

NACKA DISTRICT COURT  
Land and Environmental Court \*

Case no. M 1333-11  
Act document no. 843

## Summary of opinion

January 23, 2018

### PERMIT APPLICANT

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### THE CASE

Permit according to the Environmental Code for facilities for a coherent system for final disposal of spent nuclear fuel and nuclear waste; at this time a question of an opinion to the government

## Opinion of the Environmental and Environmental Court

The undertaking \*\* is permissible if:

1. Svensk Kärnbränslehantering AB [SKB] produces evidence that the repository in the long term will meet the requirements of the Environmental Code, despite remaining uncertainties regarding how the protective capability of the canister may be affected by
  - a. corrosion due to reactions in oxygen-free water
  - b. pit corrosion due to reaction with sulphide, including the contribution of the sauna effect to pit corrosion
  - c. stress corrosion due to reaction with sulphide, including the contribution of the sauna effect to stress corrosion
  - d. hydrogen embrittlement
  - e. radioactive radiation impact on pit corrosion, stress corrosion and hydrogen embrittlement.
2. the long-term responsibility for the the final repository according to the Environmental Code has been clearly assigned.

Before permission is given, Swedish Nuclear Fuel and Waste Management Company [SKB] must also provide a comprehensive report of the plant's surface operations and indicate the siting of two possible ventilation towers.

The government should consider whether a legislative amendment is needed regarding the time limit for water management. The government should also consider giving the Radiation Safety Authority the right to plead cases under Chapter 22, Section 6 of the Environmental Code, and an opportunity to apply for re-evaluations under Chapter 24, Section 7 of the Environmental Code.

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\* <http://www.nackatingsratt.domstol.se/Om-tingsratten/Mark--och-miljodomstolen/>

\*\* [Editor's note: The Swedish judicial term "verksamhet" could also be translated as "activity/activities".

# 1 Summary

## 1.1 Assessment under the Environmental Code

Swedish Nuclear Fuel and Waste Management Company (SKB) has applied for a permit under the Environmental Code for the final disposal of nuclear fuel waste and nuclear waste from the Swedish nuclear power program. The application comprises two facilities, an encapsulation facility in Oskarshamn municipality and a final disposal facility at Forsmark, Östhammar municipality. The final disposal is to be carried out in accordance with the KBS-3 method, which is based on three safety barriers – the canister with casing consisting of 50 mm copper, the bentonite buffer and the granite rock formation in Forsmark. The intention is to deposit 6,000 canisters, each containing approx. 2 tonnes of nuclear waste, i.e., a total of approx. 12 000 tonnes of nuclear waste. Disposal will take place at a depth of approximately 470 m. The time between start of construction of the final repository and its closure is estimated to be 70 years.

The government will determine whether the undertaking may be permitted under the Environmental Code. The Land and Environmental Court has prepared the case for the government. Following an exchange of submissions and inquiries in the case, the court held hearings in Nacka, Oskarshamn and Östhammar. SKB's facilities in Oskarshamn and at the site of the repository for final disposal in Östhammar were visited.

In the opinion to the government the Land and Environmental Court reports on its assessment as to whether the planned undertaking can be permitted. If the government decides to allow the undertaking, the case will be returned to the court that will then consider issues relating to permits and set out conditions for the undertaking.

## 1.2 The overall conclusions of the Land and Environmental Court

### **SKB's investigation\* is thorough, but uncertainties about the canister remain**

The application concerns a comprehensive project for final disposal of spent nuclear fuel and other nuclear waste from the Swedish nuclear power program. SKB has conducted research and development of the KBS-3 method for this purpose for more than 30 years. This has resulted in a comprehensive and thorough investigation, which provides a good basis for assessing whether the undertaking may be permitted under the Environmental Code. A comprehensive safety analysis of the safety of the final repository for one million years after closure has been presented.

