

**From:** Garcia-Santos, Norma

**Sent:** Friday, April 22, 2016 1:05 PM

**To:** Michael.Conroy@dot.gov; 'Rick.boyle@dot.gov' <Rick.boyle@dot.gov>

**Cc:** Ruffin, Steve <Steve.Ruffin@nrc.gov>; Pham, Bo <Bo.Pham@nrc.gov>; Lombard, Mark <Mark.Lombard@nrc.gov>

**Subject:** IMPORTANT INFORMATION---Revalidation Request: Model No. LEUPA - On-Hold and Issues  
**Importance:** High

Good afternoon Michael and Rick,

After considering the information provided by the applicant to support the revalidation request to the U.S. Department of Transportation for the Model No. LEUPA package (and a meeting yesterday with our Division's management), the staff cannot make a revalidation recommendation at this time. Therefore, our Division will be placing this review "on hold" until the staff receives an application that addresses the issues associated with this review. In general, the major issues that still exist related to this review (and application) are as follows:

- a. Incomplete translation of the application and documentation associated with it;
- b. Translated documentation is not adequate or clear enough to make a revalidation recommendation;
- c. The information provided in the responses to the requests for additional information (RAI) is either unclear, incomplete, or not adequate.
- d. There are still instances in which text\links\referenced information cannot be found (For example: Table 3 of document No. 004-908-LE01-3BEIN-024B, Section 7.4.2.2, and Section 7.4.2.4.)

We are looking forward to meet with Roberto Barrios, Vice-President, International Trade, INVAP S.E., to clarify questions that the applicant may have about the staff's questions.

It is important to note that the evaluation of the Model No. LEUPA as well the RAIs consider the T-S-R-1 requirements for a Type B package. The issues related to the staff's questions (i.e., RAIs) are included in the items below. (This e-mail does not include the staff's assessment of the responses related to the Materials Evaluation or an in-depth assessment of the shielding evaluation.)

**1. General questions:**

- a. The staff is aware that the application include descriptions of the main components related to this package throughout the application. Nevertheless, the staff requested to consolidate the definitions\descriptions of the main components (important to safety) in the "Definitions" section of the application.
- b. The applicant needs to define the term "Other." If this item is not resolved, there should be a condition on the recommendation for revalidation to limit the authorized contents for the Model No. LEUPA during transport to not include the term "Other."

**2. Criticality Safety:**

- a. Cr-1, -3, and -4

In general, for the criticality evaluation, the staff cannot find the following information in the application:

- i. acceptance tests for neutron absorbers;
- ii. analysis for a single package array – Given a  $k_{eff}$  of 0.8, the staff may be able to make a determination, even though, the question was not answered;
- iii. benchmarking analysis; and
- iv. calculation of the upper sub criticality limit for a single package - Given a  $k_{eff}$  of 0.8, the staff may be able to make a determination, even though, the question was not answered.

b. Cr-2

The staff would be proposing a condition to limit the amount of plastic when using the Model No. LEUPA for transporting radioactive material. (The applicant provided a response, but this response is not part of the certificate.)

### **3. Shielding Evaluation:**

- a. G-Sh-1 - The staff cannot determine if the picture referenced in the response to the question has been fixed or not (the reviewer would need to confirm this in the application documents). The response only provided another figure/diagram of the package (in Spanish) and said nothing regarding the picture the RAI asked about.
- b. G-Sh-2 – The response does not answer the question. If it is not resolved, there should be a condition on the recommendation for revalidation.
- c. Sh-2 - For the part related to hypothetical accident conditions (HAC), the response is not adequate. The staff still needs to determine if the response related to normal conditions of transport (NCT) is adequate.
- d. The application documents do not include a shielding evaluation chapter, but these include shielding-related information (e.g., dose rates, shielding analysis codes used to determine dose rates). Even though the contents in the Model No. LEUPA are Type AF quantities and there really is no need for shielding chapter, the staff needs to perform a review of the sections of the application related to a shielding evaluation because it is being revalidated as a Type B package.

### **4. Structural Evaluation\Containment Evaluation**

St-4 – The response does not directly address the question. The staff's question is about the impact(s) of the temperature and pressure (as required for a Type B package) on the spiral seal gasket (in general, compliance with TS-R-1 requirements of a Type B package).

### **5. Operating procedures**

The unloading procedure does not include torques, tolerances, dimensions, etc. (The unloading procedure should include at least details as in sections 7.2.4 and 7.2.5 of the application as well as any other applicable information.)

Please do not hesitate to contact me if you have questions about this communication. (I am working from home today and on Monday. You can contact me through the NRC's operator at 301-415-7000. I should be in the office on Tuesday, Wednesday, and Thursday of next week.)



Sincerely,

*Norma Garcia Santos*

Project Manager  
Spent Fuel Management Licensing Branch  
Division of Spent Fuel Management  
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and Safeguards  
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