

The Future of Nuclear Waste – Burden or benefit?

An invitation to an international seminar arranged by the Swedish National Council for Nuclear Waste

Stockholm 8 – 9 November 2012.

Näringslivets hus, Storgatan 19, 114 85 Stockholm.

Background

The Swedish National Council for Nuclear Waste (former KASAM) is an advisory body to the government on the management of nuclear waste and spent fuel. As a part of this assignment the Council observes the development within the nuclear waste sector, both within Sweden as well as internationally.

The prevailing proposals for management of radioactive waste are final disposal in geological repositories. In Sweden, Swedish Nuclear Fuel and Waste Management Company (SKB) has submitted an application on building a final repository for spent nuclear fuel in Östhammar, that is currently being reviewed by the Swedish Radiation Safety Authority and the Environmental Court.

These proposals have been challenged by other proposals suggesting alternative methods for nuclear waste management. In an earlier seminar arranged by the council, deep boreholes have been highlighted. The present seminar will focus upon the emergence of new reactor technologies using nuclear waste as a resource and the shortening of the lifetime of nuclear waste through partitioning and transmutation.

Objectives

The aim of the seminar is to explore and present different alternatives regarding the management of nuclear waste and spent nuclear fuel in the light of new technologies and development. The seminar will provide an opportunity for an analysis of the implications for new technologies for radioactive waste management by addressing the fundamental question: ***Is nuclear waste a burden or resource for future generations?***

This question encompasses ethical, technical, social and scientific aspects. The answer has significant consequences for radioactive waste management and deposition of nuclear waste.

Key questions

The seminar will provide an opportunity - through presentations by highly merited speakers, panel discussions and open dialogue with the audience – to explore the following key questions:

- **Future nuclear technologies in societal context.** What are the prospects for significant future development concerning new reactor technologies? What potential do new techniques hold for the management of nuclear waste and what are the limitations and risks? Under which future scenarios may these be developed?
- **Implications for current proposals for geological repositories.** What would be the implication of the development of new reactors for existing and currently developed proposals for geological repositories (e.g. the KBS-3 method)?
- **International perspectives.** What are the specific national approaches to nuclear waste management in the view of new technologies?
- **Intergenerational justice and equity.** What are the implications of transmutation and recycling of nuclear waste for the principles of intergenerational justice and equity? What brings the greatest benefit and the least burden to future generations?
- **The implications for uranium mining.** How does development of new techniques affect uranium mining and what would be the implications, not only in technical, but also social and political terms?

Outcome of the Seminar

It is not purpose of the seminar to reach a final verdict on the future development of nuclear power. It is, nevertheless, of importance to view nuclear waste management in the light of different scenarios of technological development. There is no general agreement on the desirability of these scenario – and nor is such an agreement to be expected after the seminar. Still, it is of importance to analyse the possibilities, clarify our choices and explore their implications.

In this spirit we invite all concerned with nuclear waste management to participate in this seminar and engage in an open dialogue.

On behalf of the seminar committee,

Carl Reinhold Bråkenhielm, vice chairman of the Swedish National Council for Nuclear Waste

Holmfridur Bjarnadottir, administrative director, Swedish National Council for Nuclear Waste