The Land and Environmental Court finds that the environmental impact assessment meets the requirements of the Environmental Code and can therefore be approved. All in all, the investigation meets the high standards set out in the Environmental Code, except in one respect, the safety of the canister.

The investigation shows that there are uncertainties, or risks, regarding how much certain forms of corrosion and other processes can impair the ability of the canister to contain the nuclear waste in the long term. Overall, these uncertainties about the canister are significant and have not been fully taken into account in the conclusions of SKB's safety analysis.

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\* [Editor's note: The Swedish administrative term "utredning" can be translated as a "documented investigation providing the basis for decision-making".]

The Land and Environmental Court considers that there is some leeway for accepting further uncertainties. The uncertainties surrounding certain forms of corrosion and other processes are, however, of such gravity that the Court cannot, based on SKB's safety analysis, conclude that the risk criterion in the Radiation Safety Authority's regulations has been met. In the context of the comprehensive risk assessment required by the Environmental Code, the documentation presented to date does not provide sufficient support for concluding that the final repository will be safe in the long term.

The conclusion is therefore that the proposed undertaking will be permissible only if SKB provides conclusive evidence that the repository is safe in the long term, even with respect to the protective capability of the canister.

Before permissibility can be granted, SKB also needs to more precisely describe the area of surface operations and indicate the siting for two possible ventilation towers.

### **Responsibility for the final repository in the long term needs to be clarified**

The Land and Environmental Court considers that the undertaking of final disposal of nuclear waste will continue even after the final repository is closed. According to the Environmental Code, the licensee has a responsibility for the undertaking until further notice, i.e., there is no time limit. Views differ as to the responsibility for the final repository in the long term. The material presented does not demonstrate that SKB will have the resources to respond to possible demands for measures hundreds or thousands of years after closure. Östhammar municipality refuses to accept ultimate responsibility for the final repository. Consequently, the question arises whether the national government shall assume responsibility for the repository. In the view of the Court the licensing authority or regulatory authority cannot, under the current regulations, assign ultimate responsibility to the state. It is of urgent importance to clarify where long-term responsibility under the Environmental Code resides.

### **The proposed site of the final repository in Forsmark fulfils the requirements of the Environmental Code regarding location, protected areas and protected species**

The Land and Environmental Court determines that the site chosen for a final repository in Forsmark meets the criteria set out in the Environmental Code for a suitable location. The undertaking is consistent with current areas of national interests, environmental quality standards, Natura 2000 areas and protected species, provided that protective measures are taken. In addition, compensatory measures need to be taken.

The exploitation poses a risk of significant damage to Forsmark-Kallrigafjärden, an area of national interest for nature conservation, but the Land and Environmental Court finds that the national interest for the final disposal of spent nuclear fuel represents takes priority. A permit is required for the Natura 2000 areas of Kallriga, Skaten-Rångsen, Storskäret and Forsmarksbruk, as the undertaking is likely to significantly impact the environment in these areas. Provided measures are taken, permission can be granted to all Natura 2000 areas. Such measures may also maintain a favourable conservation status for species covered by the Species Protection Ordinance.

### **The undertaking at Clab and Clink can be allowed**

The Land and Environmental Court finds that the proposed undertaking at Clab and Clink in Oskarshamn may be permitted under the Environmental Code.

## **Certain legislative changes should be considered**

Before giving permission, the government should consider whether a legislative amendment is needed regarding the time limit for water management. Giving the Swedish Radiation Safety Authority (SSM) a stronger standing in the evaluation of permit issues under the Environmental Code by according the Authority the right to plead cases and an opportunity to call for revocation of decisions, should also be considered.

### **1.3 The environmental impact assessment can be approved**

The report on public consultations is sufficiently comprehensive and its contents have been taken into account in the preparation of the environmental impact assessment. The international consultation required under the Espoo Convention also meets the set demands. The environmental impact statement contains a sufficient account of alternative sites, designs\* and materials, and fulfils, together with other documentation in the application, the requirements set out in the Environmental Code. Consequently, the content of the environmental impact assessment, with supplements, has sufficed to be used as a basis for the assessment of the Land and Environmental Court.

