



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

August 28, 2019

Mr. 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. TN-MTR TRANSPORT PACKAGE –
FIRST REQUEST FOR ADDITIONAL INFORMATION**

Dear Mr. Boyle:

By letter dated March 5, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19115A127), as supplemented on June 12, 2019 (ADAMS Accession No. ML19169A036), the United States Department of Transportation requested that the U.S. Nuclear Regulatory Commission (NRC) staff perform a review of the French Certificate of Approval F/357/B(U)-96 Revision Eah, for the Model No. TN-MTR transport package and make a recommendation concerning the revalidation of the package for import and export use. Specifically, you requested that the NRC only review the content in Appendix 9 to the French certificate for shipment of the Gisete 4, Gisete 5, or Gisete 8 radioisotopic thermal generators.

In connection with our review, we need the information identified in the enclosure to this letter. To assist us in scheduling the staff's review of your response, we request that you provide this information one month from the date of issuance of this request. Inform us at your earliest convenience, but no later than three weeks after issuance of this request, if you are not able to provide the information by that timeframe. If you are unable to provide a response one month after issuance of this request, our review may be delayed.

The staff is available for a public meeting if you wish to discuss these issues in more detail prior to deciding on your course of action. Please reference Docket No. 71-3052 and EPID L-2019-LLA-0044 in future correspondence related to this action.

R. Boyle

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If you have any questions regarding these matters, please contact me at (301) 415-6577.

Sincerely,

/RA/

Bernard White, Senior Project Manager
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-3052
EPID L-2019-LLA-0044

Enclosure:
Request for Additional Information

SUBJECT: APPLICATION FOR THE MODEL NO. TN-MTR TRANSPORT PACKAGE –
 FIRST REQUEST FOR ADDITIONAL INFORMATION, DOCUMENT
 DATE: August 28, 2019

DISTRIBUTION: DSFM r/f NMSS r/f YKim JWise

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ADAMS Accession No.: ML19239A196

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|----------------|-----------------------------|-----------------------|------------------------|----------------------|
| OFFICE: | DSFM | DSFM | DSFM | DSFM |
| NAME: | BWhite | SFiguroa Via email | JBorowsky Via email | VWilson Via email |
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Request for Additional Information
U.S. Department of Transportation
French Certificate of Approval F/357/B(U)-96 Revision Eah
Docket No. 71-3052
Model No. TN-MTR Package

By letter dated March 5, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19115A127), as supplemented on June 12, 2019 (ADAMS Accession No. ML19169A036), the U.S. Department of Transportation requested that the U.S. Nuclear Regulatory Commission (NRC) staff performs a review of the French Certificate of Approval F/357/B(U)-96 Revision Eah, for the Model No. TN-MTR transport package and make a recommendation concerning the revalidation of the package for import and export use. Specifically, you requested that the U.S. Nuclear Regulatory Commission only review the content in Appendix 9 to the French certificate for shipment of the Gisete 4, Gisete 5, or Gisete 8 radioisotopic thermal generators.

This request for additional information identifies information needed by the NRC staff (the staff) in connection with its review of the application. The staff used the International Atomic Energy Agency Specific Safety Requirements No. 6, "Regulations for the Safe Transport of Radioactive Material," 2012 Edition, in its review of the application.

Thermal Evaluation

Provide the temperature of the 'outer surface' to confirm that temperatures are below the allowable 85°C for exclusive use shipment.

Chapter 1 (page 18/34) states that surface temperatures are greater than 50°C and that the package is transported as exclusive use. However, it appears there was no demonstration in the thermal chapters, including Chapter 2 (Document No. DOS-18-011415-024 Rev. 1.0), that outer surface temperatures were below the allowable temperature for exclusive use shipment.

This information is needed in order to determine compliance with if the TN-MTR package meets the requirements of paragraphs 654 and 655 of SSR-6, 2012 Edition.

Shielding Evaluation

Provide the flux-to-dose rate conversion factors (DCFs) used within TRIPOLI 4.4 to calculate external radiation levels.

The DCFs should be appropriate for the calculating dose equivalent for meeting the SSR-6 requirements and that are measurable since verification at the time of shipment is (often) done by measurements.

The staff needs this information to verify that the shielding is adequate for determining compliance with paragraphs 526, 527, 648(b), and 659(b)(i) of SSR-6, 2012 Edition.

Enclosure