NAC INTERNATIONAL

Atlanta Corporate Headquarters
3930 East Jones Bridge Road, Suite 200
Norcross, GA 30092
Phone 770-447-1144
Fax 770-447-1797
www.nacintl.com

September 7, 2016

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

Attn: Document Control Desk

Subject: Supplement to Submission of Responses to NRC Request for Additional Information No. 2 for NAC's Request for an Amendment of Certificate of Compliance (CoC) No. 1031 for the 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. 5, June 29, 2015
2. MAGNASTOR Cask System Final Safety Analysis Report (FSAR), Revision 6, NAC International, August 2013
3. ED20150090, Submission of a Request to Amend the U.S. Nuclear Regulatory Commission Certificate of Compliance No. 1031 for the NAC International MAGNASTOR® Cask System, August 7, 2015
4. NRC Letter, Amendment Request No. 6 To Certificate of Compliance No. 1031 – Request for Additional Information No. 1 (TAC No. L25045), January 2, 2106
5. Submission of a NAC Responses to NRC's Request for Additional Information (RAI) to NAC's Request to Amend the U.S. Nuclear Regulatory Commission Certificate of Compliance No. 1031 for the NAC International MAGNASTOR® Cask System, April 15, 2016
6. Amendment Request No.7 to Certificate of Compliance No. 1031 – Request for Additional information No. 2 (CAC No. L24045), June 15, 2016
7. ED20160081, Submission of Responses to NRC Request for Additional Information No. 2 for NAC's Request for an Amendment of Certificate of Compliance (CoC) No. 1031 for the MAGNASTOR® Cask System, August 11, 2016

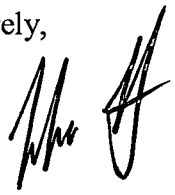
NAC International (NAC) hereby submits a revised response for what was submitted in Reference 7. NAC's revised response to the RAI can be found in attachment 1 to this letter.

NMSS26
NMSS

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

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

Sincerely,



Wren Fowler
Director, Licensing
Engineering

Attachment

Attachment 1 – Request for Additional Information No. 2 Supplemental Response

NAC INTERNATIONAL

NAC INTERNATIONAL
AFFIDAVIT PURSUANT TO 10 CFR 2.390

Kent S. Cole (Affiant), President and CEO, 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 an Amendment of Certificate of Compliance (CoC) (No. 1035) for the NAC International MAGNASTOR® Cask System.

   - ED20160084, Attachment 1 – Request for Additional Information No. 2 Supplemental Response

   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.

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
AFFIDAVIT PURSUANT TO 10 CFR 2.390

STATE OF GEORGIA, COUNTY OF GWINNETT

Mr. Kent S. Cole, 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 7th day of September, 2016.

Kent S. Cole
President and CEO
NAC International

Subscribed and sworn before me this 7th day of September, 2016.

Notary Public

Attachment 1

Request for Additional Information No. 2 Supplemental Response

September 2016

Chapter 4 Thermal Evaluation

NAC Response:

On July 6th and August 29th, 2016, the NRC and NAC conducted teleconferences to discuss the modeling methods chosen for evaluating the PMTC. As a result of the July 6th teleconference, it was concluded that NAC did not need to perform a sensitivity study for the transient condition. RAI 4.1, Item C, focuses on the PMTC air annulus flow in a steady state condition. The k-omega turbulent model for the PMTC annulus flow was used since the use of this turbulent model has its basis in Amendment 0, SER Section 4.3.4, for the normal condition of air annulus flow in the vertical concrete cask. Additionally, Amendment 0, SER Section 4.6 indicates that the staff concluded that the flow in the air annular gap is found to be in the transitional region of turbulence. This conclusion is based on the staff's validation, as well as NAC's validation reported in FSAR Section 4.8.3, which utilized a PWR based system with a lower heat load of 14.9 kW. Given the increased air gap for the PMTC and higher heat load (as compared to the 14.9 kW), the PMTC annulus flow is also concluded to be in a transitional region of turbulence. Thus, the use of the turbulent modeling technique for the vertical concrete cask is applicable to the PMTC.

Further justification of the acceptability of the k-omega turbulent model can be seen after observing the effects of changing from the k-omega turbulent model to a laminar flow model. The use of the k-omega turbulent model is preferred because the laminar model results in oscillatory behavior when the solution is converging even after 48,000 iterations. Typically at this level of iterations the oscillations are absent.

[redacted] Since the PCT allowable is 752°F, the use of the conservative laminar model confirms that the PCT is less than the PCT allowable even with the oscillatory behavior. Therefore, the use of the previously approved k-ω turbulent modelling technique for the vertical concrete cask is appropriate and the preferred method for evaluating the performance of the PMTC since it doesn't result is oscillatory behavior.