groups. The first members in this category are expected to be Brazil, South Africa, India, Australia, and Japan. There will be one country, probably Sweden, to represent nations that have technical knowledge but no uranium supplies.

Two seats will go to nations with large supplies of raw materials. These seats are expected to alternate between Belgium and Czechoslovakia one year and Poland and Portugal the next year.

Ten other members of the board of governors will be elected by the annual meeting of the agency's general conference, which will be composed of all members of the agency. These ten seats will be for underdeveloped countries that will benefit from the aid program.

Under this program, major atomic powers will contribute fissionable materials for the agency to allocate for peaceful uses in underdeveloped countries. Each country receiving such gifts will have to submit to inspection by representatives of the agency. The United States, the Soviet Union, and other countries that have a surplus of uranium would not face inspection, for the provision applies only to countries receiving aid. However, a recipient country will have the right to veto inspection by the nationals of an individual country.

The new plan for the agency, first proposed by President Eisenhower in a speech before the United Nations in December 1953, represents a major compromise. The United States and seven of its Western allies completed the first draft of the plan nearly a year ago, but it proved so controversial that no agreement could be reached. Then India suggested the 12-nation conference to review the original document.

The relationship of the agency to the United Nations was one of the most difficult problems to settle. The United States urged that it have the status of a specialized agency, like the World Health Organization, and report only to the Economic and Social Council. India felt that it should have a closer connection to the U.N., and the Soviet Union wanted it to come under the jurisdiction of the Security Council, where it would be subject to the veto power. The present agreement takes a middle course under which the agency will report primarily to the General Assembly.

Nevertheless, the September conference is expected to bring some conflicts. The Soviet Union has reserved the right to propose at that time the admission of the People's Republic of China and its appointment to the agency's board of governors. India also has objections to some of the language on inspection procedures and to the composition of the board of governors.

When these and other difficulties are overcome and the draft statute is endorsed by the 84 countries belonging to the United Nations or its specialized agencies, it must then be ratified by the parliaments of at least 18 countries, the minimum required to bring the statute into force. It is believed that this can be accomplished by June 1957.

Sea-Water Distillation

One of the largest sea-water evaporating and distilling plants ever to be built has been ordered from a firm in Glasgow, Scotland, for installation at the Netherlands Antilles island of Aruba in the Caribbean. The unit is capable of providing 8000 tons of fresh water daily. There is practically no rainfall on Aruba or any other source of fresh water. During the course of 30 years a number of smaller sea-distillation plants have been installed there, each with an output of 300 tons of fresh water a day, but increasing local demands now call for a much greater supply.

The new plant will be completed in 1958. It will comprise four horizontal evaporating units, each with it own interstage preheaters, distilling condenser, and pumps. Each unit will have a daily output of 2000 tons of fresh water. Steam, bled from turbines of the electric power generating station, will be supplied to the heating coils of the first stage of each evaporator unit.

Survey of Chemists

A comprehensive report on the economic status of the chemical profession was made public on 9 Apr. as the American Chemical Society opened its 129th national meeting in Dallas, Tex. The survey was conducted last year by Andrew Fraser of Washington, D.C., consultant, for the ACS Committee on Professional Relations and Status, of which Herman S. Bloch of Universal Oil Products, Des Plaines, Ill., is chairman. The study took the form of a questionnaire mailed to 64,606 ACS members residing in the continental United States. (The society's total membership at present is 76,522.)

Usable returns were received from 45,432 members, or 70.3 percent of the mailing list. Of the respondents, 95 percent were men and 5 percent women, most of the latter being chemists. Among the men, 63 percent were chemists, 21 percent chemical engineers, and the other 16 percent, although basically trained as chemists or chemical engineers, were in classifications designated as "other field of science or engineering" (8 percent) and "any other field" (8 percent). The Fraser report was published in full in the 9 Apr. issue of *Chemical and Engineering News*.

