

April 9, 2018

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

Attn: Document Control Desk

**Subject:** Submission of Supplemental Responses to the NRC's Request for Additional to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transportation Package

Docket No. 71-9356

- Reference:**
1. ED20120129, Submission of an Application for the NRC Certificate of Compliance (CoC) for the NAC MAGNATRAN Transport Cask, NAC International, November 26, 2012
  2. Safety Analysis Report for the MAGNATRAN Transport Cask, Revision 12A, NAC International, October 2012
  3. ED20130024, Submission of NAC Proprietary Supporting Information for NAC's Application for a NRC Certificate of Compliance (CoC) for the NAC MAGNATRAN Transport Cask, February 15, 2013
  4. NRC Letter, Application for the Model No. MAGNATRAN Transport Package – Accepted for Review (TAC No. L24701), February 28, 2013
  5. ED20130037, Submission of NAC Responses to NRC's Initial Non-Proprietary Request for Additional Information to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transportation Package, March 29, 2013
  6. NRC Letter, Application for the Model No. MAGNATRAN Transportation Package – Request for Additional Information (RAI), September 10, 2013
  7. ED20140122, Submission of NAC Responses to NRC's Request for Additional Information to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transportation Package, December 1, 2014
  8. ED20150002, Submission of Supporting Information for NAC's Responses to the NRC's Request for Additional Information to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transport Package, January 13, 2015

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9. ED20150006, Submission of Supporting Information (METAMIC Metal Matrix Composites) for NAC's Responses to the NRC's Request for Additional Information to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transport Package, January 21, 2015
10. NRC Letter, Application for the Model No. MAGNATRAN Transportation Package – Request for Additional Information, June 2, 2015
11. NRC Letter, Application for the Model No. MAGNATRAN Transportation Package – Staggered Second Request for Additional Information, June 26, 2015
12. ED20150117, Submission of NAC Responses to NRC's Request for Additional Information to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transportation Package, October 15, 2015
13. NRC Letter, Application for the Model No. MAGNATRAN Transportation Package –Third Request for Additional Information, March 3, 2016
14. ED20160036, Submission of NAC Responses to NRC's Third Request for Additional Information to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transportation Package, May 9, 2016
15. NRC Letter, Application for the Model No. MAGNATRAN Transportation Package – Fourth Request for Additional Information, September 19, 2016
16. ED20160129, Submission of NAC Responses to NRC's Fourth Request for Additional Information to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transportation Package, January 11, 2017
17. ED20170003, Submission of Supporting Calculations for Responses to the NRC's Fourth Request for Additional Information to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transportation Package, January 13, 2017

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18. ED20170018, Submission of Replacement Pages for MAGNATRAN Transportation Package, SAR Revision 16B, February 2, 2017
19. NRC Memorandum, Summary of the July 25, 2017 Meeting With NAC International to Discuss the Proposed Application for the MAGNATRAN Transportation Package, August 10, 2017
20. ED20170095, Submission of Supplemental Responses to NRC's Fourth Request for Additional Information to NAC's Request for Certificate of Compliance (CoC) No. 9356 for the MAGNATRAN Transportation Package, October 6, 2017
21. NRC Letter, Model No. MAGNATRAN Transportation Package – Audit Report Issuance, March 29, 2018

NAC International (NAC) hereby submits supplemental RAI responses to action items discussed during the inspection held at the NAC offices on January 23<sup>rd</sup> through January 25<sup>th</sup>, as summarized in Reference 21. During the inspection, the NRC discussed technical concerns with the RAI responses regarding the thermal analyses provided in References 14, 16, and 20, respectively. This submittal responds to those actions items from the January 2018 inspection and supplements the RAI responses of References 14, 16, and 20.

