



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

March 24, 2017

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

SUBJECT: REVISION 16 OF CERTIFICATE OF COMPLIANCE NO. 9235 FOR THE
MODEL NO. NAC-STC PACKAGE (TAC NO. L25181)

Dear Mr. Fowler:

As requested by your letter dated January 13, 2017, as supplemented on January 26, 2017, enclosed is Certificate of Compliance No. 9235, Revision No. 16, for the Model No. NAC-STC transportation package. Changes made to the enclosed certificate are indicated by vertical lines in the margin. The staff's safety evaluation report is also enclosed.

The approval constitutes authority to use the package for shipment of radioactive material and for the package to be shipped in accordance with the provisions of Title 49 of the *Code of Federal Regulations* (49 CFR) 173.471. Those on the attached list have been registered as users of the package under the general license provisions of 10 CFR 71.17 or 49 CFR 173.471.

Sincerely,

/RA/

John McKirgan, Chief
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9235
CAC No. L25181

Upon removal of Enclosure 3, this
document is uncontrolled

Enclosures: 1. Certificate of Compliance
No. 9235, Rev. No. 16
2. Safety Evaluation Report
3. Registered Users

cc w/encls. 1& 2: R. Boyle, Department of Transportation
J. Shuler, U.S. Department of Energy c/o L. F. Gelder
Registered Users

REVISION 16 OF CERTIFICATE OF COMPLIANCE NO. 9235 FOR THE MODEL NO. NAC-STC PACKAGE (TAC NO. L25181) DOCUMENT DATE: MARCH 24, 2017

Closes CAC No. L25181

DISTRIBUTION: (Closes TAC No L25181)

DSFM r/f NMSS r/f DMercano THsia MLayton R. Powells, RI E. Michel, RII
M. Kunowski, RIII L. Brookhart, RIV,

ADAMS Package No.: ML17086A436 CoC Accession No. ML17086A447

Letter/SER Accession No. ML17086A438

Registered Users List Accession No.: ML17086A457

OFC:	NMSS/DSFM	NMSS/DSFM	NMSS/DSFM	NMSS/DSFM	NMSS/DSFM
NAME:	BWhite	SFiguroa Via email	JPiotter via email	YDiaz-Sanabria	JMcKirgan
DATE:	3/6/17	3/7/17	3/14/17	3/22/17	3/24/17



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SAFETY EVALUATION REPORT

Docket No. 71-9235
Model No. NAC-STC
Certificate of Compliance No. 71-9235
Revision 16

SUMMARY

By letter dated January 13, 2017, as supplemented on January 26, 2017, (see Agencywide Documents Access and Management System Accession Nos. ML17018A121 and ML17030A138, respectively), NAC International Inc. (NAC or the applicant), requested a revision to Certificate of Compliance (CoC) No. 9235 for the Model No. NAC STC (NAC STC) transport package. The applicant requested that the certificate be revised to only require a thermal acceptance test, as specified in Section 8.1.6 of the SAR on the first packaging prior to first use, when multiple packages are fabricated at the same time, by the same manufacturer using essentially the same fabrication methods. In addition, the U.S. Nuclear Regulatory Commission (NRC) staff corrected an inconsistency between the certificate of compliance and the operating procedures.

In the SER for Certificate of Compliance No. 9235, Revision No. 6, NRC approved condition 9.c which states that "For packaging Serial Numbers STC-1 and STC-2, only one of these two packagings must be subjected to the thermal acceptance test as described in Section 8.1.6 of the NAC-STC Safety Analysis Report." NRC's approval at the time stated that:

"However, for the two packagings currently being manufactured at the same fabrication facility (Serial Numbers STC-1 and STC-2), an exception is made that one of the two units may be subjected to the thermal acceptance test in lieu of both units being tested. This exception is made in recognition of the uniformity of the fabricated components based on essentially identical fabrication methods and procedures at the same facility for the two units being fabricated concurrently."

NAC is currently fabricating four more NAC-STC packages (serial Nos. STC-3, STC-4, STC-5 and STC-6) at Hitachi Zosen simultaneously using essentially identical fabrication methods and plans to fabricate packages in the future and requested a generic condition for current and future fabricated packages concurrently with essentially identical fabrication methods.

In addition, NAC requested that for both condition 9(c) and 9(d), NAC requested clarification that regardless of the contents, only one thermal acceptance test needs to be performed on a package.

NRC staff corrected a discrepancy between the operating procedures and the certificate of compliance. Section 7.1.3.1, "Direct Loading of Fuel (Uncanistered)" Step No. 19 states "... the time allowed for completion of the NAC-STC loading sequence from the time the cask breaks the surface of the spent fuel pool, draining and vacuum drying, and

through placement of the cask in a horizontal position on the transport vehicle is limited to a total of 72 hours.” The certificate of compliance was in error in that it said that the 72-hour time limit was “...from the start of vacuum drying until the package is placed in the horizontal orientation....” NRC staff corrected the certificate of compliance to be consistent with the operating procedures.

CONDITIONS

Condition 9(c) was updated to clarify that the thermal acceptance test performed prior to first use does not need to be repeated in order to transport any of the contents listed in 5.(b)(1).

Condition 9(d) was added to authorize thermal acceptance testing (as described in Section 8.1.6 of the NAC-STC Safety Analysis Report) of the first package, when multiple packages being fabricated at the same time, at the same facility, using essentially identical fabrication methods. Similar to condition 9(c), the thermal acceptance test performed prior to first use does not need to be repeated in order to transport any of the contents listed in 5.(b)(1).

The first sentence in Condition 12 was revised to state “For shipment of high burnup fuel assemblies, as described in content 5.(b)(1)(i)(2) and limited in 5.(b)(2)(i)(2), the maximum time duration from the time the package breaks the surface of the spent fuel pool until the package is placed in the horizontal orientation is limited to 72 hours.”

The references section was updated to include the application for January 13, 2017, and its supplement dated January 26, 2017.

CONCLUSIONS

Based on the statements and representations contained in the application, as supplemented, and the conditions listed above, the staff concludes that the design has been adequately described and evaluated, and the Model No. NAC-STC package meets the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. NAC-STC, Revision No. 16
on 3/24/17.