

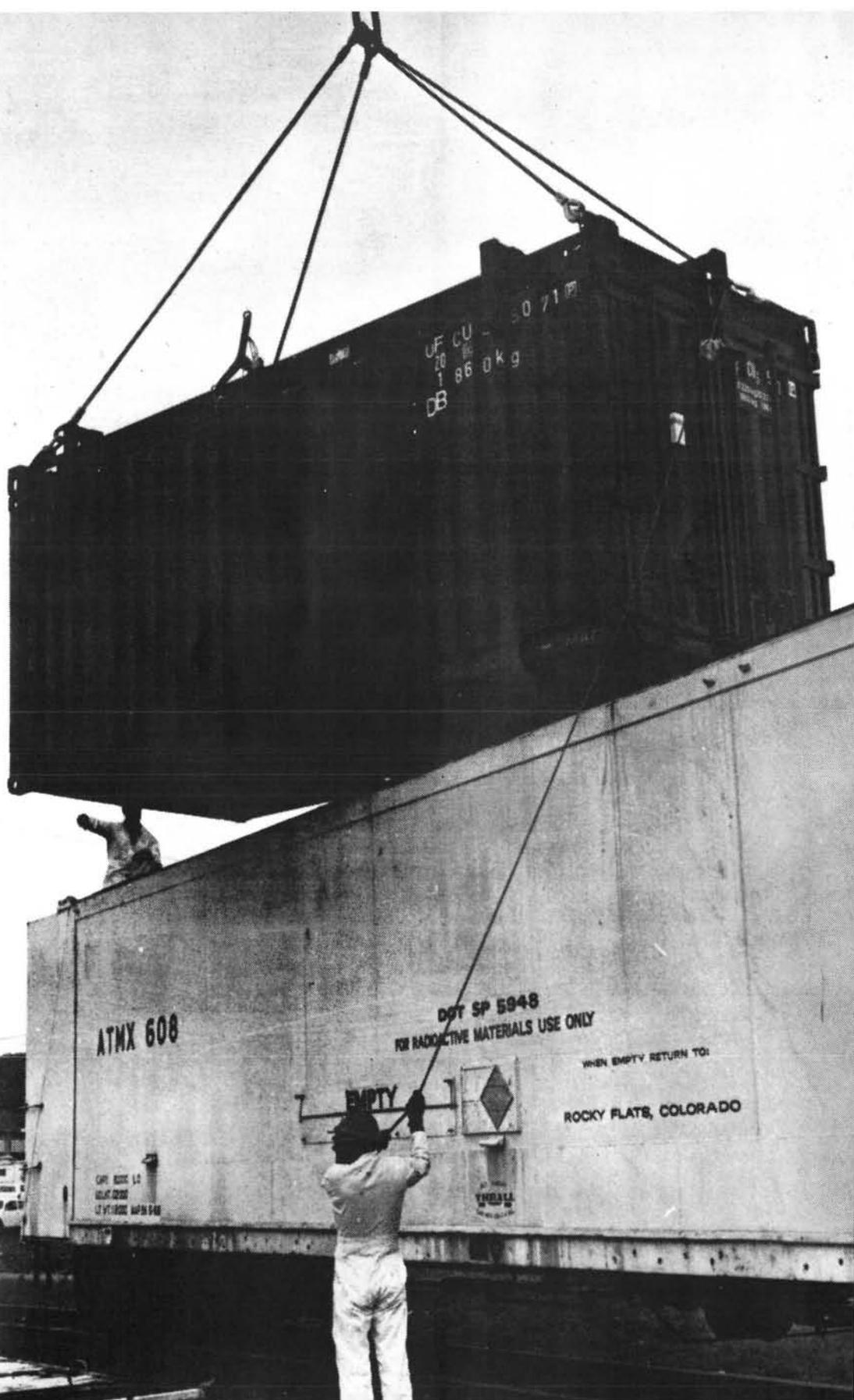
# nuclear energy and the modern world

The International Atomic Energy Agency is an autonomous organization within the United Nations system, with its headquarters in Vienna, Austria.

Its objectives, as defined in its Statute, are to "seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world", and to "ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose".

This issue of the Bulletin contains a series of articles describing some of the ways in which the Agency works to fulfil its rôle.

An important part of the Agency's work is in the establishment of standards for the protection of health and safety and the drawing-up of guidelines for the safe transport of radioactive materials. Here, workmen guide a cargo container, used for the transport of radioactive wastes, into one of two bays in a railcar designed to ensure that even in the event of a severe accident the wastes would be safely contained. Photo: USAEC



UF CU 5071  
1860kg  
DB

ATMX 608

DOT SP 5948  
FOR RADIOACTIVE MATERIALS USE ONLY

WHEN EMPTY RETURN TO:  
ROCKY FLATS, COLORADO

EMPTY



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Each year the Director General of the IAEA —since 1961, Dr. Sigvard Eklund, of Sweden — reviews the work of the Agency at the Economic and Social Council of the United Nations. In his address to ECOSOC at the Palais des Nations, Geneva, this year Dr. Eklund developed three main themes.

