

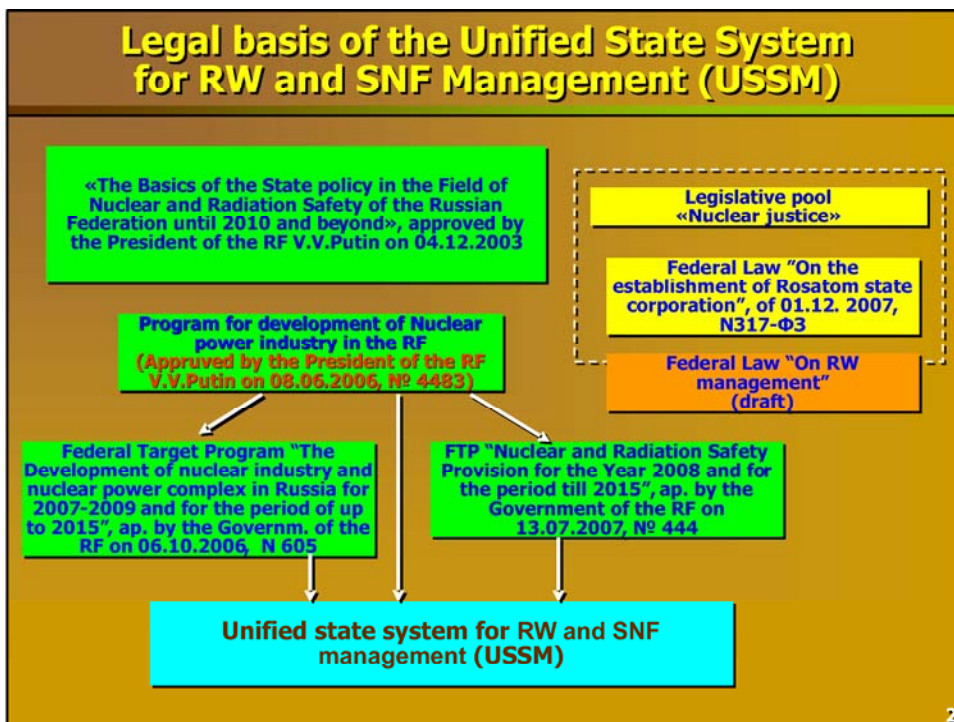
Federal Agency for Nuclear Energy



The Unified State System for the Spent Nuclear Fuel and Radioactive Waste Management (conceptual approaches and formation principles)

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Background of the state statute (level) of the SNF and RW management system

According to the obligations assumed by the Russian Federation under «The Joint Convention on the safety of spent fuel management and the safety of radioactive waste management», **the state bears the ultimate responsibility for RW and SNF management safety**

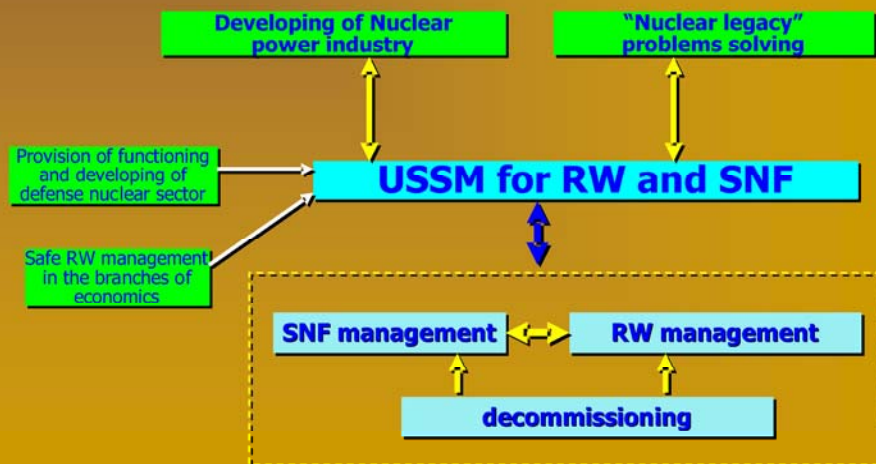
The state level of the «Program for development of Nuclear power industry in the RF» and the necessity to enable adequate infrastructure

