



## Expectations of the Regulator on a Decommissioning Project

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## Russian Legislative basis for Regulator includes:

- **Fundamentals of the State Policy in the Field of Nuclear and Radiation Safety of the Russian Federation for the Period up to 2025 (approved by the President of the Russian Federation in 2012)**

### Federal Laws

- **#170/1995 “On the Use of Atomic Energy”**
- **#3/1996 “On Radiation Safety of Population”**
- **#7/2002 “On Protection of Environment”**
- **#190/2011 “On Radioactive Waste Management”**

### Governmental Decrees:

- **#1044/2012 “Federal state supervision in the field of use of atomic energy”**
- **#280/2013 on “Provisions on licensing of activities in the field of use of atomic energy”**





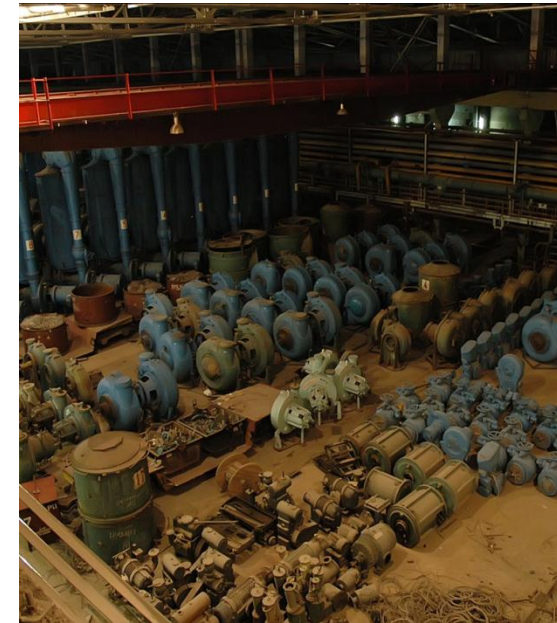
**Types of activities to be licensed in the field of atomic energy use:**

- **siting, construction, operation and decommissioning of nuclear installations, radiation sources, storage facilities of nuclear material and radioactive substance, storage facilities of radioactive waste**
- **nuclear material and radwaste management...**
- **radwaste management during storage, processing, transportation and disposal, etc.**

**Rostekhnadzor issues licenses to:**

- **operating organizations (including siting, construction, operation and decommissioning)**
- **organizations which perform works and render services (in particular, design services, engineering services, equipment manufacturing services) for operating organizations**

**Licensing procedures are set by Administrative Regulation for licensing in the field of atomic energy use**



**Diffusion plant for decommissioning**



## Basic Administrative Regulations for Rostekhnadzor:

Administrative Regulations for the Federal Environmental, Industrial and Nuclear Supervision Service on the implementation of its state function associated with **licensing** activities in the field of use of atomic energy (order № 453/2014)

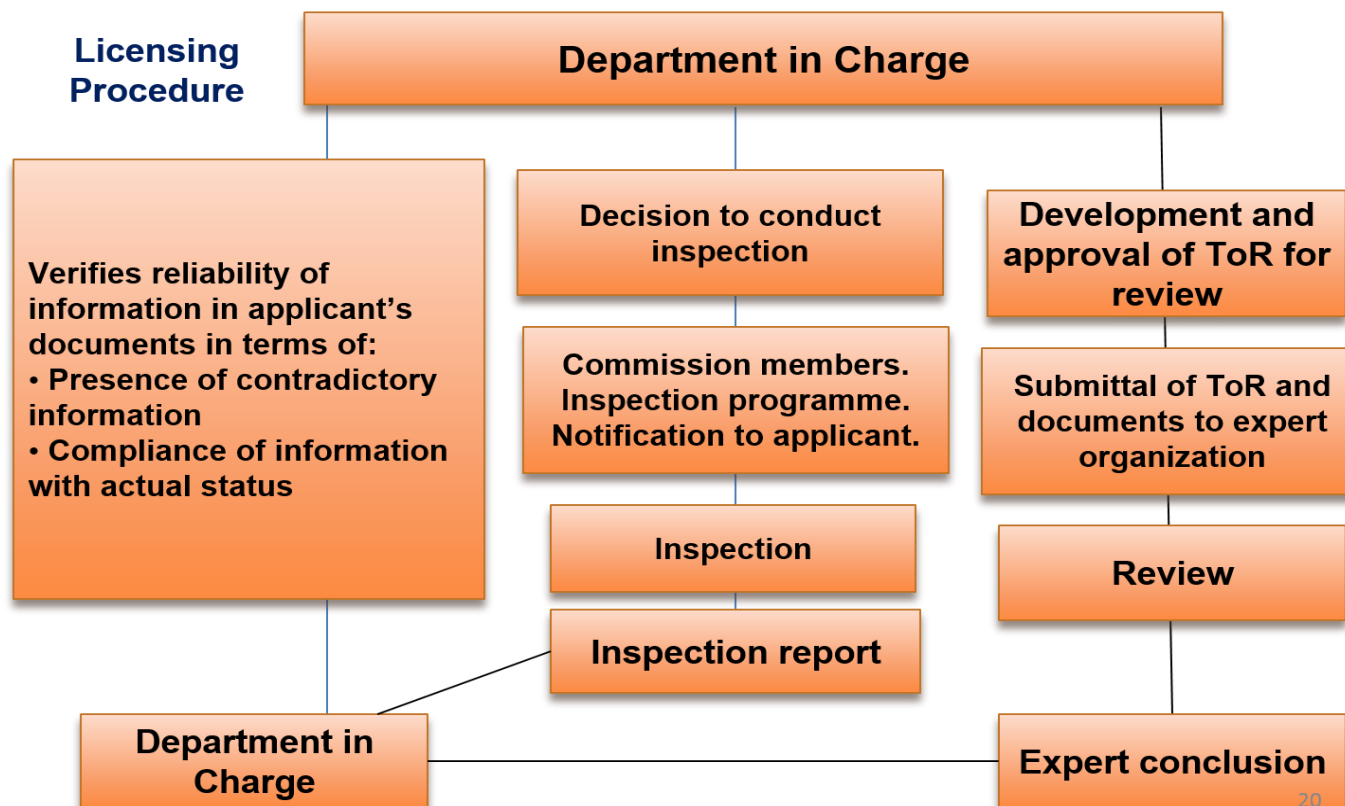
Administrative Regulations for the Federal Environmental, Industrial and Nuclear Supervision Service to perform its state function of **supervising activities** in the field of atomic energy use (order № 248/2013)

