

## WM2014 Conference Panel Report

### PANEL SESSION 70-B: International Deep Repository Progress – Part 2 of 3

**Co-Chairs:** **Enrique Biurrun**, *DBE Technology GmbH (Germany)*  
**Leif Eriksson**, *Nuclear Waste Dispositions (USA)*

**Panel Reporter:** The designated panel reporter did not attend this session and a replacement panel reporter was not assigned due to lack of communication. This panel report was thus prepared post-mortem by a collaborative effort of the session co-chairs, the panelists, and the WMS administration.

#### **Panelists:**

1. **Dr. Horst Geckheis**, *Head of the Institute for Nuclear Waste Management in the Karlsruhe Institute of Technology (Germany)*
2. **Ann McCall**, *SKB International's Representative in the United Kingdom (UK)*
3. **Rogério Pimenta Murao**, *National Nuclear Energy Commission (CNEN) of Brazil (Brazil)*
4. **Roger Nelson**, *Chief Scientist, U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) (USA)*

This half-panel session focused on repository programs in five specific countries, i.e., Brazil, Germany, Sweden, the United Kingdom, and the USA. The aforementioned four senior managers provided an overview of the current status, challenges, and future plans in their respective country. Questions followed at the end of the session.

#### **Summary of Presentations**

**Rogério Pimenta Murao** reported on the current status and recent progress achieved in Brazil on the development of a repository for LILW arising from the operation of NPPs and from other nuclear applications. The Brazilian Parliament has approved the finalization and start of operation of Angra 3, the third nuclear power plant in Brazil, under the condition that a disposal solution for the LILW generated there is available. To fulfill this regulatory requirement, the Federal Government has charged the CNEN with the development of a near-surface repository for such waste. A site has been selected and currently work on the development of a suitable repository concept is swiftly proceeding with European engineering support. Once the repository concept has been defined, a project for developing the detailed repository engineering will be launched following an international call for tenders to select the most appropriate architect-engineer.

**Prof. Dr. Horst Geckheis** reported on the current status of nuclear waste disposal in Germany. After the serious accident at the Fukushima-Daiichi NPP that followed the Great East-Japan Earthquake and Tsunami, the country's Government vowed to phase out nuclear power use by 2022. The construction of the Konrad deep geological repository, which shall take the non-heat-generating radioactive waste from operation and decommissioning of the German NPPs, as well as such waste from all other sources in the country, continues, although at a pace lower than originally planned. As for the repository for heat-generating waste, a new site selection procedure will be carried out, intending to have a site selected by 2031, in a stepwise process including the surface exploration of several sites and the underground exploration of at least two of them. As it is expected that disposal research will be strengthened in the future, all the German organizations involved in such work will be improving their coordination and cooperation by creating new working partnerships. A close cooperation with the USA, the Netherlands, and Poland, all countries considering salt formations as host rock for deep repositories, is already ongoing with bilateral agreements in place, as well as under the umbrella of the OECD-NEA in the so-called Salt-Club.

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**Ann McCall** gave a summary description of the progress with geological disposal facilities in both Sweden and the UK. The Swedish programme is at the stage where the siting process has concluded in the selection of a preferred site, the licence application has been prepared and was submitted in March 2011, and is currently being considered under both safety and environmental regulations.

The management of the UK's radioactive waste was the subject of a consultation process launched in 2001. The resulting recommendations that the UK policy should: 1) implement geological disposal following a period of interim storage; and 2) base the step-by-step repository-siting process upon a volunteer, willing communities were accepted by the Government in 2006. The ensuing siting process resulted in three communities expressing an interest in hosting the facility, but in January 2013 this process came to a halt when the communities did not agree to move to the next step. The current situation is that another consultation process is underway accommodating lessons learned. A revised siting process may be launched in 2014. The UK and Sweden have also established close links to learn from progress in both countries.

**Roger Nelson** reported on the status of the Waste Isolation Pilot Plant (WIPP) repository located in bedded salt in southeast New Mexico, including a summary of WIPP accomplishments over its 15 years of operation, with particular emphasis on 2013. The WIPP facility unfortunately suffered two serious incidents in the weeks immediately preceding WM2014. However, little was known of the casual factors, and very little speculation was offered. The DOE intends to conduct its investigation of the incidents very openly, and liberally publish the findings, recovery plans, and future corrective actions. Substantial contributions on lessons learned from the WIPP incidents were projected for WM2015.