The State responsibility for solving the problem of "historical" RW and NSF and nuclear facilities undergoing decommissioning

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Objectives of the USSM

Establishing of USSM is an **infrastructural project** in relation to the developing of Nuclear power industry complex and solving nuclear legacy problems in the RF



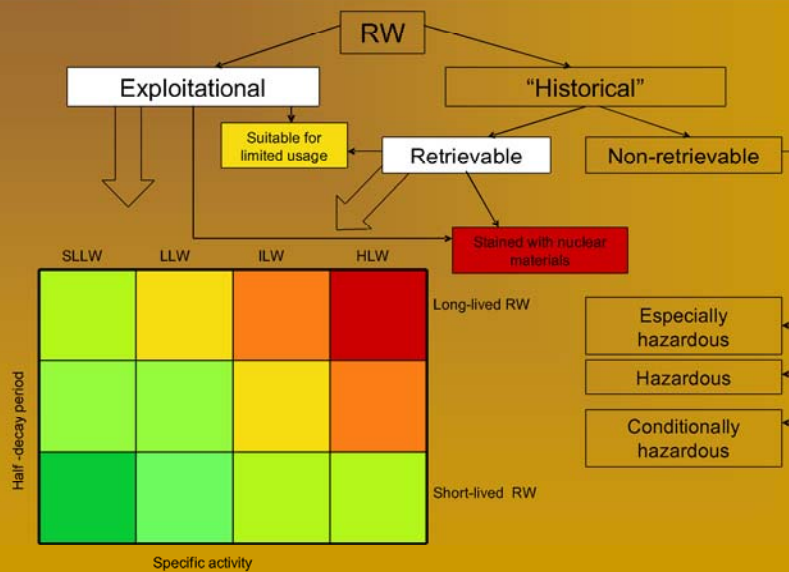
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Basic principles (Concepts)

- **Waste Producer pays**
Operating organizations, generating waste, bear the cost of the waste managing
- **Pay and forget**
Responsibility of operating organization for the RW and SNF management is exhausted after:
 - RW and SNF satisfy the standards of the USSM;
 - paying up of specified fee and SNF and RW transfer to special enterprise (enterprises) of USSM
- **Appropriate (optimal) RW conditioning**
- **Taking into account the categories and classification of radioactive waste while disposal them in interim storages**

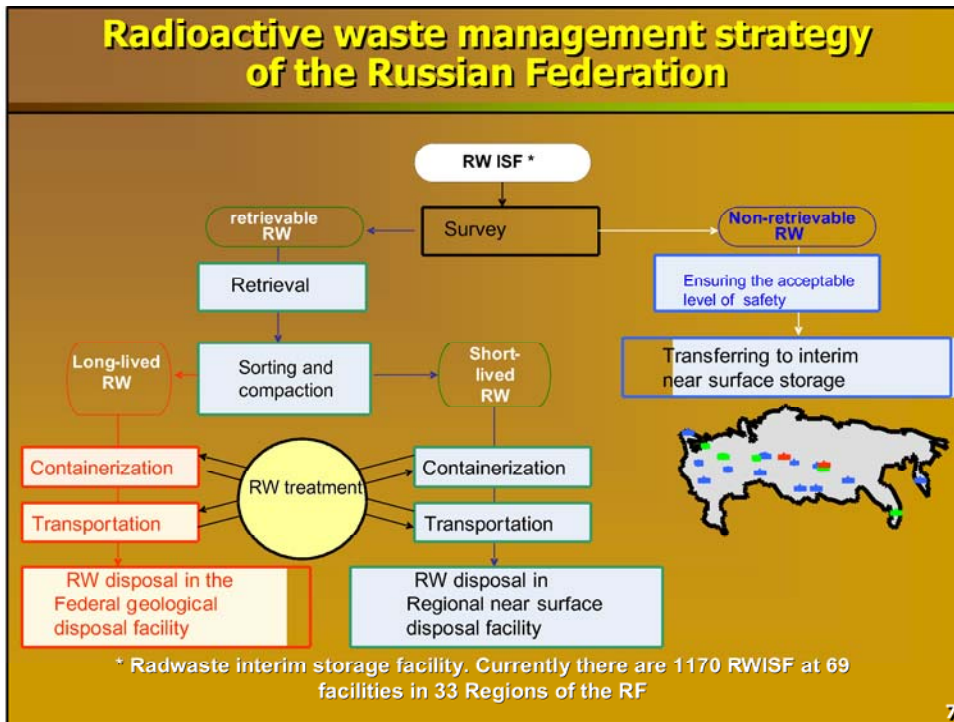
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Outline of New System of RW Classification/ Categorization



