



GNS Gesellschaft für Nuklear-Service mbH · Postfach 10 12 53 · 45012 Essen

Document Control Desk
Director, Division of Fuel Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
USA

Our reference: T1213-CO-00009
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Date: 06/07//2021

Subject: Application for 10 CFR 72 Approval for the CASTOR® geo69 Spent Nuclear Fuel Dry Storage System (Docket No. 72-1052)

Reference: Summary of Meeting with NRC staff held September 11, 2019 (ADAMS Accession No. ML20027A674)

As announced in the above-referenced pre-application meeting, GNS Gesellschaft für Nuklear-Service mbH is submitting an application requesting NRC approval of its CASTOR® geo69 spent fuel dry storage system in accordance with 10 CFR 72, Subpart L. This application is based on the enclosed "Safety Analyses Report (SAR), Dry Storage System CASTOR® geo69" (GNS Report number 1014-SR-00002), Revision 0.

The enclosed SAR fulfills the requirements of §72.230. For format and content of the SAR, GNS has followed the requirements set forth in Regulatory Guide 3.61 "Standard Format and Content of a Topical Safety Analysis Report for Spent Fuel Storage Cask" Revision 0 and taking into account NRC's periodic review conducted in July 2019. GNS also recognizes the NRC's current guidance for spent fuel transportation package applications, available in NUREG-2215, "Standard Review Plan for Spent Fuel Dry Storage Systems and Facilities," which was published in April 2020. However, because NUREG-2215 was issued during the late stages of the CASTOR® geo69 design development, some sections of the SAR are based on the previous guidance in NUREG-1536, "Standard Review Plan for Spent Fuel Dry Storage Systems at General License Facility" (and applicable Interim Staff Guidance). The guidance in NUREG-2215 was considered to the extent practical within the constraints of the project schedule.

The CASTOR® geo69 DSS is intended to be used for storage of up to 69 high burnup BWR fuel assemblies in a double containment package design. In doing so, the inner containment is formed by a canister based design using a multiple re-openable closure, while the outer containment consists of the well-known CASTOR® cask design.

The CASTOR® geo69 DSS SAR contains certain information that is proprietary, confidential and a trade secret to GNS. Therefore, this application includes a non-proprietary version of the SAR

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Daniel Oehr (Chairman)
Dr.-Ing. Jens Schröder

NM5520
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together with an affidavit prepared pursuant to 10 CFR 2.390 providing the basis for withholding of the GNS-proprietary information from public disclosure.

Also enclosed to this letter is a copy of the document "VDI 2230, Part 1; Systematic calculation of highly stressed bolted joints, Joints with one cylindrical bolt. Version 11/2015" which is referenced in the SAR. Copyright holder regulations require that this copy be sent by GNS to NRC for review purposes only and must be returned following the review. Publication of the document is not permitted.

In order to meet the needs of our clients, GNS requests approval of this package design by September 30, 2022.

Should the NRC staff require additional information to support review of this application, please do not hesitate to contact Mr. Dominik Bussmann at +49 201 109 1891, or by email at dominik.bussmann@gns.de.

Sincerely,

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GNS Gesellschaft für Nuklear-Service mbH

Dr.-Ing. Jens SCHRÖDER
- Chief Technology Officer (CTO) -

Dr.-Ing. Rainer NÖRING
- Divisional Director of Cask Projects -

- Enclosure 1: Affidavit Pursuant to 10 CFR 2.390
- Enclosure 2: SAR 1014-SR-00002 Rev. 0, Proprietary Version
- Enclosure 3: SAR 1014-SR-00002 Rev. 0, Non-Proprietary Version
- Enclosure 4: VDI 2230, Part 1, Version 11/2015

AFFIDAVIT

PURSUANT TO 10 CFR 2.390

I, Dr.-Ing. Jens SCHRÖDER, depose and say that I am the Chief Technology Officer (CTO) of GNS Gesellschaft für Nuklear-Service mbH (a company duly organized under the German Law, having its seat at Frohnhauser Strasse 67, 45127 Essen, Germany), duly authorized to execute this affidavit.

I, Dr.-Ing. Rainer NÖRING, depose and say that I am Divisional Director of Cask Projects of GNS Gesellschaft für Nuklear-Service mbH (a company duly organized under the German Law, having its seat at Frohnhauser Strasse 67, 45127 Essen, Germany), duly authorized to execute this affidavit.

We, Dr.-Ing. Jens SCHRÖDER and Dr.-Ing. Rainer NÖRING, have reviewed or caused to have reviewed the information which is identified as confidential and referenced in the paragraph below. We are submitting this affidavit in conformance with the provisions of 10 CFR 2.390 of the Commission's regulations for withholding this information.

The information sought to be withheld from public disclosure is contained in Enclosure 2 of T1213-CO-00009 and is listed below:

- Safety Analyses Report (SAR), Dry Storage System CASTOR® geo69, GNS Report number 1014-SR-00002, Revision 0, Docket 72-1052, Proprietary Version

This document has been appropriately designated as proprietary.

We have personal knowledge of the criteria and procedures utilized by GNS Gesellschaft für Nuklear-Service mbH in designating information as a proprietary trade secret, privileged or as confidential commercial or financial information.