### **1.4 The burden of proof is exacting**

Final disposal of spent nuclear fuel requires very comprehensive measures to protect human health and the environment. The burden of proof placed on the applicant is therefore exacting. This means that the requirements for SKB's investigation are far-reaching, but not so demanding that it can be considered unreasonable to fulfil them.

When making an assessment according to the Environmental Code's General Rules of Consideration, it is advisable to seek guidance in the legislation that applies to nuclear activities. The investigation supporting the application shall demonstrate that the risk criterion specified in SSM's regulations is not exceeded for a period of 1,000 years and 100,000 years, respectively, as well as beyond. The risk criterion is set out in Section 5 of the regulation SSMFS 2008:37.

A comprehensive risk assessment presumes a full investigation that demonstrates the safety of the final repository for 1,000 years after closure. In the opinion of the Land and Environmental Court, however, no full investigation of the risks of leakage and the spread of radioactivity in the environment after 100,000 years or longer can be required. It is reasonable that certain uncertainties about the repository's protective capability in the long term may be accepted. Taken together, the uncertainties cannot be significant in relation to the risk criterion, but uncertainties are acceptable if, in sum, they are small. The requirements set out for the investigation that supports the application must be met by the time of the assessment of permissibility under the Environmental Code. When assessing the long-term safety of the final repository, no consideration can be given to research and development to be undertaken after a decision on permissibility.

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\* [Editor's note: The Swedish judicial term "utformning" can also be translated as "method".]

## 1.5 Additional supporting evidence is required concerning the protective capability of the canister

### The canister

The canister has to enclose the nuclear waste for a very long; it is the final repository's primary safety function. The canister has a 50 mm thick copper shell with an insert of cast iron. The canister must withstand corrosion and mechanical stress.

The investigation on the capability of the canister is extensive and involves complex technical and scientific issues. These include groundwater chemistry, corrosion processes, as well as creep and hydrogen embrittlement (this latter affects the mechanical strength of the canister). The parties<sup>†</sup> disagree on several issues that are crucial to the final repository's long-term security.

The Land and Environmental Court considers the following uncertainties regarding the canister to be most important in the continued risk assessment:

1. *General corrosion due to reaction in oxygen-free water.* The parties have different views on scientific issues surrounding this kind of corrosion. The Court finds that there is considerable uncertainty on this topic that has not been taken account of in SKB's safety analysis.
2. *Local corrosion in the form of pit corrosion due to reaction with sulphide.* The Court finds that there is significant uncertainty regarding pit-corrosion due to reaction with sulphide. This uncertainty has not been included in the safety analysis. In addition, there is uncertainty about the sauna effect, which may have an amplifying effect on pit corrosion.
3. *Local corrosion in the form of stress corrosion due to reaction with sulphide.* The Court finds that there is significant uncertainty regarding stress corrosion due to reaction with sulphide. This uncertainty has not been included in the safety analysis. In addition, there is uncertainty about the sauna effect, which may have an amplifying effect on stress corrosion.
4. *Hydrogen embrittlement* is a process that affects the mechanical strength of the canister. The Court finds that significant uncertainty regarding hydrogen embrittlement remains. This uncertainty has not been taken account of in the safety analysis.
5. *The effect of ionizing radiation on pit corrosion, stress corrosion and hydrogen embrittlement.* There is significant uncertainty regarding ionizing radiation impact on pit corrosion, stress corrosion and hydrogen sprays. This uncertainty has been included to a limited extent in the safety assessment.

Overall, the Land and Environmental Court, finds that several uncertainties regarding the protective capability of the canister have not been taken account of in SKB's safety analysis.

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<sup>†</sup> [Editor's note: The Swedish judicial term "parter" means the different actors taking part in the case proceedings.]

