

determination of the causes, chemical composition, quantity, and means for control of motor vehicle contaminant emissions. Carries out research and evaluates advanced vehicular propulsion systems for air pollution control potential.

- **Division of Process Control Engineering** conducts an engineering research and development program directed toward identification and control of pollutants discharged to the atmosphere by industrial, commercial, or domestic processes. Designs, operates, and monitors contract research on prototype and demonstration control methods and equipment. Conducts field evaluations and stimulates demonstration studies designed to promote control of stationary sources of pollution.

Bureau of Abatement and Control, under this division, conducts technical and administrative activities necessary to implement federal air pollution abatement responsibilities. Provides for the development and strengthening of state, regional, and local air pollution control programs through grants-in-aid and technical assistance to air pollution control programs and industry. Develops and administers a national motor vehicle pollution control program to insure adherence to federal standards, the adequacy and effectiveness of control devices, systems, and inspection programs for the control of air pollution from automobiles.

Department of the Interior

18th, 19th, and C Sts NW, Washington, D C 20240

Bureau of Mines

Promotion of safe, healthful working conditions in the nation's mines and mineral processing plants has been a major responsibility of the Bureau of Mines since its creation by the Congress in 1910. The demands of mineral conservation over the years have required gradual broadening of bureau activity in such important research fields as mining, metallurgy, and fuels technology. Progress in industrial techniques and equipment has required continual expansion and improvement of bureau health and safety programs. This work can be classified under research, education and training, testing of equipment,

and coal mine inspection. Each of these activities is described below.

Research Fundamental and applied research, devoted to health and safety problems in such fields as rock physics, explosives and explosions, and mine ventilation, has contributed to noteworthy improvements in methods (a) for supporting ground at mine workings, (b) for preventing ignition of combustible gases, liquids, and coal dust, and (c) for planning and installing effective and reliable systems for coursing air through underground workings. Bureau research has defined the limits of flammability for hundreds of fluids and vapors, and has determined with precision the conditions under which many different kinds of dust will explode. It has also led to advances in mine fire fighting, in underground lighting systems, in tunnel design, and in design of safer mining methods and equipment.

Education and Training On the basis of knowledge acquired through research and exhaustive investigation of thousands of accidents, the bureau has developed effective courses in accident prevention, first aid, and mine rescue. Supplemented by the published findings of its many studies and by such widely used handbooks as its *First Aid Manual*, these courses have instilled safety awareness and competence in emergencies in millions of mineral-industry workers. The bureau also promotes safety by active sponsorship of the Joseph A. Holmes Safety Association (named for the bureau's first director), the National Safety Competition, and the biennial National First Aid and Mine Rescue Contests.

Testing of equipment Research, frequently conducted in cooperation with industry, also has provided the basis for many of the rigorous tests developed and given by the bureau to equipment and accessories designed for use in mining and related fields. Bureau standards are used in evaluating the permissibility for underground use of items ranging from respiratory protective devices to continuous-mining machines and diesel-powered mining equipment. Bureau testing is done at the request of equipment manufacturers who pay standard fees for the service and are permitted to display the bureau seal.