

59 minutes, 59.45 seconds Pacific Daylight Time (16:59:45 GCT) on 19 September at the end of a tunnel about 2000 feet long dug horizontally into the side of a mesa at the northern edge of the Yucca Basin. The explosion took place in a layer of volcanic tuff. The coordinates of the detonation point were: latitude 37° 11' 44.8" N., longitude 116° 12' 11.3" W., elevation 6615 feet above mean sea level. The vertical distance from the detonation point to the mesa surface was 899 feet, and the slant distance to the side of the mesa was approximately 800 feet.

Grants, Fellowships, and Awards

Jet Propulsion. The Daniel and Florence Guggenheim Foundation has announced that from 18 to 20 Daniel and Florence Guggenheim fellowships will be awarded in 1958 to outstanding graduate students residing in the United States and Canada for study at the Daniel and Florence Guggenheim Jet Propulsion Centers at Princeton University and California Institute of Technology, and at the Institute of Flight Structures at Columbia University. The awards carry stipends of \$1500 to \$2000 each, plus tuition. Application forms are available at each of the institutions named and at the Daniel and Florence Guggenheim Foundation, 120 Broadway, New York, N.Y.

Radiation. A David Anderson-Berry Medal, together with a sum of money amounting to not less than £100, will be awarded in 1958 by the Council of the Royal Society of Edinburgh for recent work on the effects of x-rays and other forms of radiation on living tissues. Published work will be taken into consideration if it is submitted to the society with the application. In addition to direct application for the prize, proposals may be made on behalf of others. Applications and proposals must be received before 31 March by the General Secretary, Royal Society of Edinburgh, 22, 24 George St., Edinburgh 2, Scotland.

Lilly Converts to Metric System

In January 1957 Eli Lilly and Company, pharmaceutical firm in Indianapolis, Ind., discontinued the avoirdupois system of weights and measures and converted all operations to the metric system. The United States and Great Britain are the only civilized countries in the world which still have not adopted the metric system for commercial use, despite the simplicity of calculation it provides.

Thomas Jefferson recognized the advantages of the metric system as long

ago as 1790 and recommended that Congress introduce the system in this country; Congress failed to act. John Quincy Adams made a similar unsuccessful proposal to Congress in 1821, and it was not until 1866 that legislation was passed that made the metric system legal.

In the October 1957 issue of the *Hoosier Purchaser*, Lilly spokesmen describe the company's conversion to the metric system as follows:

"We found the 90-year-old roots of the avoirdupois system quite difficult to sever. . . . [However,] there was enough agitation among our scientific personnel to cause management to decide that it might be advantageous if the entire plant operated on only one weights and measures system instead of the five systems in existence—metric, avoirdupois, apothecary, avoirdupois and apothecary combined, and decimal avoirdupois.

"This led to the establishment of a committee with all groups concerned represented. The committee was under no pressure . . . allowing ample time to study all phases of the program thoroughly over a period of several years.

"One of the first actions of the committee was to request that a half dozen formulas in each product group, that is ampoules, tablets, liquids, capsules, etc., be revised to show both avoirdupois and metric on the manufacturing formula used in dispensing and production. . . . When our men in the dispensing group saw that instead of measuring out 1 gallon, 2 pints, 3 fluid ounces, 2 fluid drams, and 50 minims of a liquid they would merely have to measure 4920 cc. in the metric system, they were sold at once. . . .

"One problem the committee had to face was how to accomplish such a conversion program economically. We had about 2500 manufacturing formulas . . . which required revision. . . . The approximate cost of a revision . . . is about \$50. Therefore, to revise all formulas to metric, specifically for that purpose alone, the cost would have been nearly \$125,000. . . . Finally it was decided that all manufacturing formulas would be rewritten to show both the avoirdupois and the metric systems. Under this setup the use of the avoirdupois system would be dropped at the time of conversion to metric, but the avoirdupois figures would still show on our formulas. However, the rewriting was only to be done when the formula came up for a routine revision, such as a change in lot size, an alteration of the manufacturing process, [or] a change in assay standards. . . . This was, therefore, a very long-range program to convert our formulas to express both systems; but we could also assume that it would not cost \$125,-

000. We established a target date of December, 1956, for the completion of this formula revision phase and were able to meet this date. . . .

"As for the purchasing department, we found it was very interesting to attempt to develop sources which would supply us in metric. . . . With only minor exceptions, our suppliers rallied to the challenge and began shipping packages in even metric packages or in standard avoirdupois packages with the metric conversion stenciled on each container. They also complied with our request to invoice in metric. We found that we were not able only to receive fine chemicals in metric, but also carloads of heavy chemicals and tank trucks of solvents, corn syrup, and acids. . . . We now estimate that greater than 90% of our chemical raw materials are coming to us in metric. . . .

"In addition to soliciting cooperation verbally through sales representatives, we prepared an "Important Progress Announcement" which was attached to each purchase order. . . . As an aid to suppliers, we prepared conversion charts for their use. We sent over 100 of these to one company alone. . . .

"Based on our successful venture, we can see no reason why other industries should not take a serious look at the many advantages of the metric system. We will be happy to help anyone toward this goal in any way that we can."

Foreign Technical Information Center

A Foreign Technical Information Center is being established within the Department of Commerce to collect, evaluate, and distribute valuable foreign scientific and technical literature for the use of American scientists and engineers. To finance prompt action on the new project, the department is requesting a special Congressional appropriation of \$300,000. (In addition, the President's budget for 1959 includes \$1.25 million for the department's Foreign Technical Information program.)