## **The buffer and backfill**

The buffer around the canister and the backfill in the deposition tunnel will delay the spread of radioactive substances should the canister lose its containment capability. The buffer shall consist of bentonite, a fine-grained clay that swells when it absorbs water.

The main issues in this section relate to erosion of the buffer and backfill, the effect of chloride on the buffer, other transformative chemical processes related to bentonite, the effect of ionizing radiation, freezing of the buffer, and degradation of the concrete in the plug sealing the deposition tunnels.

The Land and Environmental Court finds that there are minor uncertainties regarding the erosion of the buffer and backfill, the effect of chloride on the buffer, and other transformative chemical processes. The uncertainties have been taken account of in SKB's safety analysis.

## **The bedrock**

The Land and Environmental Court agrees with SSM's assessment that it is reasonable to assume that the Forsmark area has low seismicity. In the safety analysis scenarios for shear loads, SKB has used an overestimation for the probability for the frequency of earthquakes and a conservative assumption that all zones are reactivated. In view of this, the Court concludes that uncertainty regarding the risks associated with earthquakes is low.

The Land and Environmental Court finds that the uncertainties are small in terms of the characteristics of the bedrock, the location and characteristics of the deformation zones, and the ability to adapt the deposition of canisters by, for example, observing respect distances for emplacement. The risk that conditions at repository depth are significantly worse than presumed is small, as the results from the site investigation gave a relatively consistent picture.

The Land and Environmental Court note that some of the uncertainties have not been taken account of in SKB's safety analysis; among these are coastal siting and the creation of a disturbed zone. These uncertainties, however, have only a minor significance in a comprehensive risk assessment.

## **Closure**

When the final disposal of nuclear waste canisters has been completed and the tunnels been closed, all other parts of the final repository shall be closed as well. During closure, the space needed for operations, from tunnels and central areas at a depth of about 470 meters will be filled up to ground level. The sealing function shall prevent unintended human intrusion and prevent the spread of radioactive substances, should the barriers in the final repository fail.

The Environmental Impact Assessment shows that closure has been studied at a more general level, and that how it will be implemented has not been specified, as the closure lies far into the future. The Land and Environmental Court is of the opinion that SKB's documentation on closure is sufficient to test permissibility, but further investigations will be required as the time of closure approaches.

The investigation shows that the closure is an important part of the final repository from the point of view of radiation safety. The general nature of the investigation of closure means that it is currently not possible to make any final assessments as to the protective measures that may be called for. The Land and Environmental Court presumes that these will be specified much later, when the closure work approaches. In the meantime technological development will occur.

These circumstances suggest that the issue of more specific requirements for closure shall be put to a probationary period for evaluation probationary period for evaluation probationary period for evaluation ‡ as allowed according to the Environmental Code.

### **Overall assessment of long-term radiation safety**

The opinion describes how the Land and Environmental Court has made a comprehensive assessment of the long-term safety of the final repository. The Court has largely used the following approach. The Court's assessment is based on the entire investigation. SKB's safety assessment is reported in SR-Site, which covers about 900 pages and is based on the findings of extensive documented investigation. According to SKB's safety analysis, the risk criterion set out in SSM regulations is met. In the evaluation of this conclusion, the material presented in the whole of the investigation was considered, that is, also the written submissions and testimony submitted in the hearings by opposing parties. The uncertainties found in the whole of the investigation were then compared to the uncertainties included in the results of SKB's safety analysis. If additional uncertainties have arisen, compared to those considered in SKB's analysis, an assessment was made as to whether the additional uncertainties are significant in relation to the assessment of whether the risk criterion has been met. Additional uncertainties that have only a minor significance in the assessment need not be considered.

Thus, the overall risk assessment may lead to the conclusion that the undertaking implies a risk of an impact on human health and the environment that may be acceptable, taking account of the uncertainties encountered in the investigation. The conclusion may likewise be that the uncertainties are so significant that the undertaking is not permissible.

