



Radioactive Waste Management at the Institute of Nuclear Physics, Academy of Sciences of Uzbekistan Republic.



**Workshop on Radioactive Waste Management—Solutions for countries without nuclear power program,
2-6 November, 2015 - Trieste, Italy**



Nuclear Facilities at the INP, AS RU

Nuclear reactor WWR-SM



Cyclotron – Y150



Cyclotron – Y115



Neutron generator



Gamma facility





Uzbekistan has adopted rules for the organization of state accounting and control over the circulation of sources of ionizing radiation

This decision was taken in order to implement Article 22 of the Law of the Republic "On Radiation Safety", Article 10 of the Law "On Waste". The document defines the procedure for organizing the system of state accounting and control over the turnover of ionizing radiation sources (IRS) - nuclear materials, radioactive substances containing radioactive sources and radioactive waste



Provisions on handling and long-term storage of radioactive waste in the Republic of Uzbekistan

- I. General Provisions
- II. Application area
- III. Basic Concepts
- IV. Obligations of the national operator
- V. Integrated approach to security
- VI. Stages prior handling with radioactive waste
- VII. Handling with Radioactive waste, produced during mining and reprocessing
- VIII. Radiological protection of workers
- IX. Options for Waste Management
- X. Release from regulatory control
- XI. Monitoring and surveillance

Provisions for radioactive waste management are developed in accordance with the laws of the Republic of Uzbekistan on "Radiation Safety", "State Sanitary Inspection", "Environmental Protection", "Air Protection", "Waste", the rules of radiation safety 2006 and basic sanitary rules ensuring radiation safety BSRERS 2006 the Republic of Uzbekistan.



Inventory and export of radioactive sources from the State enterprise "Makhsus service uskuna"

The storage has 129 wells (116 large and 13 small)

Total 1367 radioactive sources were identified, of which 137Cs

Exemplary α - β - γ - sources;

Control sources;

Radioisotope neutralizers of static electricity;

Gammamirids.

Neutron sources.



Storage of sealed radioactive sources at the INP, AS RU

Inside the storage tracking sensors of movement around the perimeter of the storage are also installed. All sensors are displayed on the control room of physical protection at the WWR-SM research reactor. In addition, protection is set at the opening of the door (identification), which is also displayed on the remote of physical protection of the reactor.

In the protected area storage floor, walls and ceiling provide penetration delay that prevents unauthorized removal of the IRS.

In the storage beam crane lifting capacity of 2 tons is installed. Inside the storage the rails with a mobile trolley are laid.

Storage has 24 large safes size of 40 x 40 x 40 cm and 40 small safes, size of 40 x 20 x 30 cm. Every three safe in the bottom row is locked with steel bar. Every five safes in the top row is locked with steel bar. There are wells for large containers with IRS. Each well is locked.



Storage of sealed radioactive sources at the INP, AS RU



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General view of the storage



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Protection system

Security camera in storage



Protection system of the door





Inside the storage general view



Safes for storage of small containers with IRS

Wells for storage of large containers with IRS



Inside the storage general view



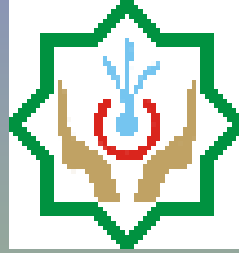
Inventory and creation of a national register of radioactive sources in Uzbekistan

Radiation Sources Database							
Sealed Source 10s-1019							
Regulatory Authority Generator No	10s-1019						
Serial Number	059						
Activity	12						
Activity Unit	GBq						
Manufacturer	Россия						
Sealed_Model	БИС-10						
Category	Category 5						
Supplier Name	Россия						
NUCLIDE							
Sr-90/Y-90							
ASSO							
Reg. Authority No	Assignment Date	Disassignment Date				Comment	
10a-0012	01.02.1990						
HISTORY							
Status Date	Status	Facility	Department	Location	Security Group	Physical Barrier	Comments
19.02.1990	действующий	ГП (Центр оказания метрологических услуг - ЦОМУ)	Отдел Государственного контроля за средствами измерения радиотех. величин ИИИ	зд. ГО ЦОМУ, 1-этаж, к.119	Security Group D	дверь, замок, сигнализация	используется для калибровки оборудования
Printed by user: Bakir Salimov Date: 12.05.2008							
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Republican Site for Radioactive Waste Disposal (RSRWD)

- **RSRWD started its operation in November 12, 1969.**
- **RSRWD is located in Tashkent region about 60 km away from Tashkent city and 35 km from INP.**
- **It's square is 9.6 h.**
- **Total square including sanitary protective zone 315 h.**
- **Ground water is 70 m.**
- **Since 1970 till 2014 at the RSRWD about 7500 Ci radioactive waste was buried.**
- **It is planed to build new storage at the RSRWD.**



**THANK YOU FOR YOUR
ATTENTION**