



Abteilung

**GENEHMIGUNGSVERFAHREN
ZWISCHENLAGERUNG / TRANSPORTE**

Ihr Zeichen

Ihre Nachricht vom

Mein Zeichen GE 4 - BfE - BfE873801/05#0013

Meine Nachricht vom

Bundesamt für die Sicherheit der nuklearen Entsorgung, 11513 Berlin

Via e-mail: hinel@mfvm.dk

**Ministry of Environment and Food of
Denmark**

Nature and Climate Adaption Department

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Information about the application for a licence pursuant to § 6 Atomic Energy Act for the storage of nuclear fuels beyond federal custody in the ESTRAL on-site interim storage facility in Rubenow

Dear Ms. Elmer,

By letter of 29 May 2019, EWN Entsorgungswerk für Nuklearanlagen GmbH (EWN), 17507 Lubmin, submitted the application for a licence pursuant to § 6 Atomic Energy Act (German: Atomgesetz; abbr.: AtG) for the storage of nuclear fuels beyond federal custody in the projected interim storage facility ESTRAL (Ersatztransportbehälterlager) on the premises of the EWN in Rubenow to the Federal Office for the Safety of Nuclear Waste Management.

According to the German Environmental Impact Assessment Act, the company is obliged to conduct an environmental impact assessment. The result of the environmental impact assessment is taken into account in the final licensing decision.

A rough assessment based on the currently available information and data has shown that the proposed activity is not likely to cause a significant adverse transboundary impact.

Please consider my information about the projects as a contribution to transparency. This is not a notification pursuant to Article 3 of the Espoo Convention.

EWN describes the project as follows:

Subject of the licence application is dry interim storage of spent nuclear fuel in 74 transport and storage casks in the new built interim storage facility ESTRAL on the premises of the EWN in Rubenow, including associated handling of the casks.



EWN as the owner and operator of the Greifswald NPP in Mecklenburg-Vorpommern and the Rheinsberg NPP in Brandenburg is responsible for dismantling of both these former NPPs as well as for the management of the radioactive waste and spent nuclear fuel originating from them.

The spent nuclear fuels to be stored in ESTRAL are enclosed in 74 transport and storage casks, which are presently stored in the interim storage facility for radioactive waste and spent fuel on the enclosed site of the former Greifswald NPP in the commune of Rubenow (Zwischenlager Nord, ZLN). Due to an amendment of security-related regulations for interim storage facilities in Germany, EWN has decided to construct the new interim storage facility ESTRAL for these 74 casks to meet the appropriate requirements.

The ESTRAL is projected to be erected directly northeast adjacent to the site of the existing storage facility ZLN on the premises of EWN within a separate enclosure. The site is located in the commune of Rubenow (district of Nonnendorf, cadastal section 1, plot 58/34) in the federal state of Mecklenburg-Vorpommern.

The storage building will be constructed as a monolithic structure of reinforced concrete with a wall thickness of 1,8 m, in a length of 135 m, width of 65 and height of 25 m. It contains a storage area, a receiving area and a maintenance area. The transport and storage casks will be stored upright in the storage area (ca. 80 m long, ca. 35 m wide). The removal of the decay heat emanating from the fuel elements will take place via supply and exhaust air openings of the storage hall independently of technical systems via passive natural ventilation. The transport and storage casks are sealed with a screwed double-lid seal system. To monitor the tightness of the double-lid seal system, each transport and storage cask is equipped with a mechanical pressure switch, which will be connected to the cask monitoring system of the ESTRAL interim storage facility.

The following maximum values referring to the ESTRAL will not be exceeded during the storage:

- Mass of heavy metal: "585,4 Mg"
- Total activity: " $5,0 \times 10^{18}$ Bq"
- Thermal release: "400 kW"

The content of the 74 loaded casks comprises spent fuel elements originating from the former NPPs of the PWR reactor types WWER-440 and WWER-70 in Rubenow and Rheinsberg in 65 transport and storage casks of the types CASTOR® 440/84, CASTOR® 440/84 mvK and CASTOR® KRB-MOX. Furthermore, vitrified residues from the vitrification facility in Karlsruhe (VEK) in five transport and storage casks of the type CASTOR® HAW 20/28 CG and furthermore spent nuclear fuels from the Karlsruhe Sodium-cooled Reactor (KNK II) and from the nuclear ship "Otto Hahn" in four transport and storage casks of the type CASTOR® KNK are to be stored in ESTRAL. All these cask types have a type B(U) package design approval for the transport of fissile materials on public roads.



The nuclear fuel will be stored in the transport and storage casks in ESTRAL for a period of max. 40 years, starting at the time of closure of the primary lid after cask loading. The 74 casks were loaded and closed between 1996 and 2011. The content of the casks shall remain unaltered during storage in ESTRAL and opening of the casks is not intended. Discharges of radioactive materials into the environment via water are not intended, and discharges via exhaust air can occur in a minor extent.

Furthermore, the licence application includes the handling of other radioactive materials used for test and maintenance purposes in ESTRAL or, respectively, arising as operational radioactive waste.

You can view the documents relating to the project ESTRAL of EWN as far as by now available – only in German - on the website of the EWN (<https://www.ewn-gmbh.de/projekte/estral/dokumente/>).

Yours sincerely,
for the Federal Office for the Safety of Nuclear Waste Management,


Michael Schwerdtfeger