AEC Radiation Protection Standards

The Atomic Energy Commission has issued a regulation, effective on 28 Feb., that establishes standards for the protection of atomic energy workers and the public against radiation hazards arising from activities licensed by the Commission.

The regulation was first published in July 1955 as a proposed rule. It has since been submitted for comment to many interested persons and organizations, including state governors and state health and labor commissioners, and the commission has had the benefit of numerous comments and suggestions. An Advisory Committee of State Officials, appointed by the commission, has twice met in Washington to consider and comment on the regulation.

The commission will continue to work closely with the states to seek their advice and keep them informed of commission action in the health and safety field and, when they request, to advise and assist the states on their related regulatory programs.

Standards are set up in the regulation for the handling of all radioactive materials subject to commission licensing—special nuclear materials such as uranium 233 and uranium 235, source materials such as natural uranium and thorium, and by-product materials (radioisotopes). Limits are prescribed governing exposure of workers to external radiation, concentrations of radioactive material which may be discharged into air and water, and disposal of radioactive wastes.

Other provisions of the regulation include requirements for surveys of radiation hazards by licensees, monitoring of workers, caution signs, labels, and signals, storage of licensed material and instruction of workers on safe procedures for handling and using licensed materials.

Permissible limits, which except for minor changes are the same as those contained in the earlier proposed regulation, agree substantially with the current recommendations of the National Committee on Radiation Protection in National Bureau of Standards Handbook 52, *Maximum Permissible Amounts of Radioisotopes in the Human Body and Maximum Permissible Concentrations in Air and Water,* and NBS Handbook 59, *Permissible Dose from External Sources of Ionizing Radiation.*

The National Committee on Radiation Protection has under review recommendations to limit cumulative exposures over periods of years. The commission is giving consideration to appropriate amendments to its regulations to deal with this cumulative exposure problem.

It is believed, on the basis of present knowledge, that the standards provide an adequate margin of safety for exposed persons. It is emphasized, however, that the standards are subject to change with the development of new knowledge, with significant increase in the average exposure of the whole population to radiation, and with further experience in administration of the regulatory program.

The new AEC regulation applies only to activities licensed by the commission. It does not cover radiation sources such as x-ray and radium. One of the purposes of the regulation, however, is to assure that exposures to radiation from licensed material, when added to exposures from unlicensed radiation sources possessed by a licensee, such as x-ray and radium, do not exceed the permissible limits.

Cold Spring Harbor Courses

The Biological Laboratory of the Long Island Biological Association at Cold Spring Harbor, N.Y., will offer three specialized courses next summer that are designed to acquaint research workers with the most important techniques used in bacterial virus research, bacterial genetics, and genetics of fungi. The course in bacterial viruses, to be given by G. Streisinger, will run for 3 weeks beginning 17 June; the course on genetics of filamentous fungi (Neurospora and Aspergillus) will be given by R. W. Barratt and Etta Käfer for 4 weeks beginning 8 July, and the course in bacterial genetics, to be given by M. Demerec, Evelyn M. Witkin, and V. Bryson, is scheduled for 3 weeks beginning 5 Aug.

Heart Drug Evaluation Program

The U.S. Public Health Service has announced a grant of $575,000 to evaluate the effectiveness of drugs in treating heart disease. This is the largest research grant of its kind ever made by the National Heart Institute. The grant was made to Alan E. Treloar, director of research of the American Hospital Association, to carry on a nation-wide program that will coordinate the activities of a number of research teams. The initial study will be concerned with the problem of hypertension.

According to present plans, an advisory board of eminent medical research workers and clinicians will be responsible for establishing guiding principles for the program and making broad policy decisions. This advisory board is expected to include a representative of the Committee on Research of the Council of Pharmacy and Chemistry of the American Medical Association and also of the American Heart Association.

A central staff with headquarters in Chicago will include a clinician and biostatistician who will coordinate the activities of the project and provide administrative and biostatistical services for participating investigators. A technical committee, composed of one representative from each of the hospitals and clinical research laboratories collaborating in the program, will serve as a means of constant communication between the various research teams and will determine the details of research procedure.

Fire at Hungarian Museum

According to a refugee from Budapest, the Hungarian National Museum was largely burned during the recent revolution. The following groups of specimens were completely destroyed: mollusks, Acarina, Orthoptera, neuropteroid insects, Diptera, fishes, amphibians, reptiles, birds, and large mammal skeletons. The famous Horvath Heteroptera collection was partly destroyed. Coleoptera and Lepidoptera were largely undamaged.

ACS Dexter Award

The Division of History of Chemistry of the American Chemical Society is asking for nominees to be considered for the 1957 Dexter award in the history of chemistry, which is administered by the division. The award will be made on the basis of services that have advanced the history of chemistry in any of the following ways: by publication of an important book or article; by the furtherance of the teaching of the history of chemistry; by significant contributions to the bibliography of the history of chemistry; or by meritorious services over a long period of time which have resulted in the advancement of the history of chemistry. All pertinent information concerning nominees should be sent *before 10 Mar.* to the secretary of the division, Sidney M. Edelstein, Dexter Chemical Corporation, 819 Edgewater Rd., New York 59, N.Y.

NBC Educational TV Programs

All 22 noncommercial educational television stations in this country have agreed to present three series of programs on mathematics, music, and American government. They will be produced by the National Broadcasting Company.

The programs, which begin in March, will be transmitted live from New York to the educational stations over N.B.C.'s regular network facilities. Stations that are unable to televise the programs live will resort to kinescope film recordings

N.B.C. has established a budget of more than $300,000 to produce and feed programs to the educational TV stations.

