trial hygiene agencies. Since but a few years ago hazards in this field were limited chiefly to those associated with radium dial painting and industrial uses of x-rays, additional training was required before industrial hygienists could undertake the study and control of ionizing radiation hazards. To provide the necessary training in the use and dangers of radioactive isotopes and in monitoring techniques, the Division of Industrial Hygiene of the Public Health Service held seminars to which the states sent selected personnel. At the same time, the agencies further prepared for this job by purchasing necessary equipment and instruments. Thus, today, almost every official industrial hygiene agency has on its staff one man with at least some training in ionizing radiation control, as well as in the use of essential monitoring equipment.

According to the reports of these agencies, among the first problems tackled was the location of sources of ionizing radiation and users of radioactive materials. Of the specific problems studied, some centered around the industrial uses of x-rays. Much attention, too, was given to the use of x-ray and fluoroscopic units in hospitals and health departments; for example, the Michigan Division of Industrial Health made an intensive study of the magnitude of x-radiation exposures of radiological personnel in diagnostic work at mental institutions. Also under considerable study were radioactive static eliminators, which are finding increasing use in industry to prevent objectionable static electricity in high speed processes. Particularly outstanding has been the work of the New York Division of Industrial Hygiene and Safety Standards in developing protective measures for workers exposed to this hazard, and of the Tennessee Industrial Hygiene Service, which has already completed a study of the static eliminators in 35 plants throughout the state.

Metals used as the basic sources of ionizing radiation are also under study. A comprehensive study of health hazards associated with uranium mining and milling operations in the Colorado plateau is now being conducted by the Public Health Service, and other groups in cooperation with the divisions in the states of Colorado, New Mexico, and Utah.

Of universal interest, because of the possible effects of excessive radiation on shoe salesmen and customers, are the hazards arising from the use of fluoroscopic shoe-fitting machines. During 1949 and 1950, 40 state and local agencies completed systematic monitoring surveys of these machines in their areas. Without exception, each agency reported that most of the machines in use were producing potentially harmful amounts of stray radiation, and that many were not being operated according to good practice. As one result of these surveys, regulations governing the safe operation of the machines were adopted by local health departments in Detroit, Milwaukee, and New York and in Louisville-Jefferson County (Ky.), as well as by the state boards of health of Indiana, Kansas, Mississippi, and West Virginia.

Agricultural Insecticides.—Another responsibility assumed by the industrial hygiene agencies concerned problems arising from the application of agricultural insecticides. The organic phosphates—particularly parathion, an economically important insecticide which is demonstrably toxic to both animals and human beings—created new and serious occupational health problems. During 1949 and 1950, at least seven known deaths and numerous poisonings occurred among mixers and packers, crop dusters, and other users of the insecticide.