

Ensuring the Compliance with Authorizing Requirements in SNF and RW Management

I.A. Pron'

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Activities related to transportation and radiochemical reprocessing of spent nuclear fuel (SNF) from military nuclear power facilities fall under the heading of activities performed in the area of atomic energy use and, therefore, are subject to licensing.

Documents defining the procedure and provisions of licensing activities in the area of atomic energy use (Figure 1).

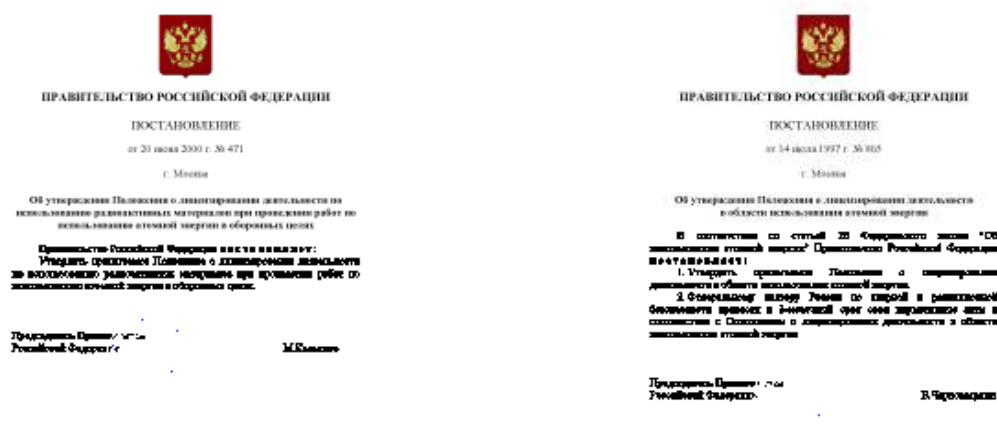


Fig.1 Documents defining the procedure and provisions of licensing activities in the area of atomic energy use

The licensing procedure and provisions for activities related to atomic energy use for defense purposes are defined by the Regulation on Licensing Activities Related to Use of Radioactive Materials in the Work Associated with

Atomic Energy Use for Defense Purposes, approved by the RF Government Decree No. 471 of June 20, 2000.

The licensing authority is the State Atomic Energy Corporation Rosatom (SC Rosatom).

The licensing procedure and provisions for activities related to use of atomic energy are defined by the Regulation on Licensing Activities in the Area of Atomic Energy Use, approved by the RF Government Decree No. 865 of July 14, 1997.

The licensing authority is the Federal Service of Ecological, Technological and Atomic Oversight (Rostekhnadzor).

In accordance with requirements of the above mentioned regulations, in order to perform the stated activities, the following documentation is to be submitted by FSUE Mayak PA to the licensing authorities:

- Application for a license;
- Copies of the foundation documents;
- Documents, which substantiate ensuring nuclear and radiation safety of the stated activities;
- Documents, which concern personnel training and certification and availability of authorizations to carry out activities in the area of atomic energy use;
- Copies of documents issued by bodies of sanitary–epidemiological oversight, which authorize to work with radioactive sources;
- Copies of authorizations issued by executive bodies that exercise government control in the area of environmental protection to perform discharges and releases of radioactive substances;

–Documents proving availability of the financial securities of civil liability for losses and damages caused by radiation exposure.

Proceeding of the documents is performed in accordance with the established procedure. Based on the results of the proceeding, a decision to grant a license or to refuse is made.

Currently FSUE Mayak PA has:

1. License No. AB-30-0181 of 07.04.2008 granted to SC Rosatom to carry out activities related to use of radioactive materials in the work associated with atomic energy use for defense purposes (Fig.2).



Fig. 2 License to use radioactive materials in the work associated with atomic energy use for defense purposes

This license entitles the enterprise to:

- transport components of military nuclear power facilities;
- work with radioactive materials (including spent nuclear materials) used for defence purposes in the course of their storage, transportation and reprocessing;
- reprocess radioactive wastes generated from using radioactive materials in the work related to atomic energy use for defense purposes;

- use complexes (buildings and constructions) intended for carrying out nuclear and radiation hazardous activities in the course of storage and disposal of components of military nuclear power facilities.

The license was granted together with the licensing provisions that specify the requirements, in compliance with which the licensed activities are to be performed.

Oversight over the compliance with the licensing provisions is implemented by the Administration of State Oversight over Nuclear and Radiation Safety of the RF Ministry of Defence.

2. License No. ГН-03-115-1640 of 28.02.2007 granted by Rostekhnadzor for using a complex with nuclear materials, which is intended for SNF radiochemical reprocessing and treatment of RW generated as a result of SNF reprocessing (Fig.3).



Fig. 3 License to use a complex with nuclear materials for the purpose of SNF radiochemical reprocessing and treatment of RW generated as a result of SNF reprocessing.

The license entitles the enterprise to:

- perform radiochemical reprocessing of SNF from power reactors, research reactors, as well as from surface ship and submarine nuclear power facilities;

- treat RW generated as a result of SNF radiochemical reprocessing (in the course of SNF storage, classification, packaging, storage, reprocessing, and conditioning);
- carry out work using radiometric and dosimetric devices, facilities and systems, measurement gauges and analytical control systems;
- perform radiation monitoring at FSUE Mayak PA subdivisions, in the buffer area and radiation – monitoring area.

The license was granted together with the licensing provisions that specify the requirements, in compliance with which the licensed activities are to be performed.

