

September 12, 2018

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

Attn: Document Control Desk

Subject: Submission of NAC International MAGNASTOR Cask System Thermal Performance Test Data Satisfying the Requirements of Certificate of Compliance, Appendix A, Section 5.6

Docket No. 72-1031

- References:
1. NRC Certificate of Compliance (CoC) No. 1031 for the NAC International MAGNASTOR Cask System, Amendment No. 7, Federal Register Docket ID NRC-2017-008, July 21, 2017
 2. MAGNASTOR Cask System Final Safety Analysis Report (FSAR), Revision 9, NAC International, August 2017

NAC International (NAC) hereby submits test data, as required by Appendix A, Section 5.6 of Reference 1, which validates the thermal performance of the MAGNASTOR Cask System for heat loads greater than or equal to 30 kW.

The tests were performed on a prototypic high-heat test assembly. Heat input for the test was at 35 kW. The test assembly was instrumented to provide direct measurement of air velocity in the test fixture inlet which was used to calculate the system mass flow rates. In addition, the test assembly instrumentation was used to measure the outer canister shell temperatures, and inner concrete cask liner temperatures. A summary report that provides a comparison between the thermal test results from Enclosure 2 and calculation results from Enclosure 3 is provided in Enclosure 1

Based on NAC's evaluation of the data in Enclosure 1 and 3 and this submittal, herewith, to the NRC, the requirements of Reference 1, Appendix A, Section 5.6 have been satisfied and NAC customers may now load MAGNASTOR Cask Systems up to the design basis heat load of 35.5 kW by referencing this submittal.

This submittal includes one proprietary and non-proprietary version of this submittal package. Attached to this letter is a signed affidavit requesting all proprietary information be withheld from public disclosure via 10 CFR 2.390.

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

Sincerely,



Wren Fowler
Director, Licensing
Engineering

Attachments:

Attachment 1 – NAC International Affidavit Pursuant 10 CFR 2.390

Enclosures:

Enclosure 1 – 71160-R-03, “MAGNASTOR Thermal Test Report,” Rev. 0

Enclosure 2 – SAND2018-5363, “Thermal-Hydraulic Results for the MAGNASTOR High-Heat
Assembly: Primary Configuration,” May 2018

Enclosure 3 – 71160-3161, “Validation of CFD Mass Air Flow Calculations for MAGNASTOR
Systems with SANDIA Thermal Test Program,” Rev. 0

NAC INTERNATIONAL
AFFIDAVIT PURSUANT TO 10 CFR 2.390

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 satisfy the requirements of Certificate of Compliance (CoC) (No. 1031), Appendix A, Section 5.6, for the NAC International MAGNASTOR Cask System.
 - 71160-R-03, "MAGNASTOR Thermal Test Report," Rev. 0
 - SAND2018-5363, "Thermal-Hydraulic Results for the MAGNASTOR High-Heat Assembly: Primary Configuration," May 2018
 - 71160-3161, "Validation of CFD Mass Air Flow Calculations for MAGNASTOR Systems with SANDIA Thermal Test Program," Rev. 0

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.

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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.

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.

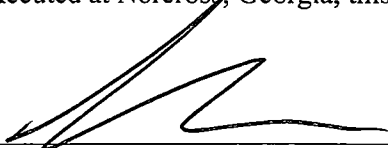
NAC INTERNATIONAL
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STATE OF GEORGIA, COUNTY OF GWINNETT

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.

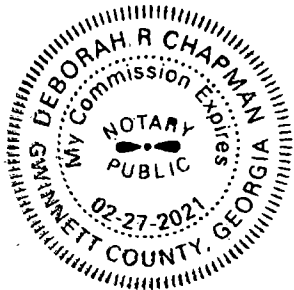
Executed at Norcross, Georgia, this 12th day of September, 2018.



George Carver
Vice President, Engineering and Licensing
NAC International

Subscribed and sworn before me this 12th day of September, 2018.

Deborah R. Chapman
Notary Public



Enclosure 1 to ED20180085
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Enclosure 1

71160-R-03, "MAGNASTOR Thermal Test Report," Rev. 0

Enclosure 1 withheld in its entirety per 10 CFR 2.390

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Enclosure 2

SAND2018-5363, "Thermal-Hydraulic Results for the MAGNASTOR High-Heat Assembly: Primary Configuration," May 2018

Enclosure 2 withheld in its entirety per 10 CFR 2.390

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Enclosure 3

**71160-3161, "Validation of CFD Mass Air Flow Calculations for
MAGNASTOR Systems with SANDIA Thermal Test Program," Rev. 0**

Enclosure 3 withheld in its entirety per 10 CFR 2.390