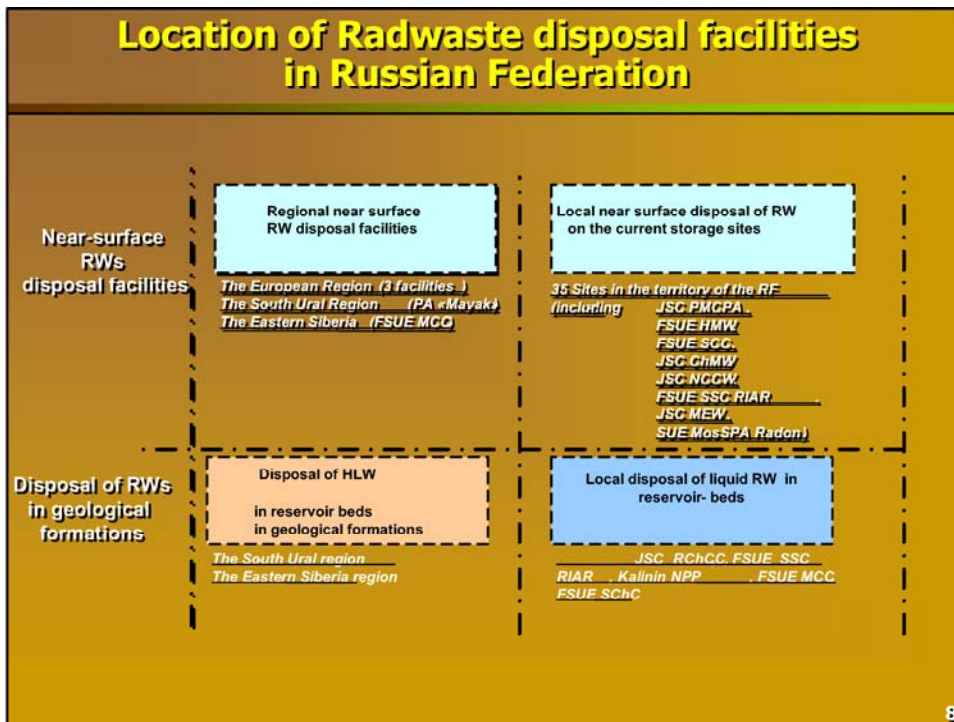
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Radioactive waste management strategy of the Russian Federation



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Location of Radwaste disposal facilities in Russian Federation



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USMS priority measures for RW management

Transition to the new principles of RW classification:

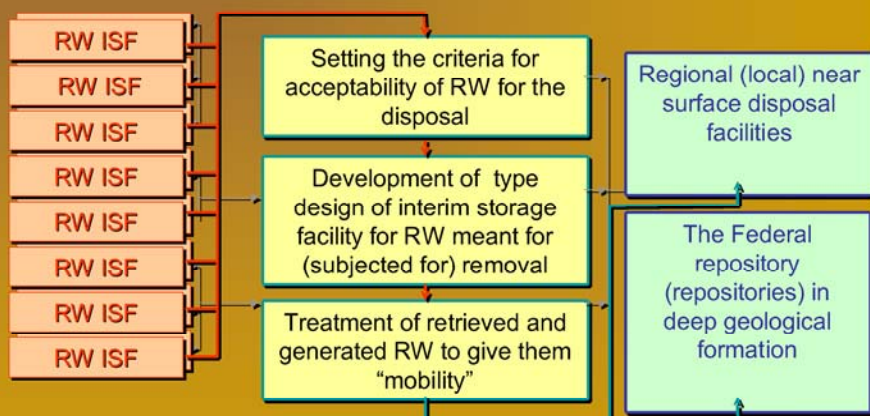
- establishment of new categories of RW – retrievable and fixed RW;
- ranking by radionuclide composition into long-, intermediate- and short- half-life RW;
- introducing the very low-level RW category (conventionally radioactive wastes).

