

The statements received can be found in their original language in Appendix E.

The statement below from the Ministry of the Environment in Finland has been translated into English by SKB.

Date	Dnr
21.4.2016	YM3/5521/2005

Environmental Protection Agency
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Your reference number: NV-07138-15

Issue Response to the Swedish authorities' notification to Finland, in accordance with sections 4 and 5 of the Espoo convention on Environmental Impact Assessment in a Transboundary Context, of interim storage, encapsulation and final disposal of spent nuclear fuel.

Sweden has, in accordance with the Espoo Convention, sent the environmental impact assessment related to the interim storage and encapsulation of spent nuclear fuel in Oskarshamn Municipality and the final disposal of spent nuclear fuel in Östhammar to Finland for comments. An information meeting was arranged on 26/3/2016 by Sweden about the project, where all consulting parties were invited to participate. Representatives from the Government of Åland and the Ministry of Employment and the Economy attended the meeting.

The Ministry of the Environment has sent the environmental impact statement to agencies and organisations involved in the Finnish EIA procedure. All material has been available through the Internet and it has been possible to leave statements both electronically and physically. The public has been given the opportunity to express opinions on the matter. The Ministry has received several statements from the authorities and in addition it has received an opinion from the public. Statements in their entirety as well as unofficial translations are attached.

The Ministry of the Interior does not have any comments to make.

The Ministry of Social Affairs and Health notes that Finland and Sweden use the same basic technology in terms of disposal of spent fuel. The Ministry of Social Affairs and Health does not believe that the final repository of Sweden's spent nuclear fuel has environmental impacts that extend to Finland.

Radiation and Nuclear Safety Authority in Finland (STUK) notes that they examined the material produced by SKB but have not verified the details. The material is considered extensive and solid on all counts. STUK notes that they examined safety at similar nuclear facilities in connection with the Olkiluoto encapsulation and final repository, where similar technology will be used. Estimates of emissions from facilities where this technology is used are low, and hence cause no transboundary radiation effects according to the statement. STUK has full confidence in the Swedish safety authorities, and considers that the information given is sufficient and therefore considers that the presented operations can be realized so that they have no impact on Finland.

- **The Ministry of Employment and the Economy** considers that Sweden is acting responsibly as a final solution to the storage of spent nuclear fuel is being sought. It further notes that it is an advantage that Sweden and Finland are using the same disposal method developed by SKB. The Ministry of Employment and the Economy believes that it is unlikely that the processing of spent nuclear fuel in Sweden has an impact on the environment in Finland.

The Government of Åland notes that the final repository unit in Forsmark is located only 70 km away from Åland. The Government invites its Swedish colleagues to ensure that the technical solution, especially in terms of corrosion of the copper canisters, is thoroughly proven safe before the technology is implemented on an industrial scale.

Based on the statements the Ministry of the Environment has received and with reference to the ministry's own experts, the Ministry of the Environment considers it unlikely that the planned project has substantial transboundary environmental impacts in Finland, despite the fact that Forsmark is located only 70 km from Åland. The Ministry of the Environment urges Sweden to, with utmost care, ensure that the implemented technology is safe at all times throughout the intended storage time.

Permanent Secretary

Hannele Pokka

Ministerial Adviser

Seija Rantakallio

Attachments

Statements (originals and unofficial translations)

Ministry for Employment and the Economy

Ministry of the Interior

Ministry of Social Affairs and Health

Radiation and Nuclear Safety Authority in Finland

The Government of Åland

Kari Kuusisto

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The statement below from the Ministry of the Interior in Finland has been translated into English by SKB.

Statement: The Ministry of the Interior

The Ministry of the Interior has no comment on this issue.

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The statement below from the Ministry of Social Affairs and Health in Finland has been translated into English by SKB.

Statement: The Ministry of Social Affairs and Health

The Ministry of the Environment has sent the Ministry of Social Affairs and Health a request for a statement regarding the environmental impact assessment in connection with Sweden's disposal of high-level nuclear waste. This is in accordance with the Espoo Convention, which requires that the states that have ratified the Convention be given an opportunity to express their opinions with respect to projects which may have transboundary implications.

The Ministry of Social Affairs and Health has the following to say:

Finland and Sweden have long closely cooperated on the disposal of spent nuclear fuel. Both countries use the same basic technology for disposal, where spent nuclear fuel is buried deep in the bedrock in copper canisters in which nuclear waste is placed in a support structure of cast iron. The copper canister is insulated with bentonite clay and disposal is completed by sealing the tunnel that the copper canister is in up to ground level.

The Ministry of Social Affairs and Health believes that the final repository of Sweden's spent nuclear fuel does not have environmental consequences that extend to Finland.

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The statement below from the Radiation and Nuclear Safety Authority in Finland has been translated into English by SKB.

Statement: The Radiation and Nuclear Safety Authority in Finland (STUK)

The Environmental Impact Assessment for encapsulation and disposal of spent nuclear fuel in Sweden

The Ministry of the Environment has asked the Radiation and Nuclear Safety Authority in Finland (STUK) to give a statement regarding the environmental impact of encapsulation and disposal of spent nuclear fuel in Sweden. STUK's statement reads as follows.

The Environmental Impact Assessment contains a broad documentation of reports with supplements and a summary in Finnish. STUK has acquainted itself with the material, but has not checked the details.