The new program will set up a central clearinghouse in the Office of Technical Services, headed by John C. Green. In announcing the plan, Secretary of Commerce Sinclair Weeks said:

"In recent years, government agencies and private institutions and industries have steadily increased their translation of Soviet magazines, monographs and books. At the present time, however, there is no central agency in the Government responsible for acting as a clearinghouse on all such foreign, technological, scientific and engineering information for the purpose of making it generally available to American scien-

tists, research institutions and the public.

"With the cooperation of the National Science Foundation, comprehensive surveys were undertaken by the department and other federal agencies last year, and the proposed new center is the result of this groundwork. Plans have been worked out for public distribution of information from such organizations as the National Science Foundation, Atomic Energy Commission, the armed services and the intelligence agencies."

Arrangements have been made to obtain from these and other agencies copies of abstracts and translations of foreign technical articles, monographs and books. It is estimated that these will be supplied at an annual rate of 50,000 abstracts and 10,000 complete translations. The items will be catalogued in the OTS library.

A staff of engineer-translators will be added to review and analyze foreign publications and select those of greatest value. There is also to be a scientific advisory committee to assist in the selection. Arrangements will be made for full translations of important articles and studies. Among the materials the engineer-translators will receive are copies of 200 important Russian scientific journals.

The new center will operate a coordination service to eliminate duplication of translating among U.S. public and private agencies and by friendly foreign governments. In its own translation work, the center will concentrate on technology. The cooperation of industry, universities, libraries and commercial translation firms will be sought in feeding information to the center.

Prosecution for Excessive Radiation

New York State's first prosecution of a corporation for exposing employees to excessive radiation ended on 9 January when a suspended sentence was imposed by a police justice on the Canadian Radium and Uranium Corporation in Mount Kisco. The firm, which had pleaded guilty, processes radioactive materials for medical, research, and industrial organizations.

State Labor Department officials brought action against the corporation last summer, charging that it had failed to survey fully the radiation hazards and had permitted excessive radiation. When the sentence was read, the court noted: "There has been no allegation or proof of any kind that the health of any person, either in or out of the plant, has been impaired in any way by the acts of the defendant, or that the health of the community has been in any way disturbed."

Few Aliens Used Specialist Quota

Fewer than 5 percent of the scientists and other skilled persons permitted to enter this country annually under special immigration provisions actually came in as immigrants during 1957. Only 3600 specially skilled immigrants arrived during the year although there were 75,000 so-called "first preference" quota numbers available.

First preference quotas are reserved for persons "needed urgently in the United States because of the high education, technical training, specialized experience, or exceptional ability of such immigrants." People in this category have precedence over all other would-be immigrants to this country.

News Briefs

Atomics International (a division of North American Aviation, Inc.) and Southwest Atomic Energy Associates have concluded an agreement that calls for a \$5,354,000, 4-year research and development program by Atomics International to determine the economic feasibility of the advanced epithermal thorium reactor (AETR) concept with a view to the construction of one or more full-scale atomic power plants utilizing this reactor as a source of energy. The Southwest Atomic Energy Associates is made up of 15 investor-owned electric companies in Arkansas, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, and Texas.

A fire at Saint Francis College, Loretto, Pa., has completely destroyed the college's library, numerous faculty offices, and the biology department. The damages, not including the building, amount to about \$500,000. A college spokesman has written: "We would appreciate the gift or loan of slides, models, incubators, in fact anything which the other colleges might want to give to help tide us over a year or two, till we are completely reestablished."

Workers digging for a school foundation in Cairo, Egypt, have unearthed two mummified ostriches believed to date back to 1350 B.C. Kamal el-Mallakh, discoverer of the solar boats at the Pyramids of Giza, said the ostriches were found in Matarich, 5 miles west of Heliopolis, the ancient holy city of the sun cult. Heliopolis is now a suburb of Cairo. Archeologists have discovered other mummified animals, but never before ostriches.

The Atomic Energy Commission has announced that the university participation portion of the Oak Ridge School of

Reactor Technology is being curtailed because many colleges and universities are now offering programs in nuclear science. Contracts with six colleges and universities that provide reactor training have been canceled: Carnegie Institute of Technology; Case Institute of Technology; Northwestern University; University of California, Los Angeles; University of Florida, Gainesville; and Union College.

The National Bureau of Standards has announced publication of Handbook No. 63 *Protection against Neutron Radiation up to 30 Million Electron Volts*. Neutrons present a special type of radiation hazard. This handbook reflects the thinking of the National Committee on Radiation Protection that the recommended limits for maximum permissible dose of ionizing radiations be substantially lowered. The 88-page pamphlet may be obtained for 40 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

The Ford Foundation, New York, has announced an appropriation of \$4.5 million to establish the Educational Facilities Laboratories, an independent, nonprofit organization concerned with research and experimentation leading to improvements in the construction of school and college buildings. The new agency will also serve as an information clearinghouse. Data on school design, building, and equipment will be available to architects, local school systems, college trustees, and others involved in the nationwide expansion of educational facilities anticipated throughout the country in the next decade.

The Navy has announced that an instrumented container of yeast will be carried in one or more of the 6-inch test satellites to be launched by Project Vanguard in the next 3 months. The growth rate of yeast on earth has been well established by biologists. By checking on the growth cycles of yeast in a satellite, biologists believe they will be able to obtain information on the effects of space travel on life. The reactions of the yeast will be recorded and radioed back to earth by a miniature telemetering system.

Scientists in the News

BERNARD L. PACELLA, an Italian-American psychiatrist of New York, has been awarded the Cavaliere Ufficiale nell' Ordine al Merito della Repubblica, an Italian Government decoration for special merit in the fields of science, letters, arts, or economics. Pacella has been