

Waste Management in a Hot Laboratory of Japan Atomic Energy Agency - 3: Volume Reduction and Stabilization of Solid Waste

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Abstract : In the Japan Atomic Energy Agency, three types of experimental research, advanced reactor fuel reprocessing, radioactive waste disposal, and nuclear fuel cycle technology, have been carried out at the Chemical Processing Facility. The facility has generated high level radioactive liquid and solid wastes in hot cells. The high level radioactive solid waste is divided into three main categories, a flammable waste, a non-flammable waste, and a solid reagent waste. A plastic product is categorized into the flammable waste and molten with a heating mantle. The non-flammable waste is cut with a band saw machine for reducing the volume. Among the solid reagent waste, a used adsorbent after the experiments is heated, and an extractant is decomposed for its stabilization. All high level radioactive solid wastes in the hot cells are packed in a high level radioactive solid waste can. The high level radioactive solid waste can is transported to the 2nd High Active Solid Waste Storage in the Tokai Reprocessing Plant in the Japan Atomic Energy Agency.

Keywords : high level radioactive solid waste, advanced reactor fuel reprocessing, radioactive waste disposal, nuclear fuel cycle technology

Conference Title : ICNDRWM 2019 : International Conference on Nuclear Decommissioning and Radioactive Waste Management

Conference Location : Venice, Italy

Conference Dates : April 11-12, 2019