Safeguards Seminar in the USSR

At the invitation of the USSR State Committee on the Utilization of Atomic Energy, thirteen Agency safeguards inspectors headed by Mr. S. Nakicenovic, the director of the Division of Operations, participated in a safeguards seminar organized in the Soviet Union for ten days in January. The purpose of the tour was to familiarize Agency staff with safeguards work carried out in the USSR. This included study and actual observation of safeguards procedures developed by the USSR for pressurized light water reactors of the WWER (Novo-Voronezh) type, which are subject to Agency safeguards in a number of countries. The members of the group were also made familiar with work on safeguards for fast critical assemblies being done under Agency contract, and with new instruments developed for the determination of uranium and plutonium in liquid waste. At the same time Agency staff were given an opportunity to present formal lectures to senior USSR collaborators in the field of safeguards, and future aspects of collaboration were considered.

The programme demonstrated the interest and support extended to safeguards in the USSR. A series of lectures and safeguards demonstrations were given at the Novo-Voronezh Nuclear Power Plant, which has the facilities for training Agency inspectors, a possibility which may be considered in the future. It was noted that the USSR intends to provide WWER units installed abroad with built-in devices to facilitate safeguards; it has developed detailed procedures for such plants, which can serve as the basis for practices by Agency inspectors in this field.

The group was also invited to several research and development institutions. Of these facilities, one of the most impressive was the BOR-60 fast reactor at the Research Institute for Atomic Reactors (NIIAR) at Dimitrovgrad, and the fast critical assembly SPECTR at the same institute. This critical assembly is the basis for an Agency Contract for the development of procedures for safeguarding of critical facilities.

Other work done in this area relates to the determination of uranium and plutonium, especially in irradiated fuel materials using mass spectrometric methods. Of particular interest was an apparatus based on a special chromotographic method, developed for the same purpose by Professor V. Markov at the Vernadsky Institute in Moscow (partly under an Agency Contract), giving quick and reliable results. This apparatus is now being tested elsewhere by the Agency under plant operating conditions.

The group also visited one of the largest institutions in this field in the USSR, the I.V. Kurchatov Institute of Atomic Energy in Moscow. They were welcomed there by Dr. I.G. Morozov, Deputy Chairman of the State Committee on the Utilization of Atomic Energy, who emphasized in his address that safeguards and their scientific implementation is one of the primary roles of the Agency and is supported in all fields by the USSR.

A final meeting of the seminar was held under the chairmanship of Dr. I.D. Morokhov, First Deputy Chairman of the SCUAE. Dr. Morokhov underlined the need for an effective and practical control system which also should be inexpensive. The safeguards responsibilities of the IAEA were extending, leading to increases in activity and staff, and it was necessary to keep this within limits. He welcomed work aimed at the simplification and reduction of inspections, pointing out that intrusion problems had to be especially avoided. The USSR was especially interested in collaborating with the Agency in making technical improvements in safeguards, he said.

The visiting safeguards inspectors with their escorts in front of the Novo-Voronezh Power Plant.

In the control room of the Novo-Voronezh Power Plant.