Development of the Technical requirements (standards) for RW packages (end products) for near surface and geological disposal.
Creation of the pilot regional near surface disposal facility.
Development of type design for interim storage facility for “mobile” RW.

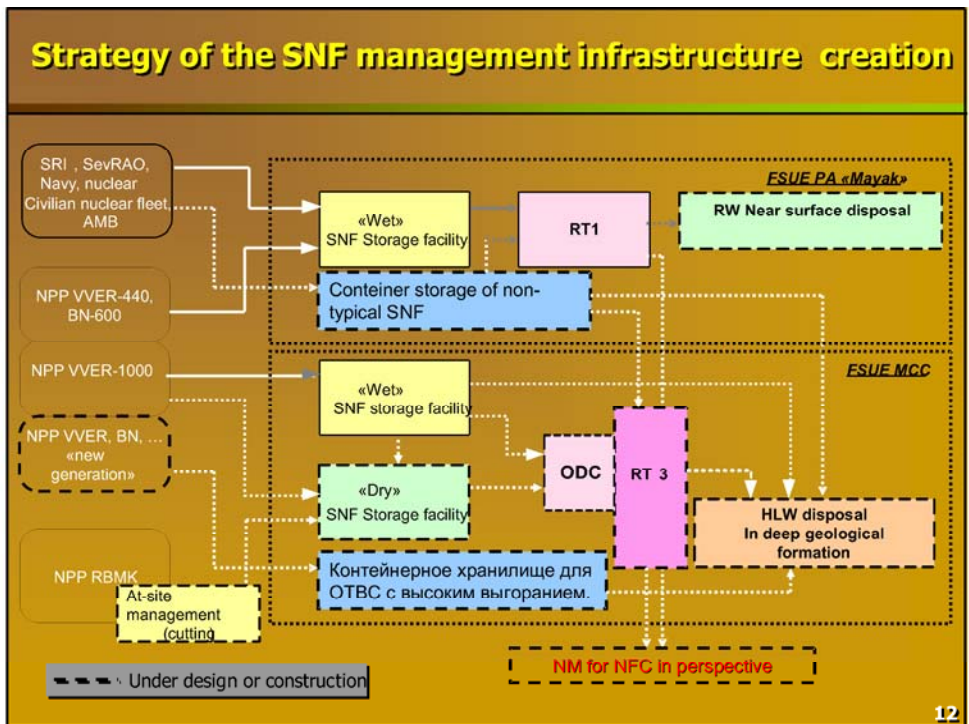
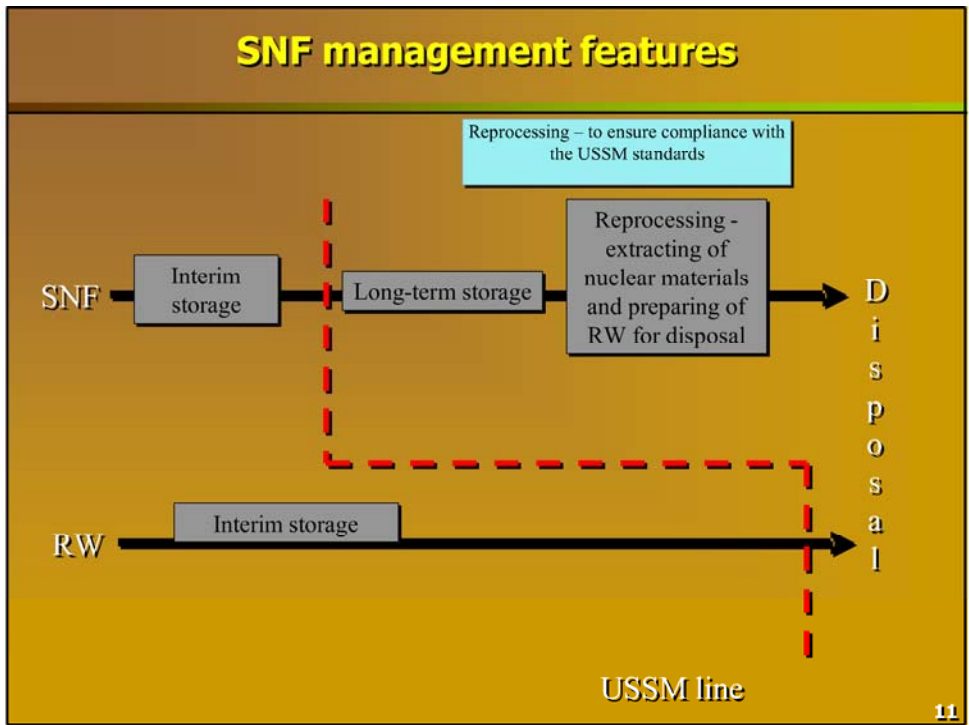
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Objectives of RW management in the Russian Federation

