Management of Radioactive Waste

Objective

To achieve global harmonization in policies, criteria and standards governing waste safety and public and environmental protection, together with provisions for their application, including state of the art technologies and methods for demonstrating their adequacy.

Uranium Mining Legacy Sites in Central Asia

In 2010, the Agency completed a report entitled *Assessment and Proposals for Uranium Production Legacy Sites in Central Asia: An International Approach* that identified the needs and priorities for environmental impact assessments at legacy uranium production sites in Central Asia. The report has been used by the European Commission, the European Bank for Reconstruction and Development, United Nations Development Programme, and the Organization for Security and Co-operation in Europe for providing assistance for remediation projects in the region.

In October 2010, the Agency launched the International Working Forum on Regulatory Supervision of Legacy Sites (RSLS), in cooperation with the Norwegian Radiation Protection Authority. This forum will provide support to regulators addressing legacy site issues by promoting the exchange of ideas, information and methods. Initially, the forum will be oriented towards remediation of the uranium mining legacy in Central Asia, but its scope will broaden to cover other types of legacy sites and facilities in other parts of the world.

Radioactive Waste Management: Networking Activities

In 2010, the Agency established the International Network of Laboratories for Nuclear Waste Characterization (LABONET, *http://www.iaea.org/OurWork/ST/NE/NEFW/wts_LABONET_homepage.html*) to improve the effectiveness of information exchange on good practices in the management of radioactive waste. Network participants were drawn from States with both advanced and limited nuclear programmes. Steps were taken to improve linkages between LABONET and other Agency networks addressing near surface disposal (DISPONET, *http://www.iaea.org/OurWork/ST/NE/NEFW/wts_DISPONET_homepage.html*), deep geological disposal (Underground Research Facilities Network (URF), *http://www.iaea.org/OurWork/ST/NE/NEFW/wts_URF_homepage.html*), the decommissioning of nuclear facilities (IDN, *http://www.iaea.org/OurWork/ST/NE/NEFW/wts_IDN_homepage.html*), and environmental remediation of contaminated sites (ENVIRONET, *http://www.iaea.org/OurWork/ST/NE/NEFW/wts_ENVIRONET_homepage.html*). These improvements are aimed at fostering the use of new electronic media and enhancing communication channels.

The Contact Expert Group (CEG) for International Radwaste Projects in the Russian Federation was established under the auspices of the Agency in 1996 to promote international cooperation and assistance in resolving problems caused by the nuclear legacy of the Cold War. The CEG comprises 13 Member States (the G8 countries plus five additional European States). At the end of 2010, CEG partners had defuelled and dismantled 191 old Russian nuclear submarines. CEG members are now focusing on the safe removal of submarine spent fuel that had been stockpiled at former navy bases in the north-western and far eastern regions of the Russian Federation. The CEG has overseen the removal of all radioisotope thermoelectric generators previously used for navigation purposes on the country's north-west and Pacific coasts and is working on the creation of two regional centres for the conditioning and storage of legacy radioactive waste.

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As a complement to networking, the Agency conducted a six week pilot course at the Technical University of Clausthal, Germany, in the area of training in radioactive waste management. The course syllabus covered predisposal radioactive waste management, decommissioning, remediation, disposal, naturally occurring radioactive material waste and radioactive waste from mining and milling. Member States that participated in the course included China, Croatia, Estonia, Iraq, Romania and South Africa.

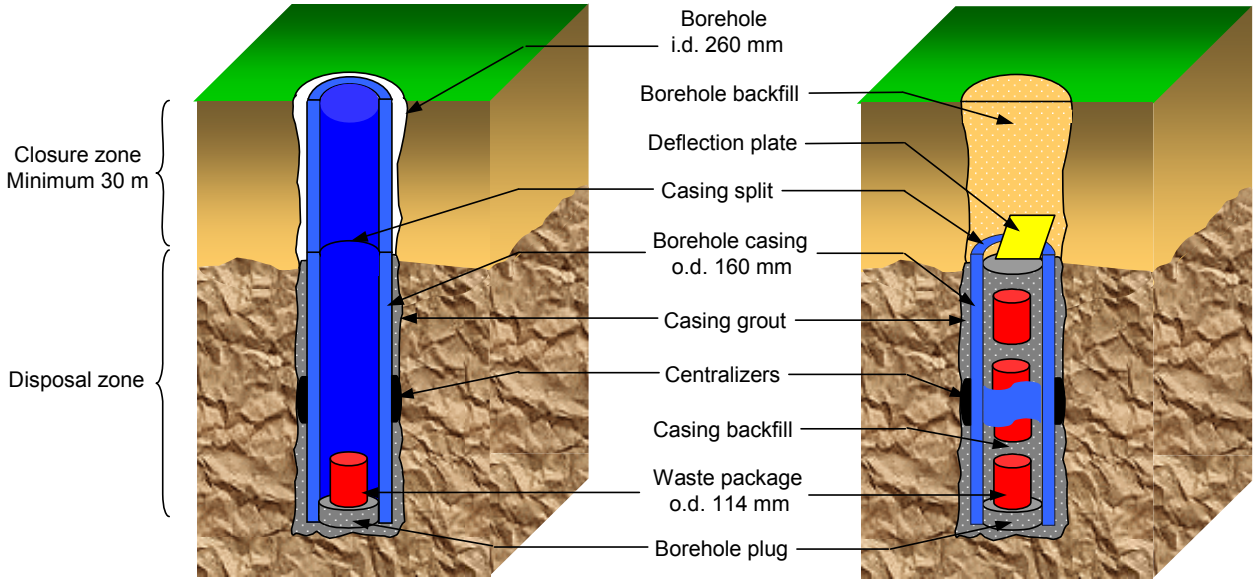

FIG. 1. Schematic of the borehole disposal concept.

Borehole Disposal

The disposal of disused sources continues to be costly and technically difficult for high activity sources. To assist countries lacking the financial, human and technical resources to ensure adequate long term management and disposal, the Agency has developed the borehole disposal system, a simple and economically viable option for use by any interested country. In 2010, implementation of this option was begun in a demonstration project in Ghana (Fig. 1).