

July 16, 2019

U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852-2738

Attn: Document Control Desk

Subject: Submission of a Request to Amend the U.S. Nuclear Regulatory Commission  
Certificate of Compliance No. 1031 for the NAC International MAGNASTOR®  
Cask System

Docket No. 72-1031

- References:
1. U.S. Nuclear Regulatory Commission (NRC) Certificate of Compliance (CoC) No. 1031 for the NAC International MAGNASTOR Cask System, Amendment No. 7, Federal Register Docket ID NRC-2017-008, June 6, 2017
  2. MAGNASTOR Cask System Final Safety Analysis Report (FSAR), Revision 10, NAC International, January 2019

NAC International (NAC) hereby submits a request to amend Reference 1 as a supplement to the Amendment 8 request. This supplement requests making an editorial change to the maximum pellet diameter for hybrid assembly CE16H1 fuel in Reference 1, Technical Specification, Table B2-3 and Reference 2, Table 6.1.1-1 and Table 6.7.2-3. The pellet diameter presented in both References 1 and 2 is a nominal dimension of 0.3250 inch. The revised maximum nominal pellet diameter of hybrid assembly CE16H1 would therefore be 0.3255 inch, which is the maximum pellet diameter when the upper manufacturing tolerance of 0.0005 inch is applied to the nominal value of 0.3250 inch. The following provides the necessary historical and technical basis for the change

**Historical and Technical Basis:**

Portions of NAC Calculation 71160-6001, Revision 0, were submitted as supporting documentation for the hybrid fuel types to be stored in the MAGNASTOR Cask System. This was provided as a supplement to NAC's response to the first round of NRC Requests for Additional Information (RAIs) (ML053610194) and detailed the development of the hybrid fuel assemblies. As shown in Table 6.3-1 therein, the maximum pellet diameter was documented as 0.3250 inch for hybrid assembly CE16H1. This was ultimately the maximum nominal pellet outer diameter that was incorporated into Reference 1.

As discussed on Page 62 of calculation 71160-6001 which was provided in the supplement, detailed evaluations on lattice parameter variations within each hybrid, including manufacturing tolerances on the nominal fuel characteristics, are discussed in Appendix D. The results of these evaluations were part of the responses to the first round of RAIs and were placed in the Safety Analysis Report (SAR) as Table 6.7.2-3, "PWR Lattice Parameter Reactivity Study (Increased Variance)."

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Appendix D evaluated a maximum pellet outer diameter variation for CE16H1 from 0.3255 inch to 0.3245 inch. The result is documented as “Case 2 to Case 4” in SAR Table 6.7.2-3, which found the resulting change in  $k_{eff}$  to not be statistically resolvable within a two or three sigma uncertainty level as discussed in SAR Section 6.7.2. Appendix D documents the results in Table D.1.2, “PWR Lattice Parameter Reactivity Study (Toleranced/Adjusted Characteristics).” The basis for studying a variation from 0.3255 inch to 0.3245 inch was the application of a manufacturing tolerance of 0.0005 inch, which is found in Table 4.1-1 of calculation 71160-6001.

NAC acknowledges that Appendix D was not explicitly provided nor was Table 4.1-1. However, the final results were provided and included in the SAR. Thus, NAC is considering this request to change the maximum nominal pellet outer diameter for hybrid assembly CE16H1 to 0.3255 inch to be editorial. The description of the technical information used and the final results justifying this change were previously provided to the NRC as part of the original approval of MAGNASTOR. For the sake of clarity, NAC has provided excerpts from calculation 71160-6001, Revision 0, to fully document the technical basis. Specifically, Table 4.1-1 and Appendix D.1, “PWR Fuel Characteristics Evaluation.”

Consistent with NAC administrative practice, this proposed FSAR revision is numbered to uniquely identify the applicable changed pages. Revision bars mark the FSAR text changes on the Revision 19A pages (Enclosure 3). The included List of Changes (Enclosure 3) identifies the revision level of all pages in the Reference 2 FSAR with Revision 19A incorporated. Enclosure 2 contains the proposed Technical Specification changes for this amendment. In order to better facilitate the review process, NAC is providing the Revision 19A changed pages with appropriate backing pages. In accordance with NAC’s administrative practices, upon final acceptance of this application, the 19A changed pages will be reformatted and incorporated into the next revision of the MAGNASTOR FSAR.

If you have any comments or questions, please contact me on my direct line at 678-328-1236.

