

August 24, 2005

Mr. Hisham Shamkhani
Vice President, Logistics Engineering
Duratek, Inc.
140 Stoneridge Drive
Columbia, SC 29210

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 9196 FOR THE MODEL NO. UX-30
PACKAGE - REQUEST FOR ADDITIONAL INFORMATION

Dear Mr. Shamkhani:

This refers to your application dated January 21, 2004, requesting amendment of Certificate of Compliance No. 9196 for the Model No. UX-30 Package.

In connection with our review, we need the information identified in the enclosure to this letter. Additional information requested by this letter should be submitted in the form of revised pages. To assist us in scheduling staff review of your response, we request that you provide this information by October 14, 2005. If you are unable to provide a response by that date, our review may be delayed.

If your response properly addresses the staff's questions, the staff estimates that the amended approval and its Safety Evaluation Report will be issued on November 2005.

If you have any questions regarding this matter, we would be pleased to meet with you and your staff. I may be contacted at (301) 415-8500.

Sincerely,

/RA/

José R. Cuadrado, Project Engineer
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9196
TAC No. L23833

Enclosure: Request for Additional Information

Mr. Hisham Shamkhani
 Vice President, Logistics Engineering
 Duratek, Inc.
 140 Stoneridge Drive
 Columbia, SC 29210

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Request for Additional Information

Docket No. 71-9196
Model No. UX-30 Package
Certificate of Compliance No. 9196

By application dated April 7, 2005, Duratek, Inc., requested amendment of Certificate of Compliance No. 9196 for the Model No. UX-30 package. This request identifies additional information needed by the U.S. Nuclear Regulatory Commission (NRC) staff in connection with its review of the application. NUREG-1609, "Standard Review Plan for Transportation Packages for Radioactive Material" was used by the staff in its review of the application. This request describes information needed by the staff for it to complete its review of the application and to determine whether the applicant has demonstrated compliance with regulatory requirements. The requested information is listed by chapter number and title in NUREG-1609.

Chapter 2.0 - Structural

- 2-1 Provide justification that ETPP cylinders weighing more than 5000 lbs gross can be safely transported with the additional special precautions delineated in Chapter 7, Table 7.1.

The maximum gross weight of ETPP cylinders is limited to 5000 lbs based on stress analyses under hypothetical side drop and end drop conditions. However, the ETPP cylinders gross weight could be as high as 6550 lbs (see Chapter 8, Table 8.1). It is not clear that the additional precautions delineated in Table 7.1 are adequate to ensure package safety for transportation.

This information is needed to satisfy the safety requirements of 10 CFR 71.73(c)(1).

Chapter 6.0 - Criticality

- 6-1 Revise Attachment 2 to the Duratek letter dated April 7, 2005, "Criticality Analysis for ETPP Cylinders," to incorporate an administrative margin on k_{eff} of 0.05.

Section 2 of this attachment states that minimum subcritical margin of 0.03 is appropriate for this analysis. NUREG/CR-5661, "Recommendations for Preparing the Criticality Safety Evaluation of Transportation Packages," states that "The NRC currently regards 0.05 Δk as the minimum administrative margin of subcriticality that should be considered for transportation packages." The applicant's criticality analysis should be revised to show that the maximum k_{eff} of the system, including bias and uncertainty, is less than 0.95 under all conditions.

This information is needed to ensure that the package remains subcritical and meets the fissile material requirements of 10 CFR 71.55 and §71.59.