

# Harmonization of the Regulatory Framework for RW Management

**Utkin S.S.**

**Head of department, PhD**

**VI International Forum ATOMEXPO  
Moscow  
June 10, 2014**

# 1950's-1980's – Simplified Decisions on RW

www.ibrae.ac.ru

- **Radically different facilities:**
  - surface water reservoirs for LRW storage,
  - off-design repositories,
  - LRW deep well injection facilities.
- **Various periods of potential hazard:** from hundreds to tens of thousands of years.
- The regulatory practice based on **ad hoc decisions**.
- RW management was not considered as an **integrated challenge** in comparison with the existing scientific and practical issues in the field of nuclear weapon and nuclear energy.

# 1990's – Establishing Modern Regulatory Framework

www.ibrae.ac.ru

- **Key federal laws:**
  - On Subsoil (1991),
  - On Atomic Energy Use (1995),
  - On Radiation Safety of the Population (1996),
  - On Sanitary and Epidemiological Well-Being of the Population (1999),
  - On Environmental Protection (2002).
- **Convention on Nuclear Safety (1996)**



***Conformity with the international practice – start for active harmonization***

# 2000's – Switching Over to Plans and Programs

[www.ibrae.ac.ru](http://www.ibrae.ac.ru)

**2003**

Comprehensive Plan for addressing PA “Mayak” ecological challenges

**2004 –  
2007**

Strategic Master Plan for dismantlement and environmental remediation of decommissioned nuclear-powered fleet facilities

**2008**

The First State Nuclear Legacy Programme

# The Techa Cascade of Reservoirs at PA “Mayak”

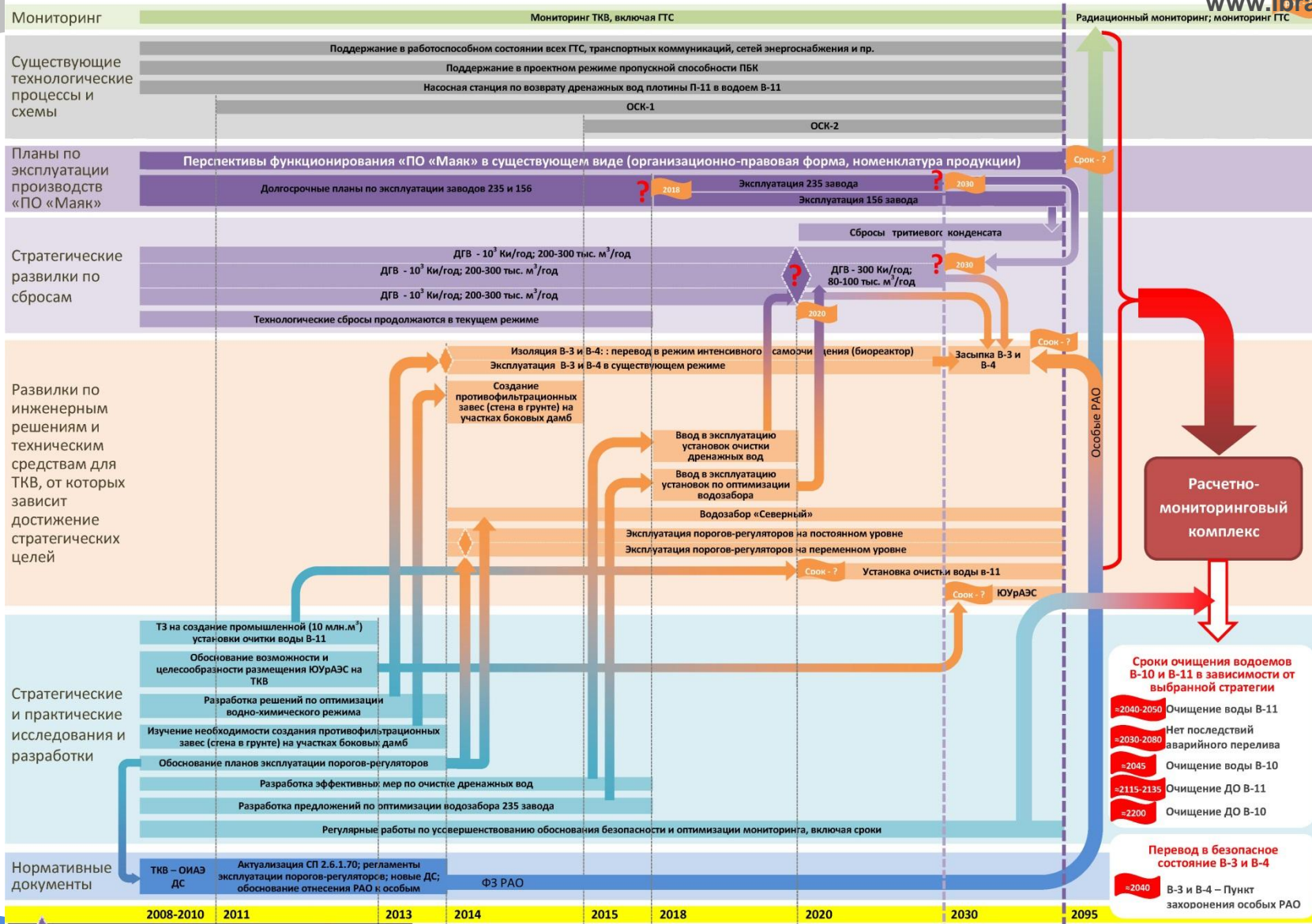
www.ibrae.ac.ru



Reservoir	Year of establishment	Total activity in the reservoir, kCi	Water volume, mln m <sup>3</sup>	RW classification(water/sediment)
B-3	1951 (expanded)	20	0,88	LLW/ILW
B-4	preexisting	13,6	4,6	LLW/ILW
B-10	1956	130	82,5	LLW/ILW
B-11	1963	21,5	270	LLW/ILW



# Strategic Mater Plan addressing TCR challenges



# LRW Deep Well Injection

- The most striking **difference from the international practice.**
- **2005** – Ratification of the «Joint Convention on the Safety of SNF and RW Management»
- **2009, 2011** – Questions concerning LRW deep well injection during the presentation of National Reports
- **2013 – IAEA Mission:**
  - Performance of deep well injection facilities was highly praised.
  - A number of remarks on the long-term safety justification in the context of SSR-5 were made.