Oversight over the compliance with the licensing provisions is implemented by the Ural Interregional Administration of Oversight over Nuclear and Radiation Safety (UITA) of Rostekhnadzor, which includes the Ozersk Inspection Department of Rostekhnadzor UITA.

According to the licensing provisions, FSUE Mayak PA is to carry out the authorized activities in compliance with the following legislative and normative documents:

1. Existing legislation of the Russian Federation.
2. Principles, criteria and requirements of safety established by the bodies of government safety regulation through rules and norms, guidelines, decrees and other normative documents.
3. State and industrial standards and rules, technological documentation, normative documents specifying requirements for safety and quality of work, instructions on labor safety, industrial sanitation, and fire, nuclear, radiation and technical safety.

4. Normative documentation on ensuring physical protection and organization of accounting for and control of nuclear materials, radioactive substances and radioactive waste.

FSUE Mayak PA is prohibited from entering into agreements to execute work and render services with companies, which are not licensed to perform the corresponding type of activity.

When new federal norms and rules are carried into effect in the area of atomic energy use, FSUE Mayak PA should perform an analysis of conformity of the enterprise activities with the requirements of the norms and rules, as well as develop and undertake measures to bring the operational conditions into the line with the requirements of the norms and rules.

Each license at FSUE Mayak PA is carried into effect by an order within the enterprise. The order defines officials in charge of execution of and ensuring the license provisions.

In accordance with the procedure established by the legislation of the Russian Federation, FSUE Mayak PA provides officials from Rostekhnadzor (Headquarters, UIRA, Ozersk Inspection Department of UITA), ASO NPS of the RF Ministry of Defence, and SC Rosatom with access to carry out inspections and perform their duties. Upon their request, FSUE Mayak PA submits all information, materials and documentation required to evaluate the enterprise compliance with the licensing provisions.

Every year FSUE Mayak PA submits to the licensing and oversight authorities an annual report on the status of nuclear and radiation safety and on the compliance with the licensing provisions. FSUE Mayak PA informs the Department of Nuclear and Radiation Safety, licensing and authorizing bodies

of SC Rosatom, Ozersk Inspection Department of Rostekhnadzor UITA about newly introduced and replaced technological regulations, authorizing documents of environmental bodies, sanitary-epidemiological conclusions and other documents listed in the application for the license.

Licensed activity of FSUE Mayak PA is carried out in accordance with state-established sanitary-epidemiological rules and standards: СП 2.6.1.758-99 «Radiation Safety Standards (NRB-99), СП 2.6.1.799-99 «Basic Sanitary Rules Ensuring Radiation Safety (OSPORB-99), СП 2.6.6.1168-02 «Sanitary Rules of RW Management (SPORO-2002), МВ 2.6.1.24-04 «Sanitary Requirements for Collection, Storage, Transportation and Disposal of Solid Radioactive Waste at FSUE Mayak PA (ST TRO-M), СП 2.6.1.70-04 «Requirements for Ensuring Sanitary-Epidemiological Safety at Use of Mayak PA Special Industrial Reservoirs (SP-ESP-POM-04).

The compliance of the work performed with rules and standards is proved by sanitary-epidemiological conclusions issued by the Federal Medical Biological Agency (FMBA) of the Russian Federation. Control and oversight over the compliance with requirements of sanitary-epidemiological rules and standards and with restrictive conditions of sanitary – epidemiological conclusions is implemented by Regional Department No. 71 of FMBA of the Russian Federation, which is located in Ozersk.

Oversight over the compliance of the enterprise with fire safety rules and standards is implemented by the Department of the State Institution Special Administration of Federal Fire Service No. 1 of the RF Ministry for Emergences located in Ozersk.

In order to authorize to perform assembling, repair and maintenance work with fire safety equipment in buildings and constructions, The Ministry of the

Russian Federation for Civil Defence Affairs, Emergencies and the Elimination of Consequences of Natural Disasters granted a license to FSUE Mayak PA for carrying out this type of activity.

The compliance of the FSUE Mayak PA activities with the requirements of federal and agency-level normative documents or provisions of licensing and authorizing documentation is checked by the oversight bodies through complex, target and operative inspections. Based on the inspection findings, an inspection act is issued.

If it is found that FSUE Mayak PA failures to meet requirements of normative documents or provisions of licensing and authorizing documentation, the oversight bodies issue corresponding exigencies.

When these exigencies from the oversight bodies are received by the enterprise, within a period specified in the exigency, FSUE Mayak PA is to inform the body, which issued the exigency, about measures undertaken to eliminate the discovered failures and about performance of activities listed in the schedules of performance of work related to the elimination of failures (if any) in accordance with the established time limits. If necessary, the enterprise arranges discussions of the situation and possible ways out of it engaging representatives of the oversight bodies and independent experts.

If FSUE Mayak PA failures to comply with the licensing provisions, the oversight bodies are entitled to impose punitive sanctions, which are laid down in the legislation of the Russian Federation.

No cases of license suspension or revocation have occurred over the whole period of FSUE Mayak PA SNF and RW management.

Conclusions:

1. FSUE Mayak PA has all required authorizing documentation to carry out activities related to SNF and RW management.
2. Control and oversight over the compliance of FGUP Mayak PA activities with rules, standards, and provisions of licensing and authorizing documentation is performed by the Administration of State Oversight over Nuclear Radiation Safety of the RF Ministry of Defence, Federal Service administrations and Departments of Ecological, Technological and Atomic Oversight, Federal Medical Biological Agency, and Federal Fire Safety Service.
3. Compliance of FGUP Mayak PA SNF and RW management activities with requirements of federal and agency-level normative documents and provisions of licensing and authorizing documentation is proved by acts of complex, target and operative inspections.