

IAEA Training Activities Related to State Systems of Nuclear Materials Accountancy and Control

The model safeguards agreement [1] for States party to the Treaty on Non-Proliferation of Nuclear Weapons (NPT), specifies that "... the State shall establish and maintain a system of accounting for and control of all nuclear material ...". A similar provision does not exist in "non-NPT" safeguards agreements, but it is difficult to imagine how a State might truly comply with its international safeguards commitments without such a system.

The backbone of Agency safeguards is the verification of nuclear material based on data generated, in most cases, by the facility operators and transmitted to the Agency by the State. If this data is not generated, it cannot be transmitted, if it is not transmitted it cannot be verified, and if it is not verified there are no international safeguards.

Thus it is that in recent years the Agency has placed an increasing emphasis on State systems of accountancy and control (SSAC) of nuclear material. The programme began with a panel meeting in Tokyo in November 1973 at which the essential requirements of State systems in compliance with international safeguards agreements were outlined and discussed. In July 1975 the responsibilities and activities of State systems were discussed in greater detail at an advisory group meeting in Brno, Czechoslovakia, with emphasis on some optional State System activities. If all goes as planned, in the spring of 1978, another advisory group will undertake the task of preparing a written code of practice.

In 1975, in the course of the Brno advisory group meeting, it was noted by several participants that there was a need for an Agency-sponsored training programme related to the organization and operation of State systems, and a separate advisory group meeting on that subject was recommended.

Preparation for the advisory group on training programmes began almost immediately, with the calling of an informal meeting of consultants in early December, 1975. The advisory group meeting took place in Vienna in March 1976, and it was opened by the Director General of the IAEA, who noted that the establishment of nuclear materials accountancy and control systems in States embarking on nuclear power programmes was a very important element in international safeguards. He expressed the belief that the Agency could play an important role in the development of such systems, and that one way of providing this assistance was through the organization of a series of training courses.

The advisory group on SSAC training gave primary attention to the organization of a basic training course for Member States whose nuclear power programmes are still in the early stages. Two such a training courses have been held. The advisory group also has made several suggestions relating to more advanced training courses or seminars. It is expected that the first advanced course will be held early in 1978.

The first "Basic Training Course for Personnel of State Systems of Accounting for and Control of Nuclear Material" was held in Vienna from 2–17 November 1976, and was followed by visits to selected nuclear facilities in the Federal Republic of Germany. The course was attended by 27 individuals from 18 Member States. Primary emphasis was given to two topics, namely Fundamentals of Nuclear Materials Accountancy, and Organization, Activities and Responsibilities of the State System. Guest lecturers described material control systems in their countries, and discussed materials accountancy practices and problems in their State systems, and numerous discussion periods were scheduled in order to encourage audience participation. In addition to the primary topics, lectures were also presented on the history of international safeguards, on physical protection of nuclear materials and nuclear facilities, and on a description of the Agency's international safeguards system.

The second basic training course was held in IAEA Headquarters from 23 May to 3 June 1977. No facility visits were arranged, but the basic course content was the same as that provided in the first training course. This second basic training course was attended by 35 persons from 25 countries.

Formal training courses are not the Agency's only activity related to State systems of nuclear materials accountancy and control. In the autumn of 1977, some 17 persons participated in a month-long study tour involving three days of lectures in Vienna, two weeks of lectures and facility visits in the Soviet Union, three days in the German Democratic Republic, and three days in Czechoslovakia. This four-country study tour included extensive visits to operating nuclear facilities, and provided participants with the opportunity to see actual operating nuclear material control systems in action.

Several States have requested, formally or informally, that they be granted fellowships or similar awards permitting extended visits to some country (or several countries) with an operating State system, or that the Agency arrange for suitable experts in the field to visit their country for an extended consulting period, possibly as long as one year. There are difficulties in these approaches. Nearly all of the major industrial countries consider that any extended fellowship-type visit would permit the recipient to have an unacceptable degree of access to commercially sensitive information. Thus while such visits are by no means precluded, the duration is more likely to be three weeks rather than three months to one year. At the same time, moreover, most experts in the field who might consult on the development of a State system are urgently needed where they are, and are more likely to be available for consulting visits of three weeks rather than three months.

The subject of State systems of nuclear materials accountancy and control continues to be of vital concern, and planning for future training courses continues. It is also foreseen that there will be written guidelines, not only the "code of practice" previously referred to, but also instruction manuals on topics related to nuclear material control and State system operation.

Reference

- [1] INFCIRC/153 "The Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on Non-Proliferation of Nuclear Weapons"; IAEA, June 1972.