Sincerely,



Wren Fowler  
Director, Licensing  
Engineering

Enclosures:

Enclosure 1 – Excerpts from NAC Calculation 71160-6001, “NewGen Transfer and Storage Criticality Analysis”, Revision 0

Enclosure 2 - Proposed Changes for MAGNASTOR FSAR Technical Specifications, Amendment 8

Enclosure 3 - List of MAGNASTOR FSAR Changes, 19A

Enclosure 4 - FSAR Changed Pages and LOEP – 19A

**NAC INTERNATIONAL**  
**AFFIDAVIT PURSUANT TO 10 CFR 2.390**

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George Carver (Affiant), Vice President, Engineering and Licensing, of NAC International, hereinafter referred to as NAC, at 3930 East Jones Bridge Road, Norcross, Georgia 30092, being duly sworn, deposes and says that:

1. Affiant has reviewed the information described in Item 2 and is personally familiar with the trade secrets and privileged information contained therein, and is authorized to request its withholding.
2. The information to be withheld includes the following NAC Proprietary Information that is being provided to support the technical review of NAC's Request for a Certificate of Compliance (CoC) (No. 1031) for the NAC International MAGNASTOR Cask System.
  - Enclosure 1 - Excerpts from NAC Calculation 71160-6001 Revision 0, NewGen Transfer and Storage Criticality Analysis
  - Enclosure 4 - FSAR Changed Pages and LOEP – 19A, – Proprietary Version

NAC is the owner of the information contained in the above documents. Thus, all of the above identified information is considered NAC Proprietary Information.

3. NAC makes this application for withholding of proprietary information based upon the exemption from disclosure set forth in: the Freedom of Information Act ("FOIA"); 5 USC Sec. 552(b)(4) and the Trade Secrets Act; 18 USC Sec. 1905; and NRC Regulations 10 CFR Part 9.17(a)(4), 2.390(a)(4), and 2.390(b)(1) for "trade secrets and commercial financial information obtained from a person, and privileged or confidential" (Exemption 4). The information for which exemption from disclosure is herein sought is all "confidential commercial information," and some portions may also qualify under the narrower definition of "trade secret," within the meanings assigned to those terms for purposes of FOIA Exemption 4.
4. Examples of categories of information that fit into the definition of proprietary information are:
  - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by competitors of NAC, without license from NAC, constitutes a competitive economic advantage over other companies.
  - b. Information that, if used by a competitor, would reduce their expenditure of resources or improve their competitive position in the design, manufacture, shipment, installation, assurance of quality or licensing of a similar product.
  - c. Information that reveals cost or price information, production capacities, budget levels or commercial strategies of NAC, its customers, or its suppliers.
  - d. Information that reveals aspects of past, present or future NAC customer-funded development plans and programs of potential commercial value to NAC.
  - e. Information that discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information that is sought to be withheld is considered to be proprietary for the reasons set forth in Items 4.a, 4.b, and 4.d.

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5. The information to be withheld is being transmitted to the NRC in confidence.
6. The information sought to be withheld, including that compiled from many sources, is of a sort customarily held in confidence by NAC, and is, in fact, so held. This information has, to the best of my knowledge and belief, consistently been held in confidence by NAC. No public disclosure has been made, and it is not available in public sources. All disclosures to third parties, including any required transmittals to the NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements, which provide for maintenance of the information in confidence. Its initial designation as proprietary information and the subsequent steps taken to prevent its unauthorized disclosure are as set forth in Items 7 and 8 following.
7. Initial approval of proprietary treatment of a document/information is made by the Vice President, Engineering, the Project Manager, the Licensing Specialist, or the Director, Licensing – the persons most likely to know the value and sensitivity of the information in relation to industry knowledge. Access to proprietary documents within NAC is limited via “controlled distribution” to individuals on a “need to know” basis. The procedure for external release of NAC proprietary documents typically requires the approval of the Project Manager based on a review of the documents for technical content, competitive effect and accuracy of the proprietary designation. Disclosures of proprietary documents outside of NAC are limited to regulatory agencies, customers and potential customers and their agents, suppliers, licensees and contractors with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.
8. NAC has invested a significant amount of time and money in the research, development, engineering and analytical costs to develop the information that is sought to be withheld as proprietary. This information is considered to be proprietary because it contains detailed descriptions of analytical approaches, methodologies, technical data and/or evaluation results not available elsewhere. The precise value of the expertise required to develop the proprietary information is difficult to quantify, but it is clearly substantial.
9. Public disclosure of the information to be withheld is likely to cause substantial harm to the competitive position of NAC, as the owner of the information, and reduce or eliminate the availability of profit-making opportunities. The proprietary information is part of NAC’s comprehensive spent fuel storage and transport technology base, and its commercial value extends beyond the original development cost to include the development of the expertise to determine and apply the appropriate evaluation process. The value of this proprietary information and the competitive advantage that it provides to NAC would be lost if the information were disclosed to the public. Making such information available to other parties, including competitors, without their having to make similar investments of time, labor and money would provide competitors with an unfair advantage and deprive NAC of the opportunity to seek an adequate return on its large investment.

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STATE OF GEORGIA, COUNTY OF GWINNETT

Mr. George Carver, being duly sworn, deposes and says:

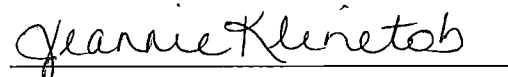
That he has read the foregoing affidavit and the matters stated herein are true and correct to the best of his knowledge, information and belief.

Executed at Norcross, Georgia, this 16<sup>th</sup> day of July, 2019.



George Carver  
Vice President, Engineering and Licensing  
NAC International

Subscribed and sworn before me this 16<sup>th</sup> day of July, 2019.



Notary Public

