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# NUCLEAR ENERGY AGENCY RADIOACTIVE WASTE MANAGEMENT COMMITTEE

CREATION OF THE RWMC PILOT GROUP ON MANAGEMENT OF RADIOACTIVE WASTE IN VIEW OF DISPOSAL

This document supports Item 13.e of the provisional agenda of the 47th session of the RWMC, to be held 26-27 March 2014.

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#### RADIOACTIVE WASTE MANAGEMENT IN VIEW OF DISPOSAL - PROPOSAL FOR PILOT GROUP

#### Introduction

As recorded in the summary record of RWMC-46, Items 15 and 18, dealt with the issue of **Waste Management in View of Disposal**. The RWMC expressed strong support to further explore the interface between storage and disposal. One could think, e.g., of the issue of ageing, the timing of encapsulation before disposal, the optimal timing and organisation of the operational disposal phase as a function of accumulated waste volumes in storage, the potential impacts of delays on disposal implementation for managing waste in storage, the R&D needs as storage times get longer than initially programmed, etc. ...

The creation of small Pilot Group was suggested in order to arrive at robust choice of topics and modus operandi.

#### **Proposal**

A Pilot group composed of 5-6 people and supported by the Secretariat, should

- a. Design and conduct a survey of
  - the current situation in member states in terms of policy and practices for the storage of all types of radioactive wastes
  - the main issues for managing the (future) interface between storage and final disposal at the technical, financial and societal level.
- b. Present a report at the 2015 meeting of the RWMC meeting on
  - the outcomes of the survey
- a suggested programme of work for a dedicated group on waste management in view of disposal keeping into account other international initiatives in this area.
- c. In parallel, the Pilot Group would review and revise the 2006 RWMC report: "The Roles of Storage in the Management of Long-lived radioactive Waste. Practices and Potentialities in OECD Countries". See also Annex to this document

The Pilot Group would be given a mandate of 2 years in order to accomplish the tasks a, b, and c above.

### ANNEX

The storage of radioactive waste is an important management step in all national waste management systems. There is worldwide operational experience with storage facilities for high-level and long-lived waste, and these storage facilities play a key role in the implementation of national long-term management policies.

The concept of storage has been defined in international conventions, recommendations and national legislation. There is a broad consensus that storage has always to be considered as an interim management step, but never a long-term management alternative to disposal.

Storage can play different roles in a national management policy and management system:

- **Decay storage** to allow radioactivity and heat output levels to be reduced before going to the next management step;
- Buffer storage to provide sufficient waste stock for a subsequent process;
- Interim storage awaiting the next management step to be developed and made operational (e.g. disposal);
- **Strategic storage** for materials for which decisions of reuse, recycling or declaration as waste are temporarily postponed.

The situations in different OECD/NEA member states can widely vary in terms of storage policies and practices, notwithstanding the fact that disposal solutions will have to be developed and implemented (either national or supra-national) to responsibly and safely manage high level and long-lived waste.

In 2006 NEA/OECD published a report: "The Roles of Storage in the Management of Long-lived radioactive Waste. Practices and Potentialities in OECD Countries". This report provided an overview discussion on the different possible roles of storage in OECD member states and addressed the question of whether long-term storage could or could not be a long-term management alternative to disposal, concluding that for long-lived radioactive waste "(...) storage can never become an endpoint for radioactive waste management."

One can expect the main elements of discussion and the main observations and conclusions of the 2006 report still to be valid, although the situation in some Members states might have somewhat evolved., which needs to be verified.

Meanwhile, the 2006 report was not really focusing on elements and issues of key importance for managing the interface between storage and disposal. One can think, e.g., about ageing of spent fuel assemblies, the timing of encapsulation for disposal, the optimal timing and organisation of the operational disposal phase as a function of accumulated waste volumes in storage, the potential impacts of delays on disposal implementation for managing waste in storage, ...This may be, however, beyond the scope of simply updating the 2006 report and part a larger new task.