of the radioisotope training courses and an advanced radiotherapy course. Informal education is accompanying the introduction of monitoring procedures. Monitoring activities include a film badge service, a haemotological program, a radiation standards laboratory, a radioactive wastes laboratory and a program for observing environmental radioactivity.

In Paraguay, radioisotopes have been used for medical purposes under a program initiated with the assistance of the Brazilian Nuclear Energy Commission which sponsored an isotope course in Asunción in 1959 as a joint undertaking of the Universities of Asunción and São Paulo. At the conclusion of this course, equipment for a small isotope laboratory was donated to the Faculty of Medicine of the University of Asunción by the Brazilian Nuclear Energy Commission. The isotope applications so far have been almost entirely in thyroid diagnosis and a few cases of treatment. The mission was informed that the cost of isotopes set a limit to the amount of work that could be undertaken. It recommended that the National Atomic Energy Commission should explore the economics of importing isotopes from consumers of large quantities in neighboring countries.

Radioisotopes have been rather extensively used for two to three years in Peru in therapy with sealed sources, and in diagnosis, therapy, and research with unsealed sources. At present these activities are confined to Lima, although considerable isotope equipment is available at the medical school in Arequipa. A large cobalt teletherapy unit has been in operation in a hospital since 1958 with a very heavy patient load. Clinical applications of unsealed isotopes are currently conducted in at least four hospitals. These applications are largely thyroid diagnosis and therapy, but they also include several other routine clinical tests and therapeutic applications. Further, a start has been made in research applications of isotopes; at the medical school radiocarbon has been used in biochemical investigations, and in the Institute of Andean Biology studies have been made of the effect of altitude on red blood cell and thyroid status. Interest was expressed in the study of endemic goiter and endemic cretinism with radioiodine and other methods. It was felt that such a study would stimulate the introduction of preventive measures against goiter and add significantly to the understanding of endemic cretinism.

# CO-OPERATION WITH REGIONAL ORGANIZATIONS

During the last part of 1960, the IAEA concluded formal agreements for co-operation with two regional organizations concerned with the peaceful uses of atomic energy. The organizations are the European Nuclear Energy Agency (ENEA) and the Inter-American Nuclear Energy Commission (IANEC). While the main activities of both these organizations differ in many respects from those of the IAEA, there are also many matters of common concern.

The European Nuclear Energy Agency was established by a decision of the Council of the Organization of European Economic Co-operation (OEEC) on 17 December 1957, and has the same 18 members as OEEC. All of these, except Ireland, are also members of IAEA.

IAEA and ENEA have mutual interests in several of the fields in which the latter has been active. These include several aspects of health and safety work, research on food irradiation, training courses, third party liability, safeguards, and nuclear power economics. Perhaps most significant of ENEA's activities have been its promotion of three joint research and development enterprises. These are: the European Company for the Chemical Processing of Irradiated Fuels, which is building a reprocessing plant in Belgium; the HALDEN project, under which an experimental boiling water reactor is operated in Norway; and the DRAGON project, an experimental high-temperature, gas-cooled reactor to be built and operated in the United Kingdom.

Because of these mutual interests the IAEA and ENEA Secretariats began early to maintain informal contacts on a working level, to exchange information and documents, and to send representatives to each other's meetings and conferences.

## Agreement with ENEA

In March 1960 ENEA suggested to IAEA that a formal agreement be negotiated to widen and formalize this co-operation. IAEA's Board of Governors approved this proposal, and in June 1960 also passed favorably upon the text of the proposed agreement. It became effective in September 1960 on its approval by the IAEA's General Conference and by the Council of OEEC. Under the terms of the agreement, IAEA and ENEA "will act in close co-operation with each other and will consult each other regularly in regard to matters of common interest". Among the types of

Signing of agreement between IAEA and ENEA. Left to right, Mr. Pierre Huet, Director of ENEA, Professor Leandre Nicolaidis, President of ENEA's Steering Committee, and Mr. Sterling Cole, Director General, IAEA

co-operation envisaged in the agreement are exchange of information and documents; close working relationships between the two staffs; arrangements for the co-operative use of personnel, materials, services, equipment and facilities; and reciprocal representation at meetings.

In November 1960, Mr. Sterling Cole, Director General of IAEA, attended a meeting of ENEA's Steering Committee in Paris and, along with Mr. Pierre Huet, Director of ENEA, signed the protocol regarding the entry into force of the agreement. In his reply to the words of welcome by the President of the Steering Committee, Mr. Cole pointed out that although the two organizations had virtually identical aims their methods necessarily differed. ENEA serves a relatively homogeneous group of countries, he said, whereas IAEA's distinctive feature is its broad and heterogeneous membership. The emphasis of IAEA's work is thus concentrated on aiding the world-wide exchange of knowledge and technological know-how, on channeling technical assistance and on supplying source materials and equipment, whereas ENEA is in a position to promote the construction of large joint industrial installations and pilot plants. Mr. Cole also stressed the need for harmony between regional and world-wide health and safety regulations and practices, regarding which both organizations have taken important initiatives.

## Agreement with IANEC

The Inter-American Nuclear Energy Commission (IANEC) was established on 22 April 1959 by decision of the Council of the Organization of American States (OAS). Its membership includes all 20 Latin American States - all but four of which are also members of IAEA - and the United States of America.

The course of events by which an agreement for co-operation was reached between IAEA and IANEC closely followed the sequence with respect to the agreement with ENEA. Informal relationships were developed first between the two agencies, during which IANEC gave valuable assistance to several of IAEA's activities in Latin America, such as the holding of training courses and the organization of assistance missions. IANEC also invited IAEA to send observers to its meetings, for example, the second and third Inter-American Symposia on Peaceful Applications of Nuclear Energy, and publicized IAEA activities in its information bulletin. IAEA, for its part, invited IANEC to send observers to various meetings, including the third and fourth General Conferences.

First approaches regarding formalization of this co-operation were made by IANEC in June and July 1960. In September 1960 IAEA's Board of Governors submitted a draft agreement to the fourth General Conference, which approved it the same month. The agreement became effective, upon its approval by the Council of OAS, in December 1960.

The agreement between IAEA and IANEC closely parallels the agreement between IAEA and ENEA, which was in fact used as a model in drafting it. It was formally signed in Washington on 22 December by IAEA Director General Cole and Mr. Jesse Perkinson, Executive Secretary of IANEC.