

WM2014 Conference Panel Report

PANEL SESSION 013: Finland/Sweden Featured Nations: Siting Status and Issues

Co-Chairs: **Charles McCombie**, *MCM Consulting; Arius Association (Switzerland)*
Bo Stromberg, *Swedish Radiation Safety Authority (Sweden)*

Panel Reporter: **Keith Miller**, *National Nuclear Laboratory, UK*

Panelists:

- 1 **Olle Olsson**, *Vice President, Strategy and Programs, Svensk Karnbranslehantering AB (SKB) (Sweden)*
- 2 **Erik Setzman**, *Head of Unit for Quality & Environment, SKB (Sweden)*
- 3 **Tiina Jalonen**, *Posiva Oy (Finland)*
- 4 **Vesa Jalonen**, *President of the Municipality Council Eurajoki (Finland)*

This panel session focused on the siting status and issues in our featured Nations for WM2014, Finland and Sweden. Charles McCombie gave an overview of what attendees could expect to hear during the various presentations, directing delegates that they would have plenty of time to both consider and ask their questions as the Q&A session would be held at the end.

Summary of Presentations

Tiina Jalonen started by out-lining the framework for Radioactive Waste Management in Finland, noting the various roles of Government, the Regulator (STUK) and in Funding Management. The Finnish licensing process has 4 key stages, starting with an Environmental Impact Assessment, leading to a Decision on Principle, followed by a Construction and then an Operating License. Each stage has specific responsibilities and is fundamentally driven by Government. It is impossible to over emphasize the length of time it can take in establishing a suitable site. In Finland, the site selection Research Program lasted between 1983 and 2000. Ultimately, social impact and infrastructure became the decisive factors in selecting Olkiluoto to host the repository. Each party has given a long standing commitment to open communication and this has been key in establishing trust at a National and Local level.

To aide in site characterization the ONKALO underground rock facility was established, with demonstration tunnels being excavated to a depth of 420 m, between 2004 and 2012. Technical facilities were also constructed and lead to the adoption of the KBS-3V concept being implemented at Olkiluoto. **Tiina Jalonen** concluded the presentation with a summary of the current position, noting the main success factors as being a commitment to communication and an early start for funding. Final disposal costs are estimated to be in the region of 3.3 million Euros, based on an operational life of 59 to 60 years for the current nuclear fleet.

Vesa Jalonen explained the background for involving the Local Community in the Finnish context. The Eurajoki Municipality has of the order of 6,000 in habitants, of which 53% work in the industry, paying local taxes and providing a major income stream for the Local Council. The Municipality has had nuclear power since 1978. Olkiluoto also has an interim storage facility for spent nuclear fuel and a repository for low and medium-level waste. In the late 70's early 80's the requirement for a deep repository in Finland was driven by fuel-cycle economics, later (1994) the import and export of nuclear waste was prohibited by law. As in all nuclear matters, safety is

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the primary consideration, together with a sense of national duty to manage nuclear waste. There is a long-term political commitment to the repository and so no reason to delay its implementation. Vesa then outlined the procedure for the political decision on Final Disposal and the reasons why Eurajoki had been chosen (wide-spread local acceptance, and seen as a success story for the area), noting that local attitudes had steadily increased over the last 20 years. A program of active communication continues focusing on local welfare issues and investments in the local community.

Olle Olsson outlined the early experiences in Sweden, noting that protests were quite common at the sites under investigation. Feasibility studies took place at a number of sites between 1993 and 2001, progressing to 2 site investigations between 2002 and 2010. Many meetings with local stakeholders took place during this period, and today, everyone in the Osthhammar municipality is offered a 2-day bus tour of SKB's facilities. A key part of the communication with local Stakeholders, "Lagerbladet", published 4 times per year and distributed to all households in the municipality it contains popular information on all aspects of the repository. Site selection progressed, leading to the decision in June 2009 to select Forsmark as the location for the repository for spent nuclear fuel. SKB submitted a license application in March 2011, with this application being reviewed according to the Nuclear Act and Environmental Code. Various comments and challenges were received during the review, resulting in SKB providing comprehensive additional material to all Stakeholders. Technology development and research will continue in parallel with ultimate approval for repository construction being granted by the Government. In conclusion Olle noted that transparency, honesty, consistency and patience were key aspects in building trust.

Erik Setzman provided the background and context to Added Value Programs, in relation to Societal and Social Science aspects, stating their importance in building trust and confidence with the local community. In 2007 both municipalities decided to approach SKB together and call for SKB to contribute to "Added Values" in both areas before the site was selected. SKB signed an agreement with both Osthhammar and Oskarshamm in 2009 to contribute to their mutual benefits and good long-term conditions. Funding to a total of up to 2 B SEK was provided by SKB owners, with no funding being taken from the Swedish Nuclear Waste fund. Balance of funding is allocated 25% to Osthhammar (selected site) and 75% to Oskarshamm, which also gets the encapsulation plant. The AVP organization is fronted by a Steering Committee, with representatives from all Stakeholders. Experience to date is prosperous and promising and meets expectations. No compromising or jeopardizing of anyone's integrity. Long may it continue.

Questions and Answer

In response to a question relating to whose idea it was in the first place to have Added Value Programs, **Erik Setzman** replied that the idea came from Local Government to foster mutual benefits for industry and the Municipality.

Vesa Alonen was asked to comment on the impact of Social Media, and noted that it was vital to have opinions based on factual information. Much of this is based on the experience of having nuclear facilities in the region for many years.

Charles McCombie asked if it would be possible for the repository design to extend under the

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sea bed. **Olle Olsson** noted that there was a provision in Swedish law to extend the excavations up to 300 m under the sea bed. **Tiina Jalonen** stated that no such provision existed in Finnish law and that the entire repository had to be constructed under land.