

IMPROVEMENT OF THE REGULATORY FRAMEWORK IN THE FIELD OF RADIOACTIVE WASTE AND DECOMMISSIONING

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Abstract: The paper describes the work done in order to improve the regulatory framework in the field of radioactive waste and decommissioning of nuclear and radiological facilities. The National Commission for Nuclear Activity Control, as the nuclear regulatory authority of Romania, has improved the regulatory framework developing the safety and licensing requirements in the field of predisposal and disposal of radioactive waste and decommissioning of nuclear and radiological facilities. The paper describes the content of predisposal management and decommissioning regulations.

1. INTRODUCTION

In order to meet the requirements of COUNCIL DIRECTIVE 2011/70/EURATOM of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste [1], the regulatory authority of Romania developed new regulations and revised the existing regulations in the field of predisposal and disposal of radioactive waste, and decommissioning of nuclear and radiological facilities.

The improvement of regulatory framework has been done in the framework of the Project "Regional Excellence Project on Regulatory Capacity Building in Nuclear and Radiological Safety, Emergency Preparedness and Response in Romania". The objective of the project is to enhance the capabilities of the Romanian nuclear regulatory authority CNCAN in eight specific functional areas of work through exchange of experiences, best practices, and capacity building with the Norwegian Radiation Protection Authority and the International Atomic Energy Agency.

Main activities of the project are summarized under the following subprojects:

CNCAN1 - Enhancement of CNCAN capabilities for safety analysis;

CNCAN2 - Enhancement of CNCAN capabilities for integrated management systems and knowledge management;

CNCAN3 - Enhancement of CNCAN capabilities for inspections;

CNCAN4 - Enhancement of CNCAN capabilities for safety and security of transport and transit of radioactive and nuclear materials on the Romanian Territory;

CNCAN5 - Enhancement of CNCAN capabilities for emergency preparedness and response;

CNCAN6 - Enhancement of CNCAN capabilities for ionizing radiation sources control;

CNCAN7 - Enhancement of CNCAN capabilities for radioactive waste, spent nuclear fuel management, and decommissioning activities;

CNCAN8 - Enhancement of CNCAN capabilities for safeguards.

Total project budget is EUR 4,215,098 consisting of 85% allocated from Norway Grants and 15% to be provided in cash by the Romanian national co-financing. The Project duration is 31 months in the period from October 2013 until April 2016.

2. DESCRIPTION OF THE SAFETY REGULATION ON THE PREDISPOSAL MANAGEMENT OF RADIOACTIVE WASTE

The regulation is based on the IAEA recommendations provided in the General Safety Requirements Part 5 Predisposal of Radioactive Waste [2], as well as on the Safety Reference Levels developed by the Western European Nuclear Regulators Association (WENRA) on the storage of radioactive waste and spent nuclear fuel [3]. The regulation contains specific requirements for each step of the predisposal management covers the control of generation, characterization and classification of radioactive waste, waste acceptance criteria, collection, segregation, treatment, conditioning and storage of radioactive waste and disused radioactive sources. The chapter on requirements for the development of predisposal radioactive waste facilities details the safety requirements for siting, design, construction, commissioning, operation and permanent shut down of the facilities. The regulation introduces the concepts of safety case, safety assessment and periodic safety review.

3. DESCRIPTION OF THE SAFETY REGULATION ON THE DECOMMISSIONING OF NUCLEAR AND RADIOLOGICAL FACILITIES

The safety and licensing requirements on decommissioning cover both nuclear and radiological facilities. The regulation is based on the IAEA recommendations provided in General Safety Requirements Part 6 Decommissioning of Facilities [4], as well as on the Safety Reference Levels developed by WENRA on decommissioning [5]. The regulation defines the end state

criteria, requirements for decommissioning strategies, planning of decommissioning activities, as well as the transition from operation to decommissioning phase and conducting of decommissioning actions. The regulation introduces the concepts of safety case and safety assessment, their contents being provided in the Annexes to the regulation. The requirements for final radiological verification are also provided. The content of the final radiological survey report as well as the final decommissioning report are provided.

4. CONCLUSIONS The safety requirements provided in the regulations on the predisposal management of radioactive waste as well as on the decommissioning of nuclear and radiological facilities are in line with IAEA recommendations and meet the requirements of the applicable European Council Directives. REFERENCES [1] COUNCIL DIRECTIVE 2011/70/EURATOM of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste, Official Journal of the European Union, L 199/48. [2] IAEA GSR Part 5 Predisposal of Radioactive Waste (2009). [3] WENRA - Waste and Spent Fuel Storage Safety Reference Levels Report (2014). [4] IAEA GSR Part 6 Decommissioning of Facilities (2014). [5] WENRA - Decommissioning Safety Reference Levels Report (2015).

Country or International Organization

ROMANIA

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