The common thread which runs through all of the arrangements listed above is the research and research-related nature of the services provided. As mentioned above, this was a logical consequence of the research emphasis of P.L. 84—

159, the first Federal air pollution law enacted in 1955.

Much valuable scientific and technical information has resulted from this intra-Governmental research effort. It is not the purpose of this paper to document these contributions, but some degree of this contribution is evidenced by the many published technical papers, reports, monographs, and other manifestations of the work of these agencies.

## CURRENT TRENDS SINCE THE CLEAN AIR ACT OF 1963

The Clean Air Act (Public Law 88-206), "an Act to improve, strengthen, and accelerate programs for the prevention and abatement of air pollution," was signed by the President December 17, 1963. The main thrust of this legislation may be summarized as an extension of the Federal air pollution program from one of a relatively limited research and technical assistance orientation to one placing much greater emphasis on proposition and control of sirellation.

placing much greater emphasis on prevention and control of air pollution.

While continuing to recognize "that the prevention and control of air pollution at its source is the primary responsibility of States and local governments," this new emphasis on control is revealed in several provisions of the Act. Grantsin-aid, on a matching basis, are authorized for award to States and communities for initiation, extension, or improvement of air pollution control programs. Limited Federal abatement authority is authorized, principally in areas of interstate air pollution. Another provision empowers the Secretary of Health, Education, and Welfare to carry out a permit system as a means of controlling air pollution from Federal installations.

This recent legislative emphasis on actual control activities is reflected in a newly emerging pattern of relationships between other Federal agencies and the Department of Health, Education, and Welfare which continues to have responsibility for and the overall coordinating and directing role in the Federal air

pollution program.

Concomitant with these newly emerging patterns reflecting control emphasis, the Clean Air Act calls for a strengthening of the research program and, additionally, calls for special attention to specific areas of research. Examples of such areas are the development of processes, methods and prototype devices for control; the development of air quality criteria; and research toward the development of techniques for extraction of sulfur from fuels. This renewed emphasis on difficult research problem areas will probably result in a continued and accelerated use of certain of the Federal agencies as a means of moving ahead more rapidly. For example, the expertise of the Bureau of Mines in fuel technology will be most valuable in a stepped-up research activity concerned with the widespread problem of oxides of sulfur in the atmosphere.

Thus, the research challenges still before us will continue to require contractual research services of key Federal agencies. At the same time there is also now emerging a new pattern of Federal agency relationships, concerned principally

with prevention and control activity.

## AIR POLLUTION FROM FEDERAL FACILITIES

The activity involving the most broad and far-reaching set of Federal agency relationships relates to the provisions of Section 7 of the Clean Air Act, "Cooperation by Federal Agencies to Control Air Pollution from Federal Facilities." Section 7(a) essentially carries forward previous Government policy (Executive Order 10779 of 1958) and previous statutory provisions in P.L. 84-159 calling upon Federal agencies to cooperate, to the extent practicable, with the Department of Health, Education, and Welfare and with State and local air pollution control agencies, in controlling pollutant discharges from Federal installations. Section 7(b) authorizes the Secretary of the Department of Health, Education, and Welfare to establish classes of potential pollution sources under Federal jurisdiction and authorizes the operation of a permit system for such sources.

These provisions of the Act have their roots in Congressional intent that Federal installations perform in an exemplary manner and in general observe good community relationships. The legal problems involving Federal sovereignty and immunity from State or local regulations, of course, still obtain, but the intent is to encourage compliance and to place the Department of Health, Education, and Welfare in a position of leadership, guidance, and direction to insure