



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

October 31, 2022

Richard W. Boyle, Chief
Sciences Branch
Division of Engineering and Research
Office of Hazardous Materials Safety
U.S. Department of Transportation
1200 New Jersey Ave., S.E.
Washington, D.C. 20590

SUBJECT: APPLICATION FOR THE MODEL NO. F-522 TRANSPORT PACKAGE –
SUPPLEMENTAL INFORMATION NEEDED

Dear Richard Boyle:

By letter dated May 16, 2022 (Agencywide Documents Access and Management System Accession No. ML22160A421), as supplemented on June 8 (ML22160A424), and August 3, 2022 (ML22160230), the U.S. Department of Transportation requested that the U.S. Nuclear Regulatory Commission (NRC) staff performs a review of the Canadian Approval Certificate Number CDN/2094/B(U)-96, Revision 4, Model No. F-522 transport package, and make a recommendation concerning the revalidation of the package for import and export use.

The NRC staff performed an acceptance review of your application to determine whether the application contains sufficient technical information in scope and depth to allow the NRC staff to complete a detailed technical review per the International Atomic Energy Agency Specific Safety Requirements No. 6, "Regulations for the Safe Transport of Radioactive Material," 2012 Edition. 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 in the enclosure to this letter as request for supplemental information.

In order to start our technical review and keep this high priority case on schedule, this information should be provided within 3 weeks from the date of this letter. If the NRC receives acceptable responses in a timely manner, you should expect to receive a request for additional information in December 2022, approximately.

R. Boyle

- 2 -

If you wish to discuss these issues in more detail prior to submitting your response, the staff is available for a public meeting. Please reference Docket No. 71-3091 and EPID L-2022-DOT-0004 in future correspondence related to this action.

If you have any questions regarding these matters, please contact me at 301-415-6999 or ngs@nrc.gov.

Sincerely,



Signed by Garcia Santos, Norma
on 10/31/22

Norma Garcia Santos, Project Manager
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-3091
EPID L-2022-DOT-0004

Enclosure:
Request for Supplemental Information

**Request for Supplemental Information
U.S. Department of Transportation
Canadian Approval Certificate Number CDN/2094/B(U)-96
Revision No. 4
Docket No. 71-3091
Model No. F-522 Package**

REQUEST FOR SUPPLEMENTAL INFORMATION

Materials Evaluation

RSI-Ma-1 Provide the drawings for the F-522/F-528 package configuration.

Drawings listed in Appendix A, "Drawing and Document List for the F-522 Transport Package," do not appear to be included in the submittal.

This information is necessary to demonstrate compliance with the requirements in paragraphs 220, 640, and 809(b) of the IAEA SSR-6, 2012 Edition.

Structural Evaluation

RSI-St-1 Provide the drop test results for the F-522/F-528 package configuration.

Section 3 of Appendix 19, "Justification of the F-522/F-528 Package Configuration," states the following:

"significant difference [20% more mass than the mass of the UK-201 shielding vessel with contents] will be assessed with a full scale drop test in accordance with a plan approved by the CNSC."

However, the descriptions and results of the full scale drop test were not included in Addendum A19.4, "F-522/F-528 Drop Test Results (IS/TR 2690 F522)," of the application to demonstrate that the package and its content (including the top plug/screws) remained intact and leaktight. This section of the SAR was added as a place holder, but never was updated with the test results.

This information is necessary to demonstrate compliance with the requirements in paragraphs 719, 722 and 727 of the IAEA SSR-6, 2012 Edition.

RSI-St-2 Provide the tie-down test results for the F-522/F-528 package configuration.

Section 3 of Appendix 11.4, "Tie-Down Testing," states that "similar performance is expected from the F-522/F-528 configuration. This will be demonstrated with a full scale test with an applied load of at least 1,219 kg." However, the full scale tie-down test was not included in the application. It was noted that the tie-down test report is missing from Appendix 11.4.2 of the IS/TR 2650 F522 Report. This

section was added to the SAR as a place holder, but never was updated with the test results or an analysis to demonstrate that the tie-down points are designed to withstand the total load without yield.

This information is necessary to demonstrate compliance with the requirements in paragraph 638 of the IAEA SSR-6, 2012 Edition.

RSI-St-3

Provide the testing analysis including the evaluations and results performed for the F-522 with the F-528 shielding vessel.

Section 2.5 of IS/TR 2650 F522 states that “Retesting is planned with the F-522/F-528 prototype and a load of 1219 kg per aperture. The results will be provided in Appendix 11.” Similarly, it also states that “another specimen for the F-522/F-528 was subjected to the two 1-m pin drops and a 9-m drop,” and that “the F-522/F-528 was drop tested with the 12 lbs//ft³ FR-3712 foam.” However, Appendix 11 does not include the testing analysis including the evaluations and results performed for the F-522 with the F-528 shielding vessel.

This information is necessary to demonstrate compliance with the requirements in paragraphs 719, 722 and 727 of the IAEA SSR-6, 2012 Edition.

APPLICATION FOR THE MODEL NO. F-522 TRANSPORT PACKAGE - SUPPLEMENTAL
INFORMATION NEEDED (EPID L-2022-DOT-0004) DATE October 31, 2022

DISTRIBUTION:

JHuang, NRR/DEX/EMIB

JLopez, NRR/DEX/ESEB

TBoyce, NMSS/DFM/MSB

NGarciaSantos, NMSS/DFM/STLB

YDiaz-Sanabria, NMSS/DFM/STLB

ADAMS Accession No.: ML22286A046; ML22286A046

OFFICE	NMSS/DFM/STLB	NRR/DEX/EMIB	NRR/DEX/ESEB	NMSS/DFM/STLB
NAME	NGarcia <i>NG</i>	JHuang <i>JH</i>	JLopez <i>JL</i>	SFiguroa <i>SF</i>
DATE	Oct 13, 2022	Oct 13, 2022	Oct 13, 2022	Oct 13, 2022
OFFICE	NMSS/DFM/STLB	NMSS/DFM/STLB	NMSS/DFM/MSB	NMSS/DFM/STLB
NAME	NGarcia <i>NG</i>	NGarcia <i>NG</i>	TBoyce <i>TB</i>	YDiaz-Sanabria <i>YD</i>
DATE	Oct 17, 2022	Oct 18, 2022	Oct 18, 2022	Oct 31, 2022
OFFICE	NMSS/DFM/STLB			
NAME	NGarcia <i>NG</i>			
DATE	Oct 31, 2022			

OFFICIAL RECORD COPY