



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 4, 2020

Mr. Wren Fowler
Director, Licensing
Engineering
NAC International
3930 East Jones Bridge Road, Suite 200
Norcross, GA 30092

SUBJECT: APPLICATION FOR AMENDMENT NO. 10 TO THE MODEL NO.
MAGNASTOR® STORAGE CASK – REQUEST FOR SUPPLEMENTAL
INFORMATION

Dear Mr. Fowler:

By letter dated December 9, 2019 (Agencywide Documents Access and Management System Accession No. ML19345E594), NAC International (NAC) submitted an application for Amendment No. 10 to the Model No. MAGNASTOR® storage cask. The application proposes to add a new metal storage overpack. Staff performed an acceptance review of your application to determine whether the application contains sufficient technical information in scope and depth to allow the staff to complete a detailed technical review.

This letter is to advise you that, based on our acceptance review, the application does not contain sufficient technical information. The information needed to continue our review is described as a request for supplemental information (RSI) in the enclosure to this letter. Please note that addressing this RSI does not preclude the staff from issuing further requests for additional information during the course of the detailed technical review of this application.

In order to schedule our technical review, the RSI response should be provided within 2 weeks from the date of this letter. If the RSI responses are not received by this date, the application may not be accepted for review and the staff may discontinue any further review.

Please reference Docket No. 72-1031 and Enterprise Project Identifier (EPID) No. L-2019-LLA-0273 in future correspondence related to this request.

Sincerely,

/RA/

Bernard H. White IV, Senior Project Manager
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 72-1031
EPID No. L-2019-LLA-0273

Enclosure

SUBJECT: APPLICATION FOR AMENDMENT NO. 10 TO THE MODEL NO. MAGNASTOR®
STORAGE CASK – REQUEST FOR SUPPLEMENTAL INFORMATION

DOCUMENT DATED: March 4, 2020

Electronic Distribution:

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ADAMS Accession No.: ML200064D467 *via email

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Request for Supplemental Information
Model No. MAGNASTOR® Storage System
Docket No. 72-1031

This request for supplemental information (RSI) identifies information needed by the staff in connection with its acceptance review of the Model No. MAGNASTOR® storage cask application, dated December 9, 2019 (Agencywide Documents Access and Management System Accession No. ML19345E594).

The requested information is listed by chapter number and title in the applicant's safety analysis report (SAR).

4.0 Thermal Evaluation

Show that low-wind speeds do not adversely impact the fuel peak clad temperature or other components important to safety such that the components exceed their allowable temperature limits.

Section 4.1 of the SAR states that in the MSO, air exits through 24 outlet holes and two robot access holes. Section 4.11 of the SAR states that since the configuration is symmetrical, the inlets and outlets are simplified into a two-dimensional axisymmetric model by using equivalent dimensions for the air inlets and outlets, which are assumed to extend around the MSO periphery. Normal low-speed wind could affect the cask thermal performance (by inhibiting the air flow at the outlet vents which could have an impact on the cooling effect by reducing the mass flow rate through the annular gap) because of the many axi-symmetric outlet openings resulting in higher predicted temperatures compared to quiescent conditions. The staff has performed three-dimensional (3-D) sensitivity calculations based on a range of wind speeds which is typically considered normal (in the range of 0 to 15 miles per hour) to obtain bounding speeds for several cask designs. The staff's 3-D model included an extended domain to represent the surrounding environment. Details of these analyses were documented in NUREG-2174 "Impact of Variation in Environmental Conditions on the Thermal Performance of Dry Storage Casks".

The staff needs this information to have assurance predicted temperatures remain below allowable limits during long term storage.

This information is needed to determine compliance with 10 CFR 72.236(b) and 72.236(f).