

## **CARL Workshop Troon (29/11/2006) - Swedish Update**

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#### **Autumn 2006**

What are latest steps in the siting of a deep repository for high-level waste in Sweden?

We are 4 years into site investigations in Oskarshamn and Östhammar. These are being carried out by SKB and focus on bedrock conditions on specific sites in the two candidate municipalities.

SKB have this autumn submitted an permit application to build an Encapsulation Plant in Oskarshamn. This is planned to be directly connected to the interim storage facility for high-level waste (CLAB) already in existence in Oskarshamn.

We are in the middle of the EIA process prior to submission of application for permit to build deep repository (end of 2009)

What's looming ever larger in the siting process?

Answer: Implications of having **two** forms of legislation governing high-level waste management

#### **Two Rationalities – Two Programmes of Government Running Parallel**

High-level nuclear waste management is subject to two major programmes of government legislation. These two programmes of government are founded upon different rationalities of government implying different conceptions of stakeholder involvement.

Rationality 1 = **Nuclear Safety** – 1977 Nuclear Power Stipulation Act replaced by 1984 Act on Nuclear Activities. Both the institutions of SKB and SKI were born in connection with the 1984 Act as was the KBS-3 method of deep disposal

Rationality 2 = **Sustainable Development** – 1991 EIA rules introduced in Sweden, 1999 Swedish Environmental Code. The scale and scope of environmental legislation grew throughout the 1990s in Sweden. The Municipality of Oskarshamn were very early in promoting the relevance of this legislation for nuclear waste management and for the framing of stakeholder involvement.

No One Escapes the Swedish Environmental Code!! = A Framework Law covering everything from the establishment of a petrol station to a nuclear waste facility.

But 'a safe radiation environment' remains a environmental quality objective  
So it's business as usual for siting nuclear facilities? NO (but, maybe YES)  
Swedish government has recently allowed the upgrading of Swedish nuclear stations despite the judgement of Environmental Courts that such actions were in violation of the Environmental Code.

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But isn't nuclear power classed as non-sustainable in Swedish energy policy? YES (but maybe not for long) If Sweden is determined to break dependence on oil/fossil fuels, and if waste problem can be 'solved' through deep disposal.

## **Local Stakeholders Pioneered EIA Procedures in Siting of Waste Facilities!**

'EIA Free' sitings prior to 1991 = CLAB in Oskarshamn opening 1985 (national interim storage facility for high-level waste) and SFR in Östhammar opening 1988 (final repository for low- and intermediate level waste). Sweden has a history of successfully siting major waste facilities in communities already hosting nuclear reactors without engaging in any extended stakeholder involvement procedures.

1992 initial plans for Encapsulation Plant siting in Oskarshamn (planned application 1996) SKB originally planned to apply to build an encapsulation plant in Oskarshamn 10 years ago. But it was in connection with this siting that the municipality first took advantage of new environmental legislation to exert greater local influence over the siting process. In this connection the foundations were laid for the LKO organization in Oskarshamn of local competence development in waste issues.

1992 – SKB's Switch to Siting Strategy for KBS-3 based on 'voluntarism and dialogue' **not** a response to new environmental legislation.

1992 initiation of feasibility studies = nationwide search for 'political repositories' for a ready-made disposal concept (KBS-3). Principle of 'informality' supported by SKB in discussions with local communities. These discussions were not guided by government legislation and were conducted only in the 'spirit of' EIA consultations.

1995 – Due to pressure from Oskarshamn, feasibility studies for siting deep repository came to encompass what many participants apart from SKB came to accept as authentic early EIA consultations. No overall consensus on quality of consultations reached.

1999 – There's no escaping the Swedish Environmental Code. There's no avoiding the EIA process. But what of its scale and scope? Is the EIA process just a satellite social activity during the geoscientific site investigations determining the long-awaited final destination for already certified safe KBS-3 method of deep disposal?

## **Will Following the Letter of the Environmental Law Turn Back the Clock?**

Does Pursuing a EIA process in accordance with Environmental Code re-open big issues of methods and sites for high-level waste management in Sweden?

