

STATE SYSTEMS OF ACCOUNTING FOR AND CONTROL OF NUCLEAR MATERIALS IN THE REPUBLIC OF UZBEKISTAN



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The purpose of this presentation is to discuss about State Systems of Accounting for and Control (SSAC) of nuclear materials in the Republic of Uzbekistan.

I. INTRODUCTION

After the breakup of the USSR the Republic of Uzbekistan has been working in the following areas, attaching primary importance to producing a legislative the structure for the safe use of nuclear energy:

- legal framework for nuclear and radiation safety;
- licensing and control of nuclear facilities and radiation sources;
- regulations for the safe transport of nuclear & radioactive materials;
- emergency preparedness.

II. PRINCIPAL ELEMENTS & THE FUNCTION OF THE SSAC

Authority

The structure of the State organizations Operating directly under the Cabinet of Ministers of the Republic of Uzbekistan is the Agency on Safety in Industry and Mining (atomic inspection), which acts as the chief governmental body for the nuclear safety and radiation protection. The Committee's main activities are the preparation of legislative and regulatory documents, analysis and supervision of nuclear safety and nuclear material accounting for the State.

At the same time, work has started on reorganizing the State institutions with a view to concentrating all the main regulatory and supervisory functions in the area of radiation and nuclear safety in one institution-Agency on Safety in Industry and Mining. The Republic of Uzbekistan signed the Model protocol Additional to Safeguards Agreement between Uzbekistan and IAEA on 22 September 1998. In 1998 the Uzbekistan has acceded to the Convention physical protection of nuclear material.

III. NUCLEAR ACTIVITIES IN UZBEKISTAN

Atomic inspection safeguarded at the beginning of 2001, 9 installations which are as follows:

- * 2 Research Reactor
- * 2 Uranium mine and reprocessing plant
- * 5 Storage installations

-Nuclear research reactor WWR-SM, which is water- water type, work on the 20 % enriched uranium (total loading weight is 7.5 kg). His warming power –10Mw.Using Russian-supplied IRT-3M fuel assemblies containing. The reactor is designated to carry out experiments

in field of nuclear physics and nuclear engineering, neutron activation analysis, solid-state physics and isotope production.

-Photon Impulse Reactor enriched U total 4,550 kg (liquid), used for industrial purposes by the industrial group "Poton".

-The creation of large-scale uranium industry in Uzbekistan resulted from the establishment and development of the Navoi Mining and Metallurgy Group, which in 1965 manufactured its first batch of end product-uranous-uranic-oxide. In 1991, following the establishment of the independent Republic of Uzbekistan, this group and all its industrial facilities became the property of Uzbekistan. In 1992 the Navoi Group and a number of industrial engineering, assembly, design and other organizations were amalgamated into the State enterprise "Kyzylkumredmetzoloto". The uranium branch of this enterprise made up of Hydrometallurgical Plant N1 in Navoi and four mining.

IV. LEVELS OF DATA PROCESSING

Atomic inspection distinguishes between three main levels of data processing:

BOTTOM	Instrumental Level
PLANT	Inspector computer Operator computer
HEADQUARTERS National System	IAEA

- As general rule, the flow of information is from the bottom to the top.
- National inspection activities include:
 - Preparing the inspection report, a copy of which is sent to the IAEA, for each inspection ;
 - Examination of the records to verify self-consistency and consistency with the reports:
 - Counting & identification of the items of nuclear materials recorded and reported:
 - Taking samples, according to a statistical sampling plan for analysis of nuclear materials:

V. The Processing Cycle

The operators are required by the Regulation to report all inventory changes 15 days after the month in which they had been accounted for. Upon arrival the reports are immediately input into the computer and they are checked by the accountancy Unit Atomic inspection for clerical mistakes, in particular by comparing the calculated book inventory with the reported one. After that, the reports are dispatched to the IAEA. More than 40% of all the entry lines are reported by the operators to Atomic inspection in computer-readable. The reports come from the 5 installations. The less than 60% remaining entry lines, which are the reports of over 4 largest installations, are still on hardcopy.

A lot of effort is being devoted to encouraging further operators to computerize their reports. This requires regular and detailed contacts with these operators. As transmission medium, the Atomic inspection can presently accept:

-hardcopies;

-diskettes.

VI. Summary

The current Uzbekistan's SSAC has been developed & fully satisfies both the IAEA safeguards requirements. The Republic of Uzbekistan supports the introduction of the "integrated safeguards". There is need to further strengthen the relationship between the Uzbekistan's SSAC and the IAEA under an integrated safeguards regime to provide more effective and efficient safeguards application.