

February 1, 2019

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Subject: Supplement to NAC's Request for a Revision to Certificate of Compliance (CoC)
No. 9235 for the NAC-STC (Submittal 18C Supplement)

Docket No. 71-9235

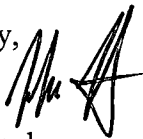
- References:
1. Model No. NAC-STC Package, U.S. Nuclear Regulatory Commission (NRC) Certificate of Compliance (CoC) No. 9235, Revision 19, November 7, 2018
 2. Safety Analysis Report (SAR) for the NAC Storage Transport Cask (NAC-STC), Revision 18, NAC International, March 2017
 3. ED20180044, NAC's Request for a Revision to Certificate of Compliance (CoC) No. 9235 for the NAC-STC (Submittal 18C), June 7, 2018
 4. Supplement to NAC's Request for a Revision to Certificate of Compliance (CoC) No. 9235 for the NAC-STC (Submittal 18C), August 16, 2018
 5. NAC's Request for a Revision to Certificate of Compliance (CoC) No. 9235 for the NAC-STC (Submittal 18C - Supplement 01), December 18, 2018

NAC International (NAC) hereby submits changes to FSAR Section 8.1.5.1.1 to clarify the Alternate Acceptance Criteria in the Fiberfrax region of the cask. During a teleconference with the NRC technical review team held on January 31, 2019, it was agreed that FSAR Section 8.1.5.1.1 would be revised to address several concerns with the description of the acceptance criteria, where measurements are taken and when the PWR basket upper weldment shield plate is to be used.

Consistent with NAC administrative practice, this proposed SAR revision is numbered to uniquely identify the applicable changed pages. Revision bars mark the SAR text changes on the Revision STC-18C pages (Attachment 1) to the Reference 2 SAR pages. Additionally, changes requested by this supplement to Section 8.1.5.1.1 are identified with red text. In accordance with NAC's administrative practices, upon final acceptance of this application, the STC-18C changed pages will be reformatted and incorporated into the next revision of the NAC-STC SAR.

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

Sincerely,



Wren Fowler
Director, Licensing
Engineering

NMSS01

Attachment 1 – NAC-STC FSAR Change page 18C Supplement

Attachment 1

License Drawings and the lead thickness shall be equivalent to the minimum lead thickness specified in the License Drawings less 3 percent. The shielding mock-up will be produced using the same fabrication techniques as those approved for the cask.

Measured count rates that exceed those established by the test mock-up shall cause the component to be rejected, with exception to the alternate acceptance criteria as specified in Section 8.1.5.1.1 for the Fiberfrax region of the lead. The rejected areas/components shall be evaluated to determine the corrective action to be taken. Any repaired areas shall be retested prior to acceptance.

An additional gamma shield effectiveness test shall be performed on each cask following first fuel loading. The neutron and gamma shield effectiveness test procedures and acceptance criteria are described in Section 8.1.5.4.

8.1.5.1.1 Alternate Acceptance Criteria (Fiberfrax Region)

In the region of the Fiberfrax insulation shown in Drawing 823-802, Detail G-G, ~~which is,~~ defined as the ~~upper~~ top 10.18 inches of the cask radial lead shield ~~upper lead region,~~ an increased count rate equivalent to a reduction in lead thickness of ~~equivalent to~~ 0.65 inches is acceptable for directly loaded fuel shipments. However, the cask shall be used with the ~~optional~~ shield plate on the basket top weldment as detailed in drawing 423-872, which compensates for this reduced lead shielding.

8.1.5.2 Neutron Shielding Test

The neutron shielding of the NAC-STC is provided by a solid layer of NS-4-FR, which is a hard polymer material. A 5.5-inch layer of NS-4-FR is located in the annulus formed by the outer shell and the 0.236-inch (6 mm) thick neutron shield shell. The neutron shield is divided in sections by the copper/stainless steel fins. A 2-inch thick layer of NS-4-FR is also installed in the cask inner lid and in the cask bottom.

The installation of NS-4-FR material in the fabrication of the cask is a special process and, as such, procedures will be prepared and qualified to ensure that the mix ratios, mixing method, degassing, pouring, and curing of the material is properly performed. The NS-4-FR raw material is provided in the form of a 3-part mixing kit. The material content of the raw material is tested and certified at the time of kit preparation. The neutron shielding material is installed into the annulus between the outer shell and the neutron shield shell by pouring it with the cask in an