Pursuant to the provisions of paragraph (b) (4) of Section 2.390 of the Commission's regulations, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure, included in the above referenced document, should be withheld.

- (1) The information sought to be withheld from public disclosure involves certain design details associated with the SAR analyses and SAR drawings of the CASTOR® geo69 dry storage system design, which are owned and have been held in confidence by GNS Gesellschaft für Nuklear-Service mbH.
- (2) The information is of a type customarily held in confidence by GNS Gesellschaft für Nuklear-Service mbH and not customarily disclosed to the public. GNS Gesellschaft für Nuklear-Service mbH has a rational basis for determining the types of information customarily held in confidence by it.
- (3) The information is being transferred to the Commission in confidence under the provisions of 10 CFR 2.390 with the understanding that it is to be received in confidence by the Commission.
- (4) The information, to the best of our knowledge and belief, is not available in public sources, and any disclosure to third parties has been made pursuant to regulatory provisions or confidentiality agreements which provide for maintenance of the information in confidence.

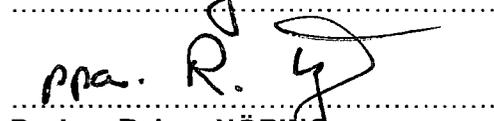
- (5) Public disclosure of the information is likely to cause substantial harm to the competitive position of GNS Gesellschaft für Nuklear-Service mbH because:
- (a) A similar product is manufactured and sold by competitors of GNS Gesellschaft für Nuklear-Service mbH.
 - (b) Development of this information by GNS Gesellschaft für Nuklear-Service mbH required expenditure of considerable resources. To the best of our knowledge and belief, a competitor would have to undergo similar expense in generating equivalent information.
 - (c) In order to acquire such information, a competitor would also require considerable time and inconvenience related to the development of a design and analysis of a cask for the dry storage and transport of spent nuclear fuel.
 - (d) The information required significant effort and expense to obtain the licensing approvals necessary for application of the information. Avoidance of this expense would decrease a competitor's cost in applying the information and marketing of the product to which the information is applicable.
 - (e) The information consists of design features, analyses methods and calculation results related to the design and analyses of a dry storage system of spent nuclear fuel, the application of which provide a competitive economic advantage. The availability of such information to competitors would enable them to modify their product to unfairly get a better competitive position with GNS Gesellschaft für Nuklear-Service mbH, take marketing or other actions to improve their product's position or impair the position of GNS Gesellschaft für Nuklear-Service mbH's product, while avoiding the expense of developing similar data and analyses in support of their processes, methods or apparatus.
 - (f) In pricing GNS Gesellschaft für Nuklear-Service mbH's products and services, significant research, development, engineering, analytical, licensing, quality assurance and other costs and expenses must be included. The ability of GNS Gesellschaft für Nuklear-Service mbH's competitors to utilize such information without similar expenditure of resources may enable them to sell at prices reflecting significantly lower costs.

Date: 07th June 2021


 Dr.-Ing. Jens SCHRÖDER
 - Chief Technology Officer (CTO) -

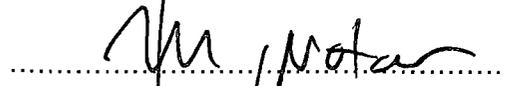
**GNS Gesellschaft für
 Nuklear-Service mbH**

Date: 07th June 2021


 Dr.-Ing. Rainer NÖRING
 - Divisional Director of Cask Projects -

**GNS Gesellschaft für
 Nuklear-Service mbH**

Subscribed and sworn to me before this ...7th... day of ...June..., 2021.


 Notary Public (Unterschrift des Notars)

Number 51 of Notary's Register of 2021

I herewith certify that the foregoing signatures are given by

**Dr.-Ing. Jens Schröder, born on 16.01.1969,
of known identity, and**

**Dr. Ing. Rainer Nöring, born on 27.11.1968,
of known identity,**

**both with their business address at
Frohnhauser Str. 67, 45127 Essen.**

The signatures were given today in Frohnhauser Str. 67, 45127 Essen.

Obligatory Statement according to German law:

According to Sec. 3 Para. 1 S. 1 No. 7 German Notarisation Law the Notary Public asked the appearers whether he or any member of his firm had acted in the matter which is the subject of this instrument, except in a notarial capacity. The appearers replied in the negative.

Essen, June, 07, 2021

(Raape)
Notary Public

APOSTILLE

(Convention de La Haye du 5 octobre 1961)

1. **Country / Land:**
Federal Republic of Germany / Bundesrepublik Deutschland

This public document / Diese öffentliche Urkunde

2. **has been signed by / ist unterschrieben von**
Notary Public Sebastian Raape / Notar Sebastian Raape
3. **acting in the capacity of / in seiner Eigenschaft als**
Notary Public in Essen / Notar in Essen
4. **bears the seal / sie ist versehen mit dem Siegel**
of the Notary Public Sebastian Raape in Essen / des Notars Sebastian Raape in Essen

Certified / Bestätigt

5. at / in E s s e n 6. the / am 07 JUN 2021
7. by / durch the President of the Regional Court Essen /
die Präsidentin des Landgerichts Essen
8. No./ unter Nr. 91 E 1 / *SdL 1903/2021*
9. Seal / Stamp Siegel / Stempel: 10. Signature / Unterschrift:



Sebastian Raape
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Höckels