

European Spallation Source ERIC  
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Your reference: John Womersley  
Reference No.: SSM2016-1980  
Document No.: SSM2016-1980-64  
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## Permit

### The Swedish Radiation Safety Authority's decision

The Swedish Radiation Safety Authority (SSM) gives European Spallation Source ERIC (ESS), organisation number 768200-0018, a permit to acquire, possess, install and import technical devices intended to generate ionising radiation, in order to construct and operate a spallation facility within the property of Östra Odarslöv 13:5 in Lund municipality. The permit includes the accelerator, klystron and target buildings.

The permit replaces the existing permit SSM2015-3112, dated 17<sup>th</sup> September 2015.

### Conditions

1. In addition to applicable provisions in law or other regulations, the conditions set out in two attachments to the review report (see Appendix 1) shall apply to the ESS facility, until SSM announces otherwise.
2. ESS shall provide the more detailed documentation required before installation for the waste building and for neutron scattering systems (NSS) at a later stage in the incremental licensing process, in order to be able to handle radiation sources and so the installation of a technical device may be allowed.
3. The installation work decided on may only begin once SSM has received and reviewed
  - accounts according to sections 11.2 of Appendix 1 (safety classification; conditions C8 - C10, Chapter 4 of the appendix to the conditions); and
  - accounts according to section 14.1 of Appendix 1 (Digital governance and control systems with a significant influence on radiation safety; Conditions D3 and B2 d, Chapter 8 of the appendix to the conditions).
4. The written commitments that ESS has presented in its application and in the additional information shall be followed by the consortium. If ESS needs to implement changes to its commitments, these shall be notified to and reviewed by SSM before they may be carried out.
5. Additional information to the three upcoming trial operation stages (trial operation of the warm part of the accelerator, trial operation of the entire accelerator, and trial operation with intentional neutron production) identified by SSM in Appendix 1 shall be presented by ESS prior to the relevant trial operation application.

6. ESS shall submit specific accounts for the area *Radioactive Waste, Decommissioning and Costs*. No later than 29<sup>th</sup> September 2017, ESS shall present an action plan of the additional information identified by SSM in sections 9.1 - 9.3 of the review report (Appendix 1). The action plan shall contain time-limited and specified measures to rectify the deficiencies prior the application for trial operation with intentional neutron production. ESS will then report how the management of the planned measures is progressing to SSM on a quarterly basis, until the application is submitted.
7. The facility may be put into trial operations only after SSM has issued a permit for the relevant trial operation.
8. The facility may be put into routine operation only after SSM has issued a permit to do so.

## The Case

In May 2016, ESS submitted an application in accordance with the Radiation Protection Act (1988:220) for a permit for installation of all parts of the research facility and trial operation of the first part of the accelerator, with a maximum beam energy of 75 MeV. In this stage of the licensing process, SSM has only reviewed *installation*. The application and additional information of this have been reviewed by the authority and are presented in a review report, see Appendix 1. The authority carries out an incremental licensing process, where this stage consists of *installation*, and the upcoming stages are *trial operations* and *routine operations*. For each of these stages, the authority may assess the need to divide the licensing process into several stages.

## The Reason for the Decision

This decision on a conditional permit has been made with the support of sections 20 and 26 of the Radiation Protection Act. The authority's review of the consortium's application with additional information (see Appendix 1) shows that SSM deems that ESS has the prerequisites to fulfil the requirements set in all areas of the review report, with the following exceptions:

- SSM deems that the accounts for the waste building and NSS are insufficient for the authority to be able to grant a permit for installation at this stage. SSM deems that ESS needs to develop the accounts for the waste building and NSS, and then return with a new application for installation for these parts of the facility (condition 2).
- SSM deems that ESS must carry out certain presentations related to specific chapters on safety classification and information security of digital governance and control systems before the installation work may begin (condition 3).
- SSM deems that ESS has not been able to demonstrate at present that they have the prerequisites to fulfil the requirements set in the area *Radioactive Waste, Decommissioning, and Costs*. However, SSM deems that the accounts are sufficient to decide on a permit for installation, provided that the waste building is not included in the permit and that ESS carries out the identified presentations (conditions 5 and 6).

This permit does not allow measures that generate ionising radiation or that radioactive substances are produced at the ESS facility. New or amended conditions may be decided during the validity period of the permit.

## How the Decision is Appealed

Appendix 2 describes how this decision can be appealed.

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The decision in this case has been taken by the Unit Manager, Helene Jönsson. Authority specialist Peter Frisk has been rapporteur. Senior Lawyer Ulf Yngvesson participated in the final processing.

### THE SWEDISH RADIATION SAFETY AUTHORITY

Helene Jönsson

Peter Frisk

### Appendices

1. Review of the application for a permit for practices with ionising radiation
2. How a decision is appealed

### For information

1. Ministry of the Environment and Energy
2. The Land and Environmental Court in Växjö

*ESS notes:*

*This permit was delivered together with two appendices and an email confirmation that are stored as separate documents:*

- SSM Permit for Installation Appendix 1 Review Report ESS-0121507
- SSM Permit for Installation Appendix 2 How to appeal ESS-0121508
- SSM Permit for Installation Email correspondence ESS-0121509