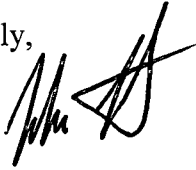
This submittal package includes one proprietary version, including this transmittal letter, attached affidavit (Attachment 1) and Enclosures 1 and 2. The proprietary information is labeled "NAC PROPRIETARY INFORMATION". In accordance with 10 CFR 2.390 this information it to be withheld from public disclosure.

Enclosure 1 contains the supplemental responses to the action items as described above. These responses are formatted in Requests for Additional Information (RAI) format. Enclosure 2 contains proprietary NAC calculations and reports used to support the responses.

Approval of the MAGNATRAN CoC is requested by June 30, 2018 in support of existing projects at decommissioned facilities. Upon approval, NAC will consolidate the submittals, Revisions 12A, 14A, 15A, 16A, 16B, 17A, and Supplement 2 (Reference 18) pages, into SAR Revision 0. If there are any questions and/or comments regarding the herewith submitted information, please contact me on my direct line at 678-328-1236.

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Sincerely,



Wren Fowler  
Director, Licensing  
Engineering

**Attachment:**

Attachment 1 – NAC International Affidavit Pursuant to 10 CFR 2.390

**Enclosures:**

- Enclosure 1 – Supplemental RAI Responses, No. 71-9356 for the MAGNATRAN Cask,  
MAGNATRAN SAR, 17A
- Enclosure 2 – Supporting Documentation, No. 71-9356 for the MAGNATRAN Cask,  
MAGNATRAN SAR, 17A

## **Attachment 1**

**NAC International Affidavit Pursuant 10 CFR 2.390**

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

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George Carver (Affiant), Vice President, Engineering and Licensing, 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. 9356) for the NAC MAGNATRAN Transport Package.
  - NAC Proprietary Supplemental RAI Responses, pages 1 thru 16
  - NAC Proprietary Documentation
    - NAC Proprietary Calculation 71160-3014, Revision 7 (Flash Drive 1of 1)
    - NAC Report, 71160-R-01, Revision 0

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

- 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.

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

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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.

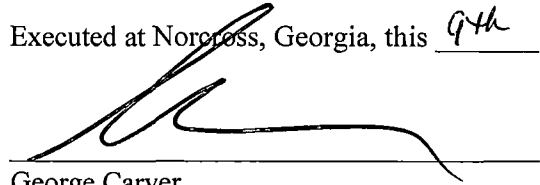
NAC INTERNATIONAL  
AFFIDAVIT PURSUANT TO 10 CFR 2.390

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 9<sup>th</sup> day of April, 2018.



George Carver  
Vice President, Engineering and Licensing  
NAC International

Subscribed and sworn before me this 9<sup>th</sup> day of April, 2018.



Notary Public





April 2018

Supplement to  
Revision 17A

# **MAGNATRAN**

(Modular Advanced Generation  
Nuclear All-purpose TRANsport)

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# **SAFETY ANALYSIS REPORT**

**NON-PROPRIETARY VERSION**

Docket No. 71-9356



**Enclosure 1**

**Supplemental RAI Responses**

**No. 71-9356 for the MAGNATRAN Cask**

**MAGNATRAN SAR, Revision 17A**

**NAC INTERNATIONAL  
SUPPLEMENTAL RESPONSE TO THE  
UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REQUEST FOR ADDITIONAL INFORMATION #4**

**January 2018**

**FOR REVIEW OF THE CERTIFICATE OF COMPLIANCE NO. 9356 REVISION NO. 0**

**(CoC NO. 9356, DOCKET NO. 71-9356)**

**April 2018**

RAI RESPONSES WITHHELD IN THEIR ENTIRETY PER 10 CFR 2.390

**Enclosure 2**

**Supporting Documentation**

**No. 71-9356 for the MAGNATRAN Cask**

**MAGNATRAN SAR, Revision 17A**

**Enclosure 2 Contents**

1. 71160-3014, Revision 7
2. 71160-R-01, Revision 0

CALCULATIONS WITHHELD IN THEIR ENTIRETY PER 10 CFR 2.390