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Progress on the Management of DSRS at China Institute for Radiation Protection

This document has suggested a conceptual design for an infrastructure to recover, handle and condition SHARS for long-term storage. The stumbling block on the international level was the management of Spent High Activity Radioactive Sources (SHARS) because of its high potential radiological risk. Based on the design concept of IAEA and the practice of NECSA, with slightly different design requirements but with basically the same concept, IAEA cooperated with China to develop a Mobile Hot Cell specifically to deal with SHARS from irradiators. The development has provided an opportunity to develop for the first time the required infrastructure in an Asian country and to test some new features of the infrastructure. A pilot conditioning operation with an activity of an around 1000 Ci Co-60 irradiator sources had been carried out in September, 2010 that the sources were handled and conditioned very successfully. The new features have provided for a more efficient source conditioning operations and increased the potential SHARS activity acceptance capacity of the hot cell. The performance testes conducted by the Agency and the team from China Institute for Radiation Protection (CIRP) showed that the mobile hot cell meets all performance requirements.

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