

May 5, 2010

Mr. Mirza I. Baig  
Chief Engineer – Engineering & Licensing  
EnergySolutions  
140 Stoneridge Drive  
Columbia, SC 29210

SUBJECT: AMENDMENT REQUEST FOR CERTIFICATE OF COMPLIANCE NO. 9204  
FOR THE MODEL NO. 10-160B PACKAGE – REQUEST FOR  
SUPPLEMENTAL INFORMATION

Dear Mr. Baig:

By letter dated April 2, 2010, you submitted an amendment request of Certificate of Compliance No. 9204 for the Model No. 10-160B package. Your amendment request was supplemented on April 19, 2010, to indicate a need date for the revised Certificate of Compliance. We performed an acceptance review to determine if the application contained sufficient scope and depth of information to allow the staff to complete a detailed technical review.

This letter is to advise you that the application does not contain sufficient technical information to begin a detailed technical review. The information needed to continue our review is described as Request for Supplemental Information (RSI) in the Enclosure to this letter. In order to schedule our technical review, the RSI responses should be provided by May 27, 2010. If the RSI responses are not received by this date, the application may not be accepted and the staff will discontinue any further review.

Please reference Docket No. 71-9204 and TAC No. L24435 in future correspondence related to this request. If you have any questions regarding this matter, please contact Soly Soto or Pierre Saverot of my staff at (301) 492-3408.

Sincerely,

**/RA/**

Eric Benner, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 71-9204  
TAC No. L24435

Enclosure: Request for Supplemental Information

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Enclosure: Request for Supplemental Information

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DOCKET NO. 71-9204

ATTACHMENT 1

REQUEST FOR SUPPLEMENTAL INFORMATION (RSI) RELATED TO THE  
MODEL NO. 10-160B PACKAGE

- RSI-1      Provide a detailed description of the “powdered contents” of the package and identify the maximum activity of the radioactive materials.
- The staff believes that the requested contents, i.e., in powdered form, are not properly addressed in the amendment request. The amendment request needs to identify the powdered contents to be authorized for shipment as well as identify the maximum activity of the constituents.
- This information is required by the staff to determine compliance with 10 CFR 71.33(b)(1).
- RSI-2      Provide a demonstration and appropriate evaluations that the current shielding analysis, based on a point source, is bounding for a distributed source (powder). Include supporting statements and any necessary bounding analyses addressing the powdered forms.
- Staff believes that there may be situations where a point source is not bounding for a distributed source, and that there is no basis provided in the amendment request that justifies that the geometry is bounding for any types of powders in the package.
- This information is required by the staff to determine compliance with 10 CFR 71.47 and 71.51.
- RSI-3      Provide an analysis demonstrating that the powdered content will not have any pyrophoric tendency during loading, transporting, or unloading. This analysis should include a list of the compositions of the powders, degree of dewatering, and surface to volume ratio of the powders.
- The current Certificate of Compliance prohibits explosives, corrosives, non-radioactive pyrophoric, and compressed gases. In addition, there is a limitation on volatile organics and residual pyrophoric radionuclides. Most pyrophoric events depend upon the degree of dryness of the material, and size distribution or surface to volume ratio of the powder. None of these properties are given in the application, and the potential for a pyrophoric event cannot be excluded.
- This information is required by staff to determine compliance with 10 CFR 71.43(d).

RSI-4            Provide a detailed description of the steps performed when leak testing the package for the new powdered solid contents.

The application provides only an overview of the testing that is planned to be done, but a more detailed discussion is needed to ensure that the package can be effectively tested by the package user for the authorized contents.

This information is needed to determine compliance with 10 CFR 71.93(b).

Observation: Staff will clarify in the revised Certificate of Compliance that the package shielding does not allow 3000 A2 of any radionuclide to be shipped because the dose rate limits before shipment would not be met. The 3000 A2 limit is based on NUREG 8-15, and such a limit is directly linked to the structural robustness of the package, classified as a Category II package in accordance with NUREG/CR-3019, "Recommended Welding Criteria for use in the Fabrication of Shipping Containers for Radioactive Materials."