First, Dr. Eklund recalled the successful completion of the work of the Safeguards Committee (1970), set up by the IAEA Board of Governors to advise it on the structure and content of agreements to be concluded between the Agency and States party to the Treaty on the Non-Proliferation of Nuclear Weapons. Under these agreements IAEA safeguards are to be applied to all nuclear material in all the peaceful nuclear activities of each country concerned. Two — with Finland and with Austria — have recently been approved by the Board, and that with Finland has been signed. A note on the Finnish signature appears later in this issue.

"For most of the 65 non-nuclear-weapon States that have already ratified the NPT", said Dr. Eklund, "the deadline for concluding such agreements is the end of February next year. I would like to use this opportunity to draw the attention of the Member States concerned who have not yet taken action to their obligations under Article III.4 of the NPT. Under that article they were required to commence negotiations within 180 days from 5 March 1970 and to conclude them not later than the end of February next year. There is not much time left before the deadline."

#### Aid to the developing world

A major programme of the Agency is in technical assistance, financed largely by voluntary contributions from Member States. Dr. Eklund reported to ECOSOC that the IAEA Board had decided to raise the target for such contributions from \$2.5 million to \$3 million in 1972. This represented an increase of 50 per cent over the target set for 1970; because of inflation, however, the 1972 target was about equivalent to the 1962 target of \$2 million. But Dr. Eklund noted that these targets were being more nearly achieved now than in earlier years. From 1965 to 1969 contributions reached about 69.5 per cent of the target; in 1970, 83.6 per cent, and in 1971 "we hope to reach 85.6 per cent". Special contributions to particular programmes had also increased, as had the number of Special Fund type projects executed by the IAEA for the UN Development Programme. (One such project is described in this issue). There was thus material growth in the amount of development aid being administered by the Agency.

Apart from technical assistance, and the International Nuclear Information System (INIS), however, "no expansion has been possible during the last two years in any of the Agency's promotional activities", said Dr. Eklund. This situation was difficult to reconcile with the expectations aroused by Article IV of the NPT (under which Parties undertake broadly to co-operate "in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes ... with due consideration for the needs of the developing areas of the world"). Dr. Eklund

recalled that the Board had expressed the hope that the Fourth International Conference on the Peaceful Uses of Atomic Energy, being held in Geneva in September this year, would give a new thrust to the promotional work of the Agency.

### Nuclear energy and the environment

"Every person who feels a sense of responsibility for the future", Dr. Eklund continued, "must welcome the worldwide debate that is going on about the environment. I am sure that most of us have been shocked by some of the things we have learned about the impact that our modern society is having on the environment.

"Nuclear energy is a growing part of this modern society. To judge its impact in true perspective, however, it must be seen from several points of view.

"Firstly, compared with the radiation dose that every man receives from nature itself, the dose to which he is exposed from manmade sources of radiation is minute. In turn, the use of nuclear energy to produce electricity contributes only a small part of this fraction. Greater exposures result from nuclear weapons testing, and far greater from medical X-rays. . .

"Secondly, nuclear energy presents very minor environmental problems compared with other technologies and industries. However, the real question we must face is: what is the best way — what is the way least damaging to the environment — of meeting the rapidly growing need for energy, and especially for electricity, of developing and industrial countries alike?

"Since the natural resources of hydroelectric power are limited, we must either burn a fossil fuel — coal, oil or gas — or use nuclear energy to meet our needs. By providing an alternative to fossil fuels, whose eye-catching impact on the landscape is there for all to see, nuclear energy will diminish pollution and contribute to a cleaner environment."

Dr. Eklund commented that it would be "unfortunate, to say the least, if unwarranted fears and speculations were to lead a pollution-conscious public away from the means we have of reducing pollution by the greater use of nuclear power". A new technology could not be introduced without giving rise to certain problems — among them, the safe management and disposal of radioactive wastes. But atomic energy authorities were devoting great effort and expense to making sure that these wastes would be permanently isolated from man and the living environment. The IAEA was taking steps to set up an international register of information on radioactivity released by the civil use of nuclear energy. Insofar as atomic energy was concerned, the IAEA had the central responsibility in the UN family for setting standards of safety for the protection of health and for the minimization of danger to life and property from the use of nuclear energy. The Agency took its responsibilities with the utmost seriousness; since 1958, it had issued 36 guidebooks or standards designed to ensure that safe and environmentally sound procedures were followed in every type of activity in which nuclear energy was used for peaceful purposes.

"It has often been said that the example given by the nuclear industry in limiting its environmental impact could profitably be followed by other

industries", said Dr. Eklund. "Perhaps also on the international level, the procedure followed by the UN family of publishing periodically a report on the effect of atomic radiation on man and his environment might be further developed. An authoritative annual report on the state of the environment could perhaps have greater practical effect than new institutional machinery."

Dr. Eklund concluded: "I would like to end with what has been said many times before — namely, that nuclear energy has come of age. The increasing cost of fossil fuel and uncertainties in ensuring reliable long-term supplies of such fuel has shown nuclear energy to be a most welcome alternative. This will certainly be emphasized at the Fourth International Conference on the Peaceful Uses of Atomic Energy."

"... Nuclear energy will diminish pollution and contribute to a cleaner environment".  
Here, fly fishing trials taking place  
on the lake at the Trawsfynydd nuclear power station, in north Wales.  
Photo: Central Electricity Generating Board