The Land and Environmental Court assesses that there are no uncertainties regarding the buffer and the refill that have not been included in SKB's safety analysis. There have been some uncertainties regarding the bedrock that have not been included, but these are of minor significance in the total assessment. The uncertainties identified to date can be accepted in a comprehensive assessment.

The investigation presented shows, however, that there are uncertainties as to the extent to which the kinds of corrosion and processes listed in the five points above can impair the ability of the canister to contain the nuclear waste in the long term. Taken together, these uncertainties are significant and have not been fully taken account of in SKB's safety analysis.

The Land and Environmental Court considers that there is some room for accepting additional uncertainties. This is because SKB's safety analysis shows that there is a significant margin to the risk criterion set out in SSM's regulations. However, the uncertainties regarding corrosion and other processes are so serious that the Court cannot, based on SKB's safety analysis, conclude that the risk criterion is met. In light of a balanced evaluation of risk, as mandated in the Environmental Code, the current documentation does not provide sufficient assurance as to the long-term safety of the final repository.

The conclusion is, therefore, that the undertaking is permissible only if SKB presents evidence that shows that the repository is safe in the long term, even with regard to the protective capability of the canister. SKB should be given the opportunity to provide additional material on the issues reported in the section above relating to the canister.

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‡ [Editor's note: The Swedish judicial term "sättas på prövotid" means that a condition is added to a permit stating that an issue has to be solved within a given time period.]

In the view of the Land and Environmental Court, SKB should, at a minimum, report the following in the evaluation under the Environmental Code. There is a need for an investigation to allow a new deliberation regarding the uncertainties that have arisen regarding the protective capability of the canister. To the extent that uncertainties persist also thereafter, they need to be included in the overall safety assessment, as required by SSM's regulations. A new scenario that takes account of these uncertainties may be called for. Finally, a new calculated result of the entire safety assessment is required, which can be compared to the risk criterion. The Land and Environmental Court has no opinion as to what additional investigation may be needed regarding the protective capability of the canister and the long-term safety of the repository. SKB is responsible for the adequacy of the investigation submitted for the assessment of admissibility.

## **1.6 The localisation principle\* has been fulfilled**

### **Clab and Clink**

The expansion of Clab and the establishment of Clink are in line with the localisation principle and provisions regarding areas of national interest, environmental quality standards, protected areas, and preservation of species.

### **The final disposal facility**

A permit can be combined with conditions that specify the protective and precautionary measures needed to prevent harm or inconvenience to human health or the environment as a result of the construction of a new bridge over the cooling water duct, the filling of Söderviken, and storage of rock masses.

The filling of smaller bodies of water and diversion of groundwater causes significant damage to nature values in the area. Nitrogenous effluents in drainage water can impact the aquatic environment. The question is whether the proposed protection measures render the planned water management permissible with regard to the localisation principle, areas of national interest, environmental quality standards, Natura 2000 areas, and protected species. The Land and Environmental Court is of the opinion that although the undertaking is likely to have a significant impact on the Forsmark-Kallrigafjärden area, the national interest of final disposal of spent nuclear fuel and nuclear waste takes priority.

Land use for the repository is compatible with coastal areas and islands of national interest and does not imply a failure to fulfil environmental quality standards for the seawater north of Öregrund. Measures to compensate for nitrogen emissions are needed.

The Land and Environmental Court perceives a risk that the undertaking will significantly impact the environment in the Natura 2000 areas of Kallriga, Skaten-Rångsen, Storskäret and Forsmarksbruk. Therefore, permits are required for these Natura 2000 areas. Such a permit may be granted for all areas, provided that conditions for the necessary protective measures are specified. In addition, compensatory measures need to be taken.

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\* [Editor's note: The Swedish judicial term "lokaliseringsprincipen" means that the siting of an undertaking shall be made as to minimize intrusion and impact on human health and the environment.