Nuclear Safety Community Grappling with Environmental Law and Legal Experts. In recent months have witnessed a growing confusion of experts. How far does the EIA process have to go, and what character should the resulting EIS take? Traditional dominance of technical 'safety' experts now complemented by growing array of legal experts debating to what extent the Environmental Code opens up issues for broader discussion that have long been treated as already settled.

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It has recently been argued that an authentic EIA process demands an objective against which alternative courses of action can be assessed including the alternative of doing nothing.

This appears to require that in order for the KBS-3 method of waste disposal to qualify as the 'Best Available Technology' it must be relegated and genuinely discussed as an alternative course of action among others in the course of EIA consultations?

SKB are resisting such a framing of the EIA process. For them the method question reached a decisive settlement already in 1984 and it does not need re-opening again at this late juncture. For SKB, following the letter of the Environmental Code is seen as equivalent to Volvo being asked to stop producing Volvo cars (KBS-3) and to openly discuss producing Toyota cars in future which are still at the drawing-board stage (deep bore-holes or transmutation).

### **BATting for KBS-3 (Best Available Technology)**

Nuclear Safety Community in Sweden has been BATting for KBS-3 for more than 20 years. Generations of safety experts, engineers and local politicians have worked together on the KBS-3 project after 1984. Individuals connected to the project have also 'switched sides' over the years moving between industry, government and even municipal authority adding to the overall cohesion of the policy network connected to the project.

KBS-3 = long-established Research, Development and Demonstration Project.

Step by step becoming more 'possible', more 'available', more economical

Oskarshamn = already most important site for 'materialization' of KBS-3, already hosting Äspö Laboratory, Capsule Laboratory, CLAB, and now named site for Encapsulation Plant. KBS-3 can be interpreted as just as much Oskarshamn's 'baby' as SKB's.

Provisional Government Stamp of Approval to KBS-3 already given twice (1984 and 2001)

Oskarshamn (2002) Östhammar (2001) said yes to site investigations for KBS-3 and nothing else.

So no competition? KBS-3's status as BAT in Sweden for high-level waste disposal appears more or less impregnable and irreversible. Could argue that SKB are being overly defensive at the moment and feeling unnecessarily threatened on the BAT issue.

Future generations cannot compete with current generations in Sweden dedicated to KBS-3 as BAT?

### **Local Acceptance/Voluntarism as Principle for Choice of Alternative Sites**

2001 Östhammar + Oskarshamn accepted by government as sites for site investigations, but in the government decision other sites for investigation were hoped for - Tierp and perhaps Hultsfred.

Again, it has been recently argued that an authentic EIA process would view 'local acceptance' as something to be negotiated during the course of the consultation process, *not* as something upon which a site's recognition as a potential site should proceed.

Voluntarism has two faces. On the one hand supports the principle that a community should not be forced to accept its selection for the siting of facilities it does not want. On the other hand, it works to the relative disadvantage of communities already burdened with nuclear waste as they don't have the option of simply wishing the problem away, especially as they continue to generate it. Communities already hosting nuclear facilities resemble 'compulsory volunteers' in the task of finding solutions to the waste problem. Voluntarism therefore gives non-nuclear communities an 'easy way out' of siting waste facilities and encourages the formation of national 'nuclear oases' and a small number of local communities destined to host reactors and waste facilities alike.

Voluntarism has served to *lock* the siting process into established nuclear communities in Sweden. National responsibility for solving the waste problem has been conveniently delegated to these communities through voluntarism.

This convenient process of 'lock-in' may prove harder to defend in face of environmental legislation than the long-established 'lock-in' to KBS-3 as BAT. Physical geology has only assumed a dominant role in the siting of KBS-3 after the commencement of site investigations in 2002. Up until the choice of Oskarshamn and Östhammar as sites for site investigations political geology was the dominant factor.

Nevertheless, given the growing enthusiasm, rather than mere resignation, for hosting a deep repository in both Oskarshamn and Östhammar it remains difficult to see how a serious lobby could form exploiting the EIA process to effectively re-open the choice of site issue.