The series on mathematics will feature lectures by college professors and other specialists. Five of the people who have already agreed to lecture on mathematics are Claude E. Shannon of Bell Telephone Laboratories, Inc., Morris Kline of New York University, Allen V. Astin of the National Bureau of Standards, Mina S. Rees of Hunter College, and Ernest Nagel of Columbia University. James Newman, author of *The World of Mathematics,* will supervise, design, and participate in the mathematics programs.

High-School Physics in an Industrial Community

The proceedings of the Conference on the Need for High School Physics in an Industrial Community, edited by W. C. Kelly, may now be obtained for a small charge from the University of Pittsburgh Press. This timely conference, which took place last January, was jointly sponsored by the University of Pittsburgh and the National Academy of Sciences–National Research Council.

Nearly 3 Million Students Enrolled

Some 2,947,000 students enrolled last fall in 1852 institutions of higher education, according to the annual fall enrollment survey of the Office of Education, Department of Health, Education, and Welfare. Additional enrollments during the school year are expected to bring the total to approximately 3¼ million, an all-time high.

The ten institutions reporting the largest enrollments this year are as follows: University of California, all campuses, but excluding extension enrollment, 40,788; University of Minnesota, all campuses, 36,303; New York University, 31,203; City College of New York, 28,178; State University of New York, all campuses, but excluding the agricultural and technical institutes, 27,566; Columbia University, 26,966; University of Illinois, 26,741; University of Michigan, 25,153; University of Wisconsin, all campuses, 24,442; and Ohio State University, 22,470.

College enrollments increased for the fifth consecutive year, the survey showed. There were 39.2 percent more students enrolled than in 1951. Enrollment figures were 10 percent higher this year than last year, the previous high. Nearly two-thirds (1,928,000) of the total number of students were men.

Total opening enrollment in separately organized professional schools (other than teachers colleges and technological and theological schools) gained 19.3 percent over 1955. Teachers colleges enrolled 13.5 percent more than in 1955; technological schools, 13.4 percent more; junior colleges, 12.7 percent more; liberal arts colleges, 9.6 percent more; universities, 8.5 percent more; and theological schools, 2.3 percent more.

The number of students who enrolled for the first time in a college or university was a record 723,000. This was 7.1 percent above first-time enrollment in 1955 and 53.2 percent more than in 1951. The greatest increase in first-time opening enrollments was in junior colleges, with a gain of 16.5 percent over 1955. Increases also were reported for technical schools, 14.4 percent; "other professional schools," 9.6 percent; universities, 6 percent; teachers colleges, 4.1 percent; and liberal arts colleges, 2.3 percent.

Although relatively few women enroll in technical schools, their number increased 41.5 percent over 1955. A decrease of 5.5 percent in first-time students was reported by theological schools.

Total enrollment in higher education was about one-third more in Nevada (gain of 34.1 percent) than in 1955. Other states with large increases included South Dakota, 21.7 percent; Maine and New Mexico, each 19.9 percent; and Rhode Island, 19.2 percent. Nevada reported a 63-percent increase in first-time enrollment. Large gains were also reported for South Dakota, 22.4 percent; Indiana, 20.4 percent; California, 18.5 percent; and Oklahoma, 16.1 percent.

First-time enrollment declined 2 percent or more in New York (6.4 percent), Oregon (3.6 percent), Wisconsin (2.7 percent), Rhode Island (2.1 percent), and Florida (2 percent). The survey findings are reported in the January 1957 issue of *Higher Education* and in Office of Education Circular No. 496, *Opening (Fall) Enrollment in Higher Educational Institutions 1956.*

Cornell Aeronautical's Wind Tunnel

The 1000-mile-an-hour wind tunnel at Cornell Aeronautical Laboratory has resumed test operations following a 5-month, $2,225,000 modification program. The 32,000-horsepower tunnel is capable of testing aircraft, missiles, and propellers at speeds up to 1.3 times the speed of sound and at varying pressures (from 1/6 to 2 1/2 atmospheres). The tunnel's new 8- by 8-foot test section has perforated walls that permit accurate performance measurement on models at transonic speeds.

Automatic data-recording and computing equipment has been set up at the laboratory, so that now test data can be processed within minutes after measurements are taken on a model in the wind tunnel, an operation that previously required up to 48 hours.

Dental Association Survey

The American Council on Education this spring will begin a survey of dentistry in the United States at the request of the American Dental Association. The project will extend over 2 years and will cost $400,000. The objective of the program is to assess the achievements, resources, and potentialities of dentistry in the United States; to determine desirable areas of future development; and to recommend methods for the better provision of service. The work will be supported by grants from the Kellogg Foundation, the American Dental Association, the Rockefeller Brothers Fund, and the Louis W. and Maud Hill Family Foundation.

The survey will center on four areas —dental education, dental research, dental practice, and dental health. A national commission, composed of representatives of such groups as education, management, labor, medicine, and dentistry, is being appointed by the American Council on Education to conduct and administer the program.

Master's Degree Courses for High-School Physics Teachers

A conference on physics in education was held in New York last summer under the joint sponsorship of the Fund for the Advancement of Education, the American Institute of Physics, and the American Association of Physics Teachers. The major part of the discussion was devoted to providing more and better physics teaching at the secondary-school level. As one of its conclusions, the conference adopted the following resolution:

"*WHEREAS* the present situation of the physical sciences demands the attention and active support of the scientists in the college and university departments, and *WHEREAS* in the past those in the college and university departments have not fully cooperated with other groups in alleviating the difficulties

BE IT RESOLVED that the colleges and universities be urged to strengthen the program in the high schools by encouraging teachers in the secondary schools to take specially designed courses in physics which will bring to them the newer developments in physics and enable them to review the basic concepts and principles of physics. To bring the