

Unified State System for Radioactive Waste Management



XI Russian Scientific Conference Radiation Protection and Radiation Safety in Nuclear Technologies

FOREWORD BY THE CHIEF EDITOR OF THE JOURNAL, CHAIRMAN OF THE CONFERENCE PROGRAM COMMITTEE, MEMBER OF THE RUSSIAN ACADEMY OF SCIENCES L. A. BOLSHOV

Given the multicomponent nature of the nuclear power sector and a large number of nuclear legacy facilities, issues associated with radiation protection and radiation safety are still considered quite relevant for the Russian Federation and are characterized by some specific features. Firstly, the situation is considered as relatively favorable as it comes to the doses of man-induced radiation for the personnel and the population, including the one residing in most territories contaminated due to radiation accidents. Secondly, the public tends to be quite concerned about nuclear technologies having some misconceptions about the scale of the radiological impact produced by the Chernobyl accident. Thirdly, the specialists understand that the decision-making on the development of nuclear technologies depends strongly on the level of nuclear and radiation safety at nuclear facilities. In particular, this applies to the topic of RW management when the goal is to maintain an adequate level of radiation safety not only for the time being, but also for the future generations.

When it comes to radiation safety, the topic of RW management also appears quite specific. 2021 marks the 10th anniversary since the adoption of the Federal Law of July 11, 2011. No. 190-FZ On Radioactive Waste Management and on Amendments to Certain Legislative Acts of the Russian Federation that paved the way for the development of the Unified State System for RW Management (USS RW) and the implementation of some long-term comprehensive solutions in the field of RW management. Nevertheless, USS RW development has not been completed yet with two more important stages envisaged to provide sustainable development of this system, as well as environmental,

social, financial and international acceptability of the national RW management practice.

Activities implemented under the first stage of the USS RW development program revealed the need of consolidating relevant expertise with the scientists and specialists involved in various areas to analyze the challenges in the field of safe RW management and disposal, to find effective solutions and initiate their implementation. For this purpose, conferences focused on some specific issues are held annually to discuss the challenges associated with RW processing and conditioning, managerial and legal support of SGUK RV and RAO and USS RW systems. The topic of radiation protection and safety is discussed at the meetings of the Scientific and Technical Council No. 10. Environmental and Radiation Safety run by the State Corporation Rosatom. Our Scientific and Technical Radioactive Waste Journal has started to play an important integrating and informative role in this regard.

The 10th Russian Scientific Conference on Radiation Protection and Radiation Safety held in 2015 showed the high efficiency of discussions held on the topic of radiation safety covering a wide range of issues: from its scientific foundations to the engineering solutions based on them. In this regard, plenary and breakout sessions of the XI Conference are viewed as a proper platform for the exchange of experience and expert discussion of RW management tasks considering the scope of general challenges in the field of radiation safety. It seems highly probable that the XI Conference and the subsequent ones is going to involve some participants from abroad. Experts from the EurAsEC and other countries have also expressed their interest in this Conference.

The conference will be held on October 26–29, 2021 in Moscow at the RAS Presidium. Originally it was scheduled for 2020 and timed to coincide with the 75th anniversary of the Russian nuclear industry, but due to known circumstances it was postponed to 2021 and will be arranged in a way supposing possible changes in the number of direct participants.

Organizational (Chairman O. V. Kryukov, Director for the State Policy in the Field of Radioactive Waste, Spent Nuclear Fuel and Nuclear Decommissioning of the State Atomic Energy Corporation) and Program Committees of the Conference express their confidence in the success of this undertaking assuming the possibility of moving it online.

Under the Conference, some plenary sessions and four sections are going to be held: 1) Radiation safety; 2) Computer codes applied to demonstrate the radiation protection and the radiation safety; 3) Safety at the final stages of the life cycle: RW and SNF management, safe maintenance of shutdown facilities and their decommissioning; 4) Radiation safety in nuclear medicine.

Section 1 aims to discuss the issues associated with the radiation safety of personnel and the public during the operation of nuclear facilities (NF), the development of equipment and tools for radiation monitoring systems, the development of digital technologies, as well as the results of experimental studies in this area and relevant regulatory framework.

Sessions held under Section 2 are going to be devoted to the development and improvement of computational codes (software) designed to demonstrate the radiation protection and radiation

safety, including relevant aspects associated with computational theory and methods, development of databases, certification of computational codes, many of which are used to address the tasks of safe RW management.

Section 3 seems to be most interesting for the experts involved in the field of RW management: it focuses on the safety of RW and SNF transportation, storage and processing, RW disposal and conservation (upgrading to long-term safe storage configuration) of facilities holding non-retrievable RW. At the same time, special emphasis will be placed on the application of digital technologies and regulatory control.

Sessions of the 4th section will discuss the development of modern nuclear medicine, its prospects, medical exposure and the safety of medical nuclear facilities.

Conference Proceedings will summarize its findings. Information regarding the Conference, including the decisions made in each thematic area, will be distributed by its information sponsors, including seven specialized scientific journals. The editorial board of the Radioactive Waste Journal will certainly invite the authors of most interesting papers presented at the Conference to publish them in the Journal.

To participate in the Conference, one should register on the information Internet portal before July 1, 2021 (<http://фцп-ярб2030.рф/conf2020/>) and send an application to the following email address: conf2020@ibrae.ac.ru.

All relevant materials and news are posted on the official conference page that can be accessed following the link: <http://фцп-ярб2030.рф/conf2020/>.