

International Conference on Radioactive Waste Management: Solutions for a Sustainable Future (CN-294)



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RADIOACTIVE WASTE MANAGEMENT ISSUES AND CHALLENGES IN IRAN

IRWA is designated by the AEOI and Iran Nuclear Regulatory Authority (INRA) as the Central Waste Management Organization in Iran to be responsible for performing all aspects of Radioactive Waste (RW) management activities for fuel cycle facilities and minor waste generators, long-term storage and disposal of all radioactive wastes including operational and decommissioning wastes are the most important responsibilities of IRWA. This vast scope of responsibilities causes challenges and need practical efforts in order to satisfy regulations and stakeholders simultaneously.

Effective and safe management of such wastes requires a comprehensive program, coordinated under a defined national waste management strategy, based on the present and future requirements. From 2001, IAEA has provided technical assistance and support for the development of national WM Strategy & Policy (WMSP) and Radioactive Waste Disposal Program, covering the whole spectrum of radioactive waste generated and anticipated radioactive waste.

Operation of the first NPP in Iran, limitation on accessing to novel technology and expertise, undefined responsibilities and shortages in design and sometimes trainings, caused problems that need special solutions in a short time. On the other side, the sudden increase in the application of Sealed Sources and Radioisotopes and operation of nuclear fuel cycle facilities in the country generated large amount of DSRSs and a variety of waste streams. In the last decade, IRWA started siting and construction of a near surface disposal facility in order to increase its capabilities for dealing with such a sudden increase in waste streams and volumes. The NPP's wastes issues were quite varied: unsuitable formulation for stabilizing the wastes which lead to improper final waste packages, improper design of stabilization process devices which lead to cost increase and non-conformances, lack of final solution for high activity wastes (group III), non-compliance in number and radioactivity of generated final waste in comparison to FSAR document

Licensing process and dealing with INRA for the disposal facility was also a challenge because of the lack of experience on the waste disposal and the specific and unique issues in disposal of radioactive waste.

By increase in the generation of DSRS, IRWA devised a methodology for their storage in order to store large no. of DSRSs in a small and controlled area and to retrieve them for reuse. Reuse is one of the main solutions in the management of DSRS.

Do you wish to participate as a Young Professional?

Speaker's title

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Do you wish to be considered for a Young Professional grant?

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