(in the midterm – up to 2015)



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Location of the SNF disposal facilities

FSUE PA «Mayak»

«Wet» RW storage facility

Container storage facility for non-typical NSF

FSUE MCC

«Wet» RW storage facility

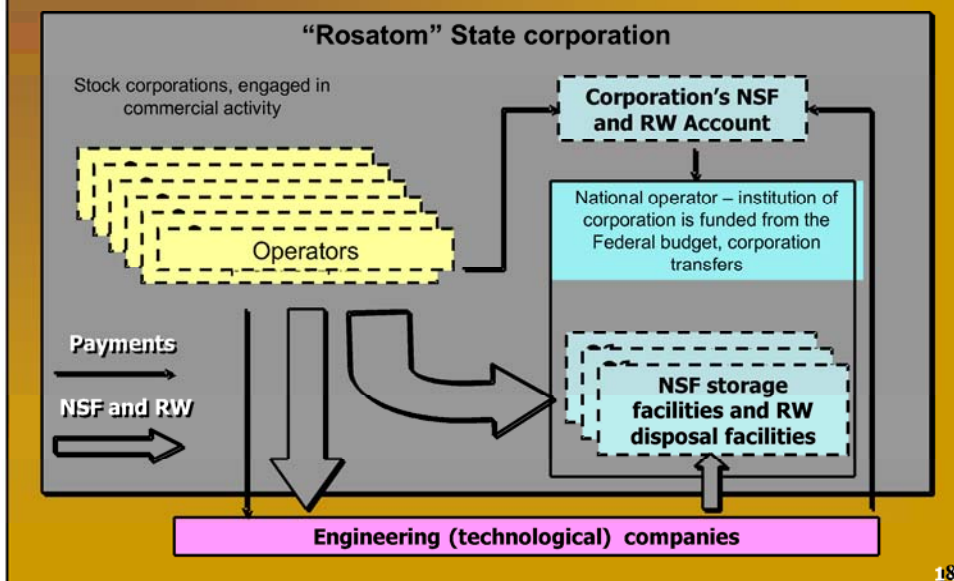
«Dry» RW storage facility

Container storage facility for high burn-up SFA (spent fuel assemblies)

----- Under construction

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Unified state system for RW and SNF management in the Rosatom State corporation system



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The State corporation "Rosatom" in implementation of the state policy in the area of RW and SNF management and decommissioning:

- Establishes and holds on the special funds
- Sets for the operating organization the fee for NSF and RW accepted by the USSM, estimates expenditures and inputs of mentioned funds
- Funds the construction and operation of the storage and reprocessing facilities of SNF, RW disposal facilities
- Funds (from the federal budget) services of engineering (technological) companies on "historical" RW and NSF management, decommissioning of the "historical" facilities which is hazardous in nuclear and radiation respect