Administrative Regulations for the Federal Environmental, Industrial and Nuclear Supervision Service for issuing **permits to nuclear facility employees** for activities in the field of atomic energy use (order №721/2011)



Administrative Regulation on licensing lays down the requirements for:

- *the procedure and conditions for licensing activities in the field of atomic energy use*
- *distribution of responsibilities between Rostekhnadzor's central and territorial bodies*
- *terms of references for safety review*
- *the requirements concerning the structure of submitted sets of document justifying nuclear and radiation safety*





The following aspects shall be evaluated by Rostekhnadzor during the safety review of decommissioning Project /activity in terms of compliance with the provisions of Federal Norms and Rules

- *compliance of personnel skills with the established requirements*
- *RW collection, storage, transportation, processing and disposal*
- *technical and administrative measures to ensure nuclear and radiation safety*
- *conditions for storage and arrangements for accounting and control of nuclear material, radioactive substances and RW, physical protection*
- *action plans to protect personnel and public in the event of an accident and preparedness to their implementation*
- *engineering and technical support*
- *quality assurance system*

**Lab for decommissioning**







## Federal Norms and Rules applied for safety assessment of a decommissioning Project

Depending of type of facility for decommissioning the following norms and rules shall be met / applied:

- “Safety rules for decommissioning of NPP power unit” (NP-012-99)
- “Safety rules for decommissioning of nuclear fuel cycle facilities” (NP-057-04) – under revision
- **“Safety assurance during decommissioning of facilities for atomic energy use. General provisions” (NP-091-14)**
- “Requirements for quality assurance programs of nuclear facilities” (NP-090-11)
- “Safety of radioactive waste management. General provisions” (NP-058-14)
- “Collection, treatment, storage and conditioning of liquid radioactive waste. Safety requirements” (NP-019-2015)
- “Collection, treatment, storage and conditioning of solid radioactive waste. Safety requirements” (NP-020-2015)
- “Management of gaseous radioactive waste. Safety requirements” (NP-021-2015)
- “Safety regulations for transport of radioactive material” (NP-053-04)
- “Requirements to safety analysis report for nuclear fuel cycle facilities” (NP-051-04)
- “General safety provisions for nuclear fuel cycle facilities” (NP-016-05)



## **Regulatory approach for safety assurance of a decommissioning Project**

**Decommissioning of a facility for atomic energy use is the activity which starts after completion of the facility operation until complete or partial withdrawal of the facility from radiation supervision of state regulatory bodies**

**Preparatory activity for decommissioning (removal of nuclear and radioactive materials, decontamination, etc.) may be covered by operational license with relevant amendments**

**Apart from SAR, basic documentation includes Decommissioning Program and Project documentation**

**Decommissioning Program formulates**

- The variant chosen for decommissioning option**
- Main stages and time-scale for the Project implementation**
- General characteristics of the facility end-state after completion of every stage**

**Taking into account diversity of the facilities under decommissioning or to be decommissioned, resulted end state may vary from “green/yellow lawn” to entombed “special” waste form**





## Conclusions

To ensure safety of decommissioning of a facility for atomic energy use the following key elements should be envisaged

- All necessary technical, technological and organizational measures are established, environmental safety is granted
- Type of work for every stage of the Project is clearly defined
- Skilled and trained personal is available, radiation protection of personal and population is granted
- Necessary financial resources are set for the Project implementation and completion
- All decommissioning waste shall be conditioned for storage and disposal, necessary waste treatment and storage/disposal capacity shall be assured
- Safety of the resulted state of the facility (or site) at the end of decommissioning Project is substantiated



***Thank you for your attention!***



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