



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

December 8, 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: APPLICATIONS FOR THE MODEL NOS. FCC-3 AND FCC-4 TRANSPORT
PACKAGES – SUPPLEMENTAL INFORMATION NEEDED

Dear Richard W. Boyle:

By letters dated August 18, 2022 (Agencywide Documents Access and Management System Accession Nos. ML22271A356 and ML22277A733), the U.S. Department of Transportation requested that the U.S. Nuclear Regulatory Commission (NRC) staff perform a review of the French Approval Certificate Numbers F/347/AF-96, Revision Gy, Model No. FCC-3, and F/348/AF-96, Revision Gw, Model No. FCC-4 transport packages, and make recommendations concerning the revalidation of the packages for import and export use.

The NRC staff performed an acceptance review of your applications to determine whether the applications contain 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," 2018 Edition. This letter is to advise you that based on our acceptance review, the applications do 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 case on schedule, this information should be provided within 4 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 February 2022, approximately.

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. 71-3083 and EPID L-2022-DOT-0007 for the Model No. FCC-3 and Docket No. 71-3097 and EPID L-2022-DOT-0008 for the Model No. FCC-4 in future correspondence related to these actions.

If you have any questions regarding these matters, please contact me at ngs@nrc.gov.

Sincerely,



Signed by Garcia Santos, Norma
on 12/08/22

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

Docket Nos. 71-3083 and 71-3097
EPID Nos. L-2022-DOT-0007 and
L-2022-DOT-0008, respectively

Enclosure:
Request for Supplemental Information
and Observation

Request for Supplemental Information and Observation
U.S. Department of Transportation
French Approval Certificate Number F/347/AF-96, Revision Gy
Docket No. 71-3083
Model No. FCC-3
French Approval Certificate Number F/348/AF-96, Revision Gw
Docket No. 71-3097
Model No. FCC-4

REQUESTS FOR SUPPLEMENTAL INFORMATION

Materials Evaluation

- RSI-Ma-1** For the Model No. FCC-3, provide translations to English and revisions for the following drawings¹:
- a. Appendix 1.3-2 Drawing
Translate Drawing No. 47-0-01-99-01-00, "Boite a Crayons FCC-3-Ensemble"
 - b. Appendix 1.4-1 Drawings
 - i. Drawing No. TFX 30 FAG 229 K 0110
 - 1. View F and cross section A-A, translate the phrase "Absorbeur de pied 12 pieds"
 - 2. Cross section A-A, fix the text that is backwards
 - ii. Drawing No. TFX 30 FAG 229 K 0130
 - 1. Detail C, explain the phrase "14x2 circlips Ref. 7133.12 TRUARC"
 - 2. Cross section A-A translate the phrase "Berceau 12 pieds"
 - iii. Drawing No. TFX 30 FAG 229 K 0145
Translate phrase "chassis support -12 pieds"
 - iv. Drawing No. TFX 30 FAG 229 K 0170 - Translate the phrase "Porte gauche 17x17x12 pieds"
 - v. Drawing No. TFX 30 FAG 229 K 0170 - Translate the term "Sens des fibres"
 - vi. Drawing No. TFX 30 FAG 229 K 0202 - Translate the phrase "Porte gauche 17x17x12 pieds"
 - vii. Drawing No. TFX 30 FAG 229 K 0270 - Detail M, translate the phrase "Porte gauche 15x15x12 pieds"
 - viii. Drawing No. FES 229 K 702 - Translate the term "Sens des fibres"
 - ix. Drawing No. FES 229 K 745 - Translate phrase "chassis support - 12 pieds"
 - x. Drawing No. FES 229 K 690
 - 1. Translate the phrase "Porte droite 17x17x14 pieds"
 - 2. Translate the phrase "Coupe A-A"
 - c. Appendix 1.4-2 Drawings
 - i. Drawing No. TFX 30 FAG 229 K 0302 - Translate the term "Sens des fibres"

¹ All packages' drawings are withheld as "Official Use Only – Security – Related Information."

- ii. Drawing No. TFX 30 FAG 229 K 0370 - Detail M, translate the phrase “Porte gauche 14x14x12 pieds”
- d. In various drawings, translate the phrase “Attention: Ce plan A ette execute en CAO...”

Also, provide higher resolution of Figures 1.3-1 through 1.3-5 in the safety analysis report document No. DOS-19-21165-002, Version 2, Chapter 1.3, “Specifications Relating to Radioactive Content.” These figures were not legible.