A comparison of 1955 earnings with those reported in two earlier ACS surveys, made in 1941 and 1943, shows a considerable rise since the war years. In 1941, base salary for beginning chemists was $132 a month at the median. By 1955, the median salary of beginners was up to $435, a 230 percent rise. For more experienced chemists the percentage increase, although not so great, was still appreciable—at the 20-year level of experience it was about 125 percent, from a median of $339 in 1941 to $763 in 1955.

When median salaries for both years were placed on a constant dollar basis by adjustment to the Bureau of Labor Statistics consumer price index, it was found that men chemists starting out in 1941 earned $209 a month, and those starting in 1955 earned $380. On the same basis, chemists with 20 years of experience drew $539 in 1941 and $666 in 1955. These figures represent income before taxes, and the report does not take into account the effect upon net income of the changes in tax structure since the war.

Changes in work patterns also appear to have been a factor in upgrading earning levels between 1941 and 1955. Last year about 20 percent of all ACS members were engaged in technical administration—a relatively high-paying field of work—compared with 15 percent in 1941. On the other hand, the proportion of members in some relatively low-paying fields declined. There were decreases, for example, from 13 to 8 percent in analysis and testing, and from 12 percent to 9 percent in college teaching.

Significant changes in sources of employment also were disclosed. In 1941 18 percent of the society's members were employed by government agencies—Federal, state, and municipal—and only 8 percent were so employed last year. In the same period, industrial employment rose from 64 to 69 percent, and jobs in teaching institutions held steady at about 12 percent. There was a sharp decline in the percentage of men chemists (19 percent to 8 percent) and chemical engineers (7 percent to 4 percent) in government work, largely the result of even sharper dips in state and municipal employment. About 13 percent of women chemists hold government jobs, compared with 18 percent in 1941, while 45 percent now work for industry—a relatively large increase over the 27-percent figure that obtained in 1941.

Of the ACS members participating in the survey, 42 percent hold doctorates, another 19 percent have the master's degree, and only 3 percent have no college degree. Chemical engineers appear to have a lesser tendency to pursue

graduate study. Only 12 percent have the doctor's degree, and 62 percent stopped at the bachelor's level. Among women chemists, 26 percent have doctorates and 50 percent have no advanced degree.

Chemical engineers as a group seem to have an earnings advantage over chemists, the report indicates, but when chemists and chemical engineers hold comparable jobs they tend to receive about the same salaries. The report also showed that men chemists, throughout their careers, earn about 1½ times as much as women chemists.

Among the occupations most common among chemists and chemical engineers, the best paying is technical administration, with a median salary (disregarding experience and education) of $856 monthly for chemists and $898 for chemical engineers. Industrial research comes next—$638 for chemists and $647 for engineers. Lowest median salaries for the more prevalent occupational categories are found in college and university teaching ($517 for chemists and $637 for chemical engineers) and in analysis and testing ($473 for chemists and $520 for engineers). Of all occupations reported, secondary-school teaching paid least, with a median salary for chemists of $443 a month. The best-paid jobs, outside technical administration, were in nontechnical administration consulting and in law.

Search for Cancer Drugs

The U.S. Public Health Service has placed contracts with five laboratories for large-scale screening of chemical compounds in the search for drugs useful in treating cancer. The laboratories, which will begin the work at once, are Microbiological Associates, Bethesda, Md.; Wisconsin Alumni Research Foundation, Madison, Wis.; Southern Research Institute, Birmingham, Ala.; Hazleton Laboratories, Falls Church, Va.; and Stanford Research Institute, Menlo Park, Calif. Responsibility for supervising the contracts rests with the Cancer Chemotherapy National Service Center of the National Cancer Institute.

The laboratories are expected to examine approximately 2000 compounds by 1 July. Each compound will be tested against three different kinds of cancer implanted into various strains of mice under procedures for animal screening established by a panel of the Cancer Chemotherapy National Committee. This committee, representing the leading organizations and Government agencies in cancer research, was established last May to sponsor a national voluntary program of cooperative research and development in cancer chemotherapy.

