

December 23, 2013

MEMORANDUM TO: Stephanie Coffin, Acting Deputy Director  
Division of Spent Fuel Storage and Transportation, NMSS

FROM: Pierre Saverot, Project Manager **/RA/**  
Licensing Branch  
Division of Spent Fuel Storage and Transportation, NMSS

SUBJECT: SUMMARY OF DECEMBER 18, 2013, MEETING WITH  
ROBATEL TECHNOLOGIES, LLC

### Background

Robatel Technologies, LLC (Robatel) received a second request for additional information (RAI) letter dated November 26, 2013, for the Model No. RT-100 package application. This meeting was requested by the applicant to discuss its proposed RAI responses.

The list of attendees and the Robatel presentation are included as Enclosures Nos. 1 and 2, respectively.