The undertakings are not deemed to interfere with the maintenance of favourable conservation status for species covered by the Species Protection Ordinance, provided that conditions for protective measures are provided. In addition, compensatory measures need to be taken. The Land and Environmental Court also finds that the evidence in the case supports the conclusion that the affected species have been adequately studied. The Court notes, however, that future findings may call for additional requests for exemptions and protective measures.

## **1.7 Ancillary activity poses no obstacles**

Ancillary activity consists of transport by road and sea to and from the facilities. It has been shown in the case that the inconvenience caused by noise, vibration and atmospheric emissions that may arise from such activity does not exceed any noise levels, environmental quality standards or other threshold values that would bar its permissibility.

## **1.8 Conditions and probationary periods**

In deciding whether the undertakings may be permitted, the Court has weighed in proposed conditions and commitments. The court has not found reason to propose conditions for permissibility. The questions about conditions mainly raised by municipalities are handed over to the government for consideration.

In the event of a permit review, the Land and Environmental Court will have to give further consideration to the conditions and commitments to be required for a permit\*. SKB and SSM have expressed the view that conditions relating to radiation safety should not be prescribed in a permit under the Environmental Code. The Court finds that the evidence presented to date does not provide a sufficient basis on which to assess the issue.

The Land and Environmental Court recommends that consideration should be given to the possibility of instituting a probationary period for evaluating the closure and sealing of the final repository, and the issue of preservation of information. The reason for this is that the investigations presented to date on these issues is not sufficient to anticipate of the effects of the undertakings. During the probationary period SKB should look further into what safety measures and other precautionary measures are required and determine whether such measures should be regulated as conditions under the Environmental Code.

The Land and Environmental Court finds that a number of uncertainties regarding the protective capability of the repository remain outstanding. The investigation of radiation safety issues to date shows that the effects of the undertakings cannot be predicted with enough certainty to permit the formulation of any final conditions. There may therefore be a need to provide for a probationary period for evaluation under the Environmental Code. However, further investigation and deliberation are necessary. The Court would like to emphasize that the study of the rock formation at Forsmark, for example, leaves ambiguities that may justify a probationary period for evaluation for the determination of conditions regarding respect distances or other precautionary measures.

The questions about probationary periods for evaluation need to be discussed further in an eventual permit review.

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\* [Editors note: The court here refers to the continued review for a permit after the government has given permission.]

The Land and Environmental Court currently has no objections to SKB's proposal of for an probationary period for evaluation of the energy savings in Clink.

## **1.9 Issues of control\* require further attention**

### **Radiation safety**

On issues relating to radiation safety SKB makes reference to an environmental monitoring program for the nuclear facilities. The investigation of radiological emission control is limited. No conditions have been proposed for radiological emission control or long-term radiation safety.

The Land and Environmental Court recommends that an in-depth discussion of issues relating to control of radiation safety before and after closure of the final repository be undertaken in conjunction with an eventual permit review. Such issues include, for example, radiological emission control and control of the saturation of the buffer and possible intrusion of oxygen into tunnels.

In conjunction with an eventual permit review, consideration should be given to whether the permit under the Environmental Code should include more detailed provisions regarding control during the construction and operation of Clab and Clink and the final disposal facility. Possible authorization of the regulatory authority, SSM, to provide detailed rules for control may also be considered at that time.

The issue of information preservation after closure is important in a review under the Environmental Code. An eventual permit review should require further investigation of measures needed for long-term information preservation. The Land and Environmental Court tentatively recommends that the issue be put under a probationary period for evaluation.

### **Groundwater diversion**

Control of groundwater issues, including injection and infiltration into wetlands to protect the high nature values involved, needs to be given priority. Extensive control measures are needed over a long period of time, probably even after the final repository has been closed. The issue should be further addressed in conjunction with an eventual permit review.

## **1.10 Some amendments to the law should be considered**

### **Time limit for water management**

The Land and Environmental Court recommends that the government, before giving permission, consider whether a change in the legislation regarding the time limit for water management is necessary.

