costs versus benefits

A number of questions have been raised in the Report of the Research Management Advisory Panel relating to human health as a measure of ecological management and as to the question of the cost of benefits to achieve "normal population health." The military departments have had to exert a considerable degree of effort in analyzing the economic implications of environmental pollution control measures. Any measures concerned with the achievement of a