State Conservation Programs

A survey of how each state is organized to give educational leadership in conservation and use of resources is being conducted under the direction of Richard L. Weaver, associate professor of conservation in the School of Natural Resources at the University of Michigan. The work is supported by a grant from the Horace H. Rackham School of Graduate Studies. Each state agency concerned with education about resources is being asked to complete an inventory statement covering such matters as leadership, state committees, program, financing, publications, cooperation, legislation, and problems or obstacles to progress.

The results of the inventory will be used by Weaver in scheduling visits to each of the states to interview the people responsible for the programs. It is expected that the results of the study will help professional organizations and foundations in their efforts to be of greater service nationally.

Code for Atomic Structure of Solids

A new code for describing the atomic structure of solids has been invented by A. L. G. Rees, assistant chief of the Division of Industrial Chemistry, at the Australian Commonwealth Scientific and Industrial Research Organisation. Rees described his new system of symbols on 5 Apr. at the Symposium on Crystallography that was held in Madrid, Spain. He pressed for universal adoption of the code, saying that it will enable scientists to set out their research results without ambiguity, which should lead to more rapid advances in many aspects of industrial research.

The code makes it possible to describe concisely the irregularities in the atomic structure of crystalline solids. These irregularities are of special industrial importance. They are important in photography, fluorescent lamps, TV screens, luminous watch dials, and transistors. They play an important part, too, in many processes of modern chemistry and metallurgy; for example, the catalysts that are used in the cracking of crude oil to produce gasoline depend on them for their activity.

News Briefs

■ A new laboratory animal, *Meriones libycus,* is being introduced into this country from England, where it has been bred for the past several years for use in studies on the Coxsackie virus. The animal is a species of desert rat found in Libya and North Africa that was originally imported into England in November 1951 by the late G. M. Findlay. He had obtained two pairs from Lapine of the Pasteur Institute in Paris.

■ The Library of Congress has agreed to prepare a continuing, annotated bibliography on air pollution for the U.S. Public Health Service. The bibliography will include references to the physical, biological, engineering, legal-administrative, and economic aspects of atmospheric pollution.

Last year, the Congress appropriated $1,785,000 for Public Health Service support of air-pollution research and technical assistance. In December it was announced that the Bureau of Mines, the National Bureau of Standards, and the Weather Bureau, would undertake research projects in air pollution for USPHS.

■ The Geological Survey has developed a new orthophotoscope that was displayed publicly for the first time at the recent annual meetings in Washington of the American Congress on Surveying and Mapping and the American Society of Photogrammetry. The device changes conventional aerial photographs, with all their distortions from camera tilt and changes in elevation on the ground, into the equivalent of distortion-free photographs. It produces a corrected photograph that is a true map or photomap of uniform scale. This development makes it possible for the first time to measure straight-line distances accurately on an aerial photograph.

■ Assistance in establishing a nuclear physics department at the Federal University of Karachi will be provided to the Government of Pakistan by the United Nations Educational, Scientific and Cultural Organization. Frans Barendregt, chief scientist at the new Dutch Nuclear Reactor Center at The Hague, is being sent to Karachi for this purpose. He is the first nuclear scientist to go on a mission under the UNESCO program designed to serve countries in fields not covered by the United Nations technical assistance program.

■ An albacore tuna tagged 1300 miles north of Hawaii on 5 Oct. 1954 by the U.S. Fish and Wildlife Service was recaptured near Japan, 2370 miles away, 471 days later. It weighed 15 pounds when it was tagged and 40 pounds when it was recaptured.

It is thought that the albacore tuna of the North Pacific may belong to a single population that migrates between the United States and Japan. However, this is only the second time that an albacore tagged by the U.S. has been taken