ment of a particular item is done by a single Technical Service or private contractor. Research, however, being diffuse by its very nature, may cut across several technical service or private industry lines, and offer promise to several different Army organizations or programs.

The ARO, in this situation, will provide centralized planning and coordination of an Army-wide research program, for Army-wide benefit. Planning will be centralized in ARO; execution will be decentralized. Research projects will continue to be handled by the Technical Services, using either their own facilities or those outside the Army, with the exception of a few projects of Army-wide nature. The Technical Services will retain complete control over their laboratories.

The Army's seven Technical Services are the Army Medical Services, the Ordnance Corps, the Corps of Engineers, the Quartermaster Corps, the Transportation Corps, the Signal Corps, and the Chemical Corps.

The ARO staff now includes 57 persons, mostly military and civilian scientists, with necessary administrative personnel. Its program extends over some 2000 research tasks, with a yearly expenditure of about $90 million. The staff will be increased to 85 persons by mid-1959 to give the program the direction it requires. ARO is now recruiting these additional personnel, principally civilian scientists in the upper-pay grades.

Sardis Found

Archeologists from Cornell and Harvard Universities have located the site of the ancient Lydian city of Sardis, once the capital of King Croesus. Ruins of the city were found beneath those of a Roman city that was uncovered earlier this summer in Turkey near the Izmir-Sahihli highway. The discovery, climax of 2 months of searching, came just a few days before the Cornell–Harvard group was due to leave the excavation site for the United States.

Sardis was the capital of Lydia in the sixth century before Christ and was one of the foremost cities of the ancient world. Croesus was the last of the Lydian monarchs to reign at Sardis. During Roman times it was the seat of a Christian bishop and was one of the "seven churches which are in Asia" mentioned in the Book of Revelation.

The expedition was sponsored by Cornell University, the Fogg Art Museum of Harvard University and the American Schools of Oriental Research, with the support of the Bollinger Foundation of New York City. The excavations will be carried out over a 3-year period. George M. A. Hanfmann of Harvard was the expedition's field director, and A. H. Detweiler of Cornell, field adviser. Other group members were Sherman E. Johnson, M. D. Ross, and John Washeba.

Nuclear Test Program

John A. McCone, chairman of the Atomic Energy Commission, and Neil H. McElroy, Secretary of Defense, have announced plans for the final nuclear test series that will take place prior to the suspension of tests for 1 year, starting 31 October. The 1958 test program, which has been in progress at the Eniwetok Proving Ground and Johnston Island in the Pacific, will conclude with approximately ten low-yield nuclear detonations at the Nevada Test Site during September and October.

Several of the test shots will take place underground in tunnels that have been under construction for several months; the remainder will be fired from balloons or towers. More than half of the tests will be less than one kiloton; the highest yield will be in the nominal (20 kiloton) range. Certain information of interest to seismologists will be provided in advance of the underground detonations.

Solar Energy Research

The Curtiss–Wright Corporation and New York University have announced joint and separate programs for research, development, and practical application of solar energy to be carried out at the Princeton Division of Curtiss–Wright, Princeton, N.J. All the programs will be under the direction of Maria Telkes, who has been in charge of solar energy research at N.Y.U. since 1953.

Curtiss–Wright is entering the field of solar energy with immediate emphasis on the development and production of commercially saleable solar products, based upon existing patents, knowledge and needs. It is anticipated that New York University's participation in the joint program will generate new and basic discoveries.

The new industry-university program includes the establishment at Princeton of the New York University Solar Research Laboratory to serve as a center for teaching, research, and the dissemination of knowledge. Curtiss–Wright, among other companies, will provide grants for research projects. Curtiss–Wright will also provide a building to house the N.Y.U. Solar Research Laboratory staff of scientists and technicians and will make other facilities available.

Cooperation with Curtiss–Wright in solar energy will be only one phase of New York University's solar program. The N.Y.U. Solar Research Laboratory will limit its activities to academic-type research and will not develop properties and patent rights for the university. It will, however, continue to conduct separate research and development programs with commercial organizations and government agencies.

A complete Sun Court and Solar Laboratory is now under construction by Curtiss–Wright at its Princeton Division, where solar products will be produced. The Sun Court includes a solar heated house and a solar heated swimming pool, solar furnaces, solar batteries, solar stills, solar driers, solar cooking equipment, solar radios, and solar food processing equipment.

Bathyscaphe

The U.S. Navy has acquired the bathyscaphe *Trieste,* launched by Auguste Piccard and his son Jacques in 1953. Last summer the Navy rented the craft for research dives off Capri, Italy, and recently bought it from the Piccards for $200,000. A new one would probably have cost $1,500,000. Already *Trieste,* which is described in the 1 September issue of *Time,* has descended almost 3 miles, or twenty times deeper than conventional submarines. It can do this without danger to itself or passengers because it operates under water like a blimp. Its 50-foot hull is a float carrying 28,000 gallons of gasoline, which is 30 percent lighter than sea water and compressible. The float does the job of a balloon's gas-filled bag, while the passenger ball hangs below. Water enters the float, equalizes the inside and outside pressure, and compresses the gasoline, reducing the craft's buoyancy. Next month *Trieste* will begin diving off San Diego, Calif., to study the ocean's physical, biological, geological and chemical characteristics.

FAO World Livestock Disease Reporting Service

The Food and Agricultural Organization has established a world livestock disease reporting service that will operate from FAO headquarters in Rome. The service has been developed in collaboration with the International Office of Epizootics. Information will be gathered from the reporting forms issued to FAO and OIE member governments. This form, which has been revised and improved, was first circulated in 1957 and, as a result, a preliminary report on world livestock disease has been issued for 1956.

FAO plans to publish annually a *Yearbook of Animal Disease* that is ex-