## **Federal Law «On RW management»:**

- Active development of the Unified State System.
- Establishment of the «National Operator for RW management».

## **New objectives:**

- Building-up a system of disposal facilities for all types of RW.
- Conservation of facilities holding non-retrievable RW.
- *Establishment of an integrated bylaw system.*



# Bylaw system

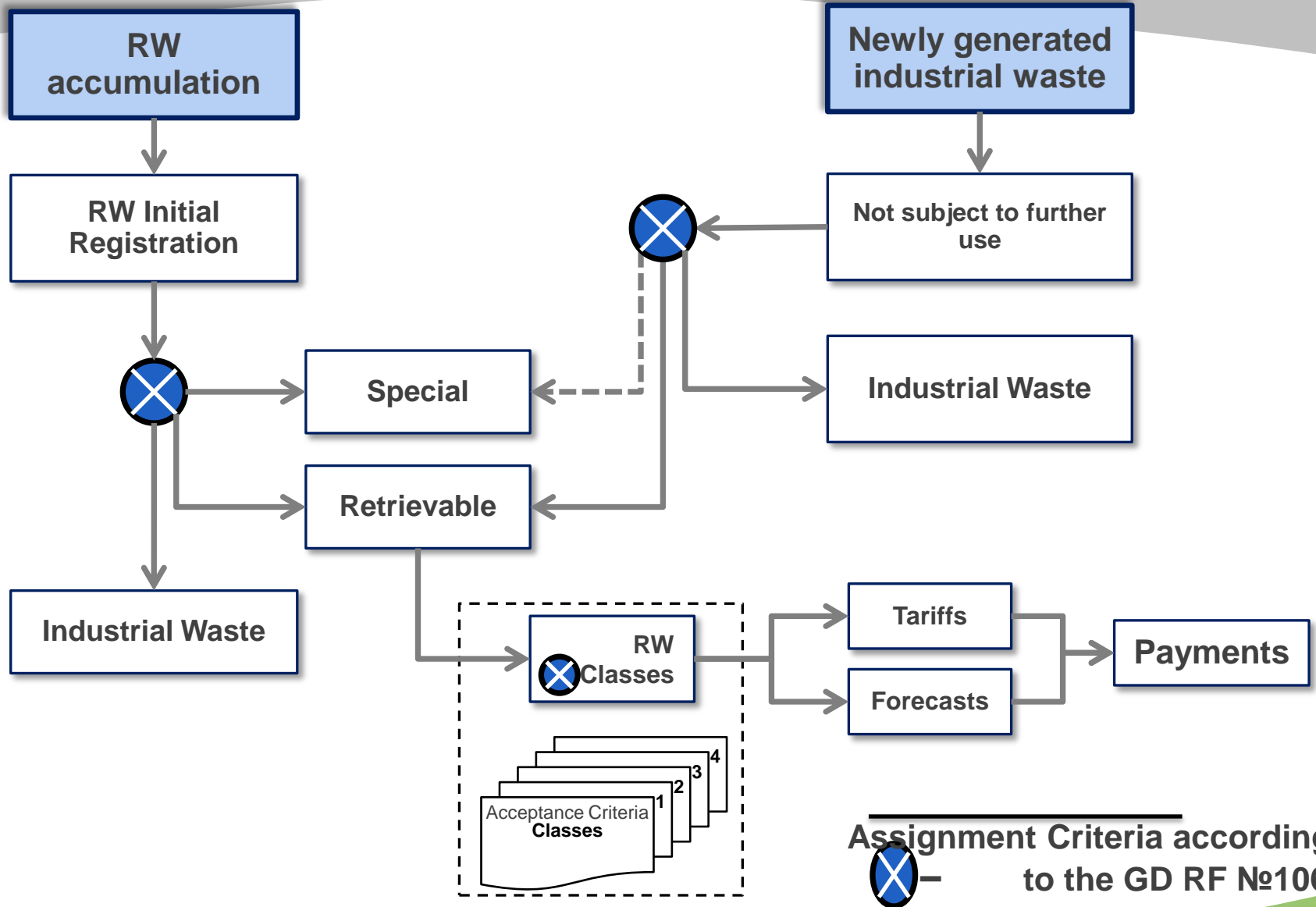
## Government Decree № 1069:

- Criteria for **waste assignment to RW.**
- Criteria for RW assignment to **special or retrievable.**
- **Classification** criteria for **retrievable RW.**

## Federal norms and rules:

- Acceptance criteria for RW disposal.

# Components of the state system for RW management



# Harmonization means:

[www.ibrae.ac.ru](http://www.ibrae.ac.ru)

- **Coordinated work** of operators, governing and regulatory bodies.
- **Taking due regard of not only the success achieved** (US remediation program), **but also of the mistakes made** (Yucca Mountain, Asse).
- **Flexible regulatory decisions** on the existing facilities.
- **No “universal recipe”** for successful advancement of new projects on RW disposal.
- Understanding the role of **public opinion**.
- Preparedness to international **peer reviews**.