SKB has applied for a permit for the diversion of groundwater from the final repository during the period up to closure. A permit for such measures specifies a time limit, i.e., the period in which the management affecting water must be carried out. The term may not exceed 10 years, with the option of extending the period by no more than ten years. The Land and Environmental

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\* [Editor's note: The Swedish term "kontroll" is used in judicial contexts to mean both control and surveillance.]

Court finds that the period in this case is considerably longer than the period the law accommodates. This is due to the fact that groundwater diversion devices need to be installed successively, as work on the tunnels progresses. Current law does not provide for time limits for the expansion of groundwater diversion facilities over a period of about 50 years.

The Land and Environmental Court does not consider the long period a fundamental obstacle to allowing the undertaking. However, the problem of applying the provisions regarding time limits need to be resolved. A legislative amendment should therefore be considered.

### **A stronger position for SSM in cases heard under the Environmental Code**

The Land and Environmental Court recommends that giving SSM the right to be plead cases provided for in Chapter 22, Section 6 of the Environmental Code, and the authority to apply for re-evaluations pursuant to Chapter 24, Section 7 of the Environmental Code should be considered.

The final repository for nuclear waste requires permits under both the Environmental Code and the Nuclear Activities Act. SSM handles applications under the Nuclear Activities Act and is responsible for a continued stepwise processing following an eventual decision for a permit by the government according to the Nuclear Activities Act. The parties' discussion of the parallel reviews raises the question of SSM's ability to take actions under the Environmental Code. The issue is related to the fact that it will take approximately 70 years for the final repository for nuclear fuel waste to take form.

Technical development continues in many environmental areas. In many countries extensive research and development work regarding the final disposal of nuclear waste is in progress. Further amendments to the environmental legislation may be expected. The site and surrounding conditions in Forsmark, including animal and plant life, may change over the 70 years in which the work will be under way.

The conditions applied to the undertaking may well turn out to be inadequate, even after the emplacement of the canisters has been going on for a short while. This may apply to conditions regarding radiation safety concerns or other upsets. With regard to radiation safety requirements, SSM has strongly emphasized the possibility to adapt the requirements in response to new knowledge and experience that the continued stepwise review under the Nuclear Activities Act allows.

The Environmental Code contains provisions that can be applied to issues that are prerequisites for the continuation or termination of undertakings that may arise out of technological development, new legislation, new jurisprudence, environmental changes or other developments. The Environmental Code, Chapter 24, contains provisions for the re-evaluation of permits and conditions for undertakings. The provisions of Chapter 24 give scope for adapting permits in response to changes, if necessary. There are also provisions for revocation of licenses and termination of on-going undertakings.

SSM is not empowered to initiate revocation of a permit or re-evaluation of conditions under Chapter 24 of the Environmental Code. Even though a permit might not involve detailed conditions regarding radiation safety, in the span of 70 years a need to change the provisions and conditions of a license cannot be ruled out. Revocation of a permit or modification of conditions may be closely linked to regulatory decisions in a permit according to the Nuclear Activities Act and what is brought to light in a continued stepwise review under SSM's auspices. The Land and Environmental Court recommends that empowering SSM to apply for re-evaluation under Chapter 24, Section 7 of the Environmental Code should be considered.

In addition SSM does not have the right to plead cases under Chapter 22, Section 6 of the Environmental Code, although some other government authorities do. This seems to mean that SSM cannot appeal permits that include conditions for the undertaking. SSM has an important role in licensing nuclear facilities under the Environmental Code. Giving SSM the right to plead cases under Chapter 22, Section 6 of the Environmental Code should therefore be considered.

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Judges Anders Lillienau, chairperson, and Monica Daoson, technical councillors Jan-Olof Arvidsson and Ingrid Johansson and special members Agneta Melin and Mikael Lif participated in the opinion. The opinion is unanimous.