The material has treated the environmental impacts related to the existing interim storage unit and the encapsulation plant planned to be built in the same area in Oskarshamn Municipality. In addition, environmental impacts of the final repository unit to be built Östhammar were treated. According to the description, a possible spread of radioactive substances could take place in connection with the function of the interim storage, encapsulation unit or final repository unit, as well as in connection with the transportation of the encapsulated spent nuclear fuel. According to the estimates presented in this description, radiation doses remain in the vicinity of the aforementioned units very small and thus the nuclear waste facilities described have no transboundary implications.

STUK has reviewed the security of the similar planned nuclear facilities in Finland. Olkiluoto encapsulation and final repository sites

The emissions arising from the Olkiluoto encapsulation and final repository facilities in normal use and in the case of accidents, according to the estimates presented in connection with the application for a construction permit are local and small and do not cause transboundary radiation effects.

The EIA has treated other options for the treatment and final disposal of spent nuclear fuel and alternative location proposals for the plants.

The Swedish national legislation defines the radiation and nuclear safety requirements and more detailed safety information has been presented as a regulatory requirement. The Swedish safety authorities' independence and the extensive knowledge they hold in the monitoring of radiation and nuclear safety is a vital part of ensuring the safe disposal of spent nuclear waste in Sweden.

Sweden has signed the international agreement Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management which sets demands on the national legislation and nuclear safety supervision. The International Atomic Energy Agency (IAEA) has extensive advice for radiation and nuclear safety. In Sweden, a standard completed evaluation according to the IAEA by the regulatory independent function International Regulatory Review Service was carried out in 2012.

Referring to that previously presented, the Radiation and Nuclear Safety Authority in Finland considers that the information given is sufficient. STUK considers that the extension of interim storage, installation of an encapsulation unit and installation of a final repository unit for spent nuclear waste can be realized such that they do not have any impact on Finland.

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The statement below from the Government of Åland in Finland has been translated into English by SKB.

STATEMENT ON FINAL DISPOSAL OF NUCLEAR FUEL

Background

The Ministry of the Environment requests a statement from the Government on the Swedish EIA procedure for a plant for encapsulation of nuclear waste in Oskarshamn and final disposal of nuclear waste in Forsmark. The Ministry of the Environment will then compile a statement on the matter to the Swedish authorities under the Convention on Environmental Impact Assessment in a Transboundary Context (E/ECE/1250) (Espoo Convention).

The company responsible for the project, Swedish Nuclear Fuel and Waste Management Company (SKB), has already compiled an environmental impact assessment (EIA) and has now updated it for interim storage, encapsulation and final disposal of spent nuclear fuel. The Government has participated in a consultation meeting under the Espoo Convention in Stockholm 03/21/2016.

Sweden has nine nuclear power plants that produce about 200 tonnes of spent nuclear fuel per year. Sweden has about 6000 tons of spent nuclear fuel, which is currently interim-stored in water-filled pools in Clab in Oskarshamn.

Encapsulation plant Clab in Oskarshamn

SKB already has permission to interim-store 8000 tonnes of spent nuclear fuel in Clab in Oskarshamn. With current projections, the licensed amount will be reached around 2023. Therefore, SKB has submitted an application to extend the interim storage amount to 11 000 tonnes of spent nuclear fuel. SKB also plans to build a plant for the encapsulation of spent nuclear fuel directly adjacent to Clab.

Final Repository in Forsmark

In Forsmark, in the vicinity of the nuclear power plant, SKB plans to build a tunnel system approximately 500 m deep and 6 km² wide. There are plans to deposit about 12,000 tonnes of highly radioactive nuclear waste there. After all waste has been deposited, the entire tunnel system will be filled with bentonite clay.

The Government's position

The Government of Åland assumes that the plans to dispose of spent nuclear fuel in Forsmark, only 70 km away from Åland, are implemented in a way that ensures the safety of people and the environment in the long term. The Government does not have sufficient expertise in its management to scientifically assess the proposed storage solution. However, one can conclude that the research questioning the long-term safety of the KBS-3 method is of concern and should be taken very seriously. The Government urges the Swedish authorities to ensure that, before the KBS-3 method is put in use, irrefutable scientific evidence exists that copper corrosion does not occur to such an extent that radioactive substances are released during the planned storage time and thus endanger current and future generations.

Deputy Head of Government Camilla Gunell

Deputy Bureau Chief Inkeri Ahonen

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The statement below from Kari Kuusisto in Finland has been translated into English by SKB.

Statement on the Swedish plan for nuclear waste management

Dear Ministry,

I, as an environmentalist, support responsible plans for managing nuclear waste.

I ask the Ministry and your Swedish colleagues and the relevant business people that you together research new opportunities for cooperation and joint nuclear waste management. Posiva has its own cave in Eurajoki but Fennovoima does not yet have a solution for waste management.

There is the Sigyn ship, which can carry all Finnish and Swedish high-level waste, as all nuclear power plants are located on the shores of the Baltic Sea or the Gulf of Finland. I hope that the Ministry will make some changes in the legislation that will help to provide the cheapest solution for this issue. Finally, I wish you the best for the project.

Kari Kuusisto

Economist and Master of Law

Espoo, Finland