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Special funds of SC "Rosatom"

SK "Rosatom"

The special reserve funds of the Corporation are established; they are provided by payments from organizations and enterprises operating facilities and manufactures which are hazardous in nuclear or radiation aspects

Fund for NSF treatment and decommissioning

Fund for safety ensuring and emergency situations

Fund for physical protection, accounting and records

Fund for modernization of organizations

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Specialized organization – National operator of USSM

- **Company accounts for the assets of USSM infrastructure;**
- **Operates the storage facilities of SNF and RW;**
- **Develops, operates and closes radioactive waste storage facilities;**
- **Conducts monitoring of closed storage facilities.**

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Operating organizations:

- **Bringing RW and SNF in conformity with standards of the delivering to the storage by own strength or by means of engineering (technological) companies.**
- **Delivering RW and SNF to the particularized organization (USSM) according to prices established by the State Corporation (Rosatom).**
- **Assigning nuclear hazardous and radiation hazardous objects decommissioning resources to the fund.**
- **In the presence of the economic expediency, making service payments to engineering (technological) companies of RW and SNF reprocessing.**

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Engineering (technological) companies*:

- Development of technologies for radioactive waste treatment (carrying out research and development);
- RW and SNF management works and services (in the presence of the license and the economic expediency);
- RW and SNF transport from operating organizations territories to RW and SNF storage and disposal facilities.

* Engineering (technological) companies of any forms of ownership are admitted to work on the condition that they have obtained the license for the corresponding activity

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Stages of USSM Establishing in the system of SC "Rosatom"

Scientific-methodological stage

- Assessment of NSF and RW streams, USSM logistics development;
- Formalization (standardization) of the requirements for RW acceptance for disposal
- Development of the typical programs on management of «historical» RW and SNF
- Justification of siting and decision-making in relation to the RW disposal and storage facilities

Organizational - preparatory stage

- Centralization of accounts and justification of payments to the SC accounts for RW and NSF
- Development of the rules for funding for "historical" NSF and payment of works on conditioning and и передачи в ЕГСО
- Commencement of the national operator USSM functioning

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Stages of USSM Establishing in the SC "Rosatom" (continuation)

Starting of practical works

- The pilot project of a regional RW repository.
- Demand making of works (services) in RW management and nuclear hazardous and radiation hazardous objects decommissioning on the basis of approved standards and government work as regards «historical» RW.
- RW and SNF infrastructure consolidation on the balance of the national waste operator.

Stable operation

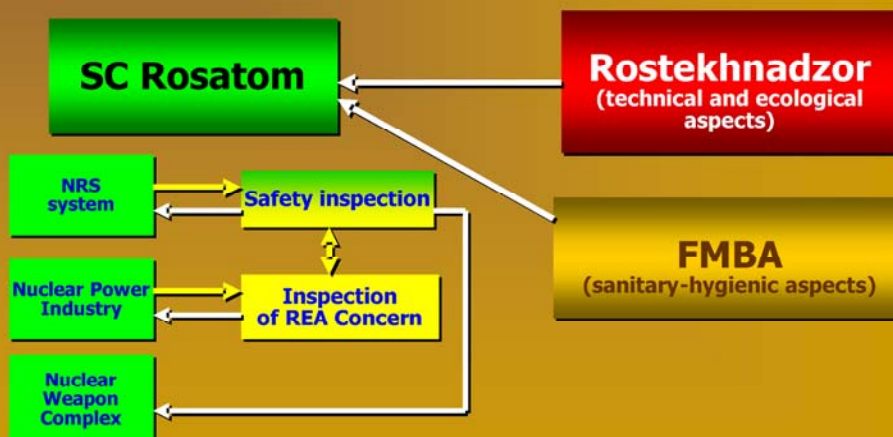
- RW and SNF receiving (on a paid basis) from operating organizations.
- Available funds investing to the USSM infrastructure.

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Management and surveillance

State management:

State surveillance:



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**Thank you for
your attention!**

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