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Improvement of the Russian Legal Framework in the Field of Disused Sealed Radioactive Sources Management including establishment of Acceptance Criteria for Disposal



THE LEGAL BASIS IN THE FIELD OF RW MANAGEMENT

The fundamental documents governing Radioactive Waste (RW) Management including RW in the form of Disused Sealed Radioactive Sources (DSRS)

The Federal Laws

«On the Use of Atomic Energy»
(The Federal Law No. 170-FZ)

«On the Management of Radioactive Waste
and Amendments to Certain Legislative Acts
of the Russian Federation»
(The Federal Law No. 190-FZ)

The Resolutions of the Government of the Russian Federation

No. 1069 of October 19, 2012 «On Criteria
Used to Define Solid, Liquid and Gaseous
Waste as Radioactive Waste...»

No. 1185 of November 19, 2012 «On the
Procedure and Timeframes for the
Establishment of the Unified State System
for Radioactive Waste Management»

THE FEDERAL LAWS PROVISIONS

The Federal Law No. 170-FZ

- RW is defined as materials and substances for which no future use is foreseen, as well as equipment, goods (*including DSRS*) containing radionuclides at concentrations greater than clearance levels established by the resolution of the Government of the Russian Federation

The Federal Law No. 190-FZ

- DSRS is defined as a source of ionizing radiation not intended for further use and by design preventing the radioactive material it contains from escaping in the environment
- Waste Acceptance Criteria is defined as binding requirements for the physical and chemical properties of RW and RW packages for the purpose of RW Safe Disposal
- The Federal Law No. 190-FZ specifies the Legal Basis for the Unified State System for RW Management (USS RW) which provides the transition from RW storage practice to RW Disposal



RW CLASSIFICATION ACCORDING TO No. 1069

Classification Criteria for RW based on appropriate disposal concepts are divided into six classes

- **Class 1** covers solid high-level RW (HLW) requiring final disposal in deep disposal facilities after prior storage to reduce heat generation
- **Class 2** covers solid HLW, **DSRS Category 1 or 2** and intermediate-level (ILW) long-lived RW containing radionuclides with half-lives greater than 30 years that require final disposal **in deep disposal facilities and not subjected to prior storage to reduce heat generation**
- **Class 3** covers solid ILW, **DSRS Category 3** and low-level (LLW) long-lived RW containing radionuclides with half-lives greater than 30 years that require final disposal **in near-surface disposal facilities at a depth of up to 100 m**

RW CLASSIFICATION ACCORDING TO No. 1069

Classification Criteria for RW based on appropriate disposal concepts are divided into six classes

- **Class 4** covers solid LLW, **DSRS Category 4 or 5** and very LLW requiring final disposal in **near-surface disposal facilities located at the ground level**
- **Class 5** covers liquid ILW and LLW requiring final disposal in deep well injection facilities constructed and operated at the time the Federal Law No. 190-FZ came into force
- **Class 6** covers RW generated in mining and processing of uranium ores or during operations that are not associated with atomic energy use, namely, mining and reprocessing of mineral and organic raw materials with high concentrations of naturally occurring radionuclides that require final disposal in near-surface disposal facilities

DEVELOPMENT OF THE USS RW ACCORDING TO No. 1185

- The first stage (2012-2014) provides for the establishment of the USS RW regulatory and procedural framework including the initial registration of RW and identification of their distribution under the established procedures
- The second stage (2015-2017) provides for the establishment of LLW and ILW disposal system
- The third stage (2018-2021) provides for the establishment of HLW disposal system, status alteration of certain facilities holding special RW to conservation facilities for special RW and certain special RW conservation facilities to RW disposal facilities

IMPROVEMENT OF THE FEDERAL REGULATIONS IN THE FIELD OF RW MANAGEMENT (2012-2014)

Developing the Amendments to Current Federal Regulations

**NP-019-2000,
NP-020-2000 &
NP-021-2000**
Safety requirements
for collection,
processing, storage
and conditioning of
liquid, solid and
gaseous radioactive
waste, respectively

NP-055-04
Principles, criteria
and basic safety
requirements for
radioactive waste
disposal

NP-058-04
General safety
provisions for
radioactive waste
management

NP-069-06
Safety
requirements for
radioactive waste
near-surface
disposal

Developing new Federal Regulation (NP-093-14)
Waste acceptance criteria for disposal

GAPS OF THE CURRENT FEDERAL REGULATIONS IN THE FIELD OF DSRS MANAGEMENT

There are **NO** Specific Safety Requirements to DSRS Management in the current Federal Regulations

- Acceptance Criteria for DSRS Disposal
- Safety Requirements to Collection, Storage and Disposal of DSRS
- DSRS Categories for Disposal

IMPROVEMENT OF THE FEDERAL REGULATIONS IN THE FIELD OF DSRS MANAGEMENT

Since the beginning of 2017 SEC NRS has been developing the Draft Amendments **concerning DSRS** to the following Federal Regulations

- Principles, Criteria and Basic Safety Requirements for Radioactive Waste Disposal (NP-055-14)
- General Safety Provisions for Radioactive Waste Management (NP-058-14)
- Safety Requirements for Radioactive Waste near-surface Disposal (NP-069-14)
- Waste Acceptance Criteria for Disposal (NP-093-14)

CONCLUSION

The Draft Amendments **concerning DSRS** to the Federal Regulations establish

- General Acceptance Criteria for DSRS Disposal including Requirements to RW packages containing DSRS (Approval is expected in November 2017)
- Safety Requirements to Collection, Storage and Disposal of DSRS including DSRS Categories for Disposal (Approval is expected in 2018)

Thank you for your attention!