The application includes a number of drawings and figures related to the package’s design. However, some drawings are either not completely or partially translated. Some of the figures provided by the applicant are not legible. The staff needs English translations of the drawings and legible figures in order to proceed with the technical review of the application.

This information is necessary to demonstrate compliance with the requirements of paragraphs 220, 640, and 809(b) of the IAEA SSR-6, 2018 Edition.

RSI-Ma-2

For the Model No. FCC-4, provide translations to English for the following figures and drawings:

- a. Document No. DOS-19-021166-002, Version 2 - Translate Figures 1.3-1 to 1.3-4
- b. Translate all Appendix 1.3-2 Drawings
 - i. Drawing No. 47-0-01-99-01-00, “Boite a Crayons FCC-4-Ensemble”
 - ii. Drawing No. 47-0-01-99-01-002, “Cale Axiale”
 - iii. Drawing No. 47-0-01-99-01-006, “Plaque D’Appui Longueur 2460”
 - iv. Drawing No. 47-0-01-99-01-009, “Cale Radiale Longueur 2460”
 - v. Drawing No. 47-0-01-99-01-016, “Plaque D' Appui D'extremite Fixe”
 - vi. Drawing No. 47-0-01-99-01-022, “Cale De Compensation Long. 2460...”
 - vii. Drawing No. PLA-16-00179264-300, “Boite A Crayons FCC4...”
 - viii. Drawing No. PLA-16-00179264-201, “Plan de...”
 - ix. Drawing No. PLA-16-00179264-202, “Plan de...”
 - x. Drawing No. PLA-16-00179264-203, “Plan de...”
- c. Appendix 1.4-1 Drawings
 - i. Drawing No. TFX 30 FAG 229 K 0400
 - 1. Translate portions of cross section A-A
 - 2. Translate the phrase “chassis support 17x17x14 pieds”
 - ii. Drawing No. TFX 30 FAG 229 K 0402 – Translate the phrase “Sens Des Fibres”
 - iii. Drawing No. TFX 30 FAG 229 K 0405 - Translate the phrase “Vue F”
 - iv. Drawing No. TFX FAG 229 K 0430 –translate the phrase “Bercceau 17x17x14 pieds”
- d. Appendix 1.4-2 Drawings No. TFX 30 FAG 229 K 0545, “Container for 2 UO2 Assemblies Model 14 Feet – 16 x 16 & 18 x 18 – Internal Equipment

T Support Frame, Sub-Unit” – Translate the phrase “Chassis Support 16X16 & 18X18 14 pieds”

- e. In various drawings, translate the phrase “Attention: Ce plan A ette execute en CAO...”

In document No. DOS-19-021166-005, provide higher resolution of Figures 1.4-1 through 1.4-4 and some of the diagrams in Table 1.4-5. These were not legible.

The application includes a number of drawings and figures related to the package’s design. However, some drawings are either not completely or partially translated. Some of the figures provided by the applicant are not legible. The staff needs English translations of the drawings and legible figures in order to proceed with the technical review of the applications.

This information is necessary to demonstrate compliance with the requirements of paragraphs 220, 640, and 809(b) of the IAEA SSR-6, 2018 Edition.

OBSERVATION

- OBS-Ma-1*** Provide an explanation of how the chrome coatings are applied and additional information on the study on the hydrogen uptake that occurs during the coating process, including the effects on the mechanical properties of the cladding alloys.

The application for the Model No. FCC-3, document No. DOS-19-021165-002, Version 2.0, includes the following:

“The claddings may be possibly coated with a chrome ...”

The application for the Model No. FCC-4, document No. DOS-19-021166-002, Version 2.0, includes the following:

“The claddings may be possibly coated with a chrome ...”

The application does not specify how coatings are applied or how the coating affects the mechanical properties of the cladding material. The staff needs this information to assess if there are any chemical reactions that may impact the safe operation of the package.

This information is necessary to demonstrate compliance with the requirements of paragraphs 614, 673, and 682 of the IAEA SSR-6, 2018 Edition.

APPLICATIONS FOR THE MODEL NOS. FCC-3 AND FCC-4 TRANSPORT PACKAGES –
 SUPPLEMENTAL INFORMATION NEEDED DATE December 8, 2022

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JHuang, NRR/DEX/EMIB

ADAMS Accession No.: ML22342A020; Ltr ML22325A092

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