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

August 5, 2022

Wren Fowler
Licensing Manager
NAC International
3930 East Jones Bridge Road, Suite 200
Norcross, GA 30092

SUBJECT: AMENDMENT REQUEST FOR CERTIFICATE OF COMPLIANCE NO. 9235 FOR THE MODEL NO. STC PACKAGE – ACCEPTED FOR REVIEW

Dear Wren Fowler:

By letter dated May 9, 2022 (ADAMS Accession No. ML22130A774), you submitted an application to revise Certificate of Compliance (CoC) No. 9235, for the Model No. NAC-STC transport package. The package is designed to transport both homogeneous and heterogeneous forms of Type A quantities of uranium bearing material enriched up to five weight percent. The application proposes to credit the flexural rigidity of the fuel pellet as recommended in NUREG-2224 versus the previously approved licensing approach for directly loaded high burnup fuel of time limitations associated with ductile-brittle transient temperature limits as well as revise high burnup fuel discussions in SAR Chapters 2 and 3.

The staff performed an acceptance review of your application and determined the application contains sufficient technical information in scope and depth to allow the staff to complete a detailed technical review. We have established a schedule for the review and estimated that the staff may need approximately 330 staff review hours and $27,000 of contractual work to complete its review. The schedule allows for the staff to issue a request for additional information (RAI) in November 2022 and, if a second RAI is not needed, a CoC in February 2023, based on you responding to the first RAI in December 2022. In general, no additional changes to the application should be submitted except for changes resulting from your response to an RAI.

The staff included an observation to allow you to start earlier on items which may potentially become a request for additional information. Responses to observations are not required for staff to begin a detailed technical review. Observations are not the result of a detailed technical review and may be resolved once staff begins a detailed review.

If you have any questions regarding this matter, please contact me at (301) 415-6877.

Sincerely,

William C. Allen Signed by Allen, William on 08/05/22

Chris Allen, Project Manager
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9235
EPID NO. L-2022-LLA-0070

Enclosure:
Observation

cc w/encls
71uf9235all@listmgr.nrc.gov

MODEL NO. NAC-STC TRANSPORT PACKAGE OBSERVATIONS

MATERIALS

OBSERVATION

6.1 Justify the flexural rigidity factor applied to the bending response of the M5 fuel cladding.

The structural analysis of the fuel cladding credits the flexural rigidity supplied by the fuel pellet, as described in NUREG-2224. The staff notes that the rigidity factor used in the calculation was not derived from testing of M5 cladding, and new data exists that may be informative of the fuel pellet contribution to M5 fuel flexural response (ORNL/SPR-2020/1780 Revision 1, “Sister Rod Destructive Examinations (FY21) – Appendix F: Cyclic Integrated Reversible-Bending Fatigue Tests,” Oak Ridge National Laboratory, March 31, 2022.).

The above information is necessary to comply with Title 10 of the *Code of Federal Regulations* (10 CFR) 71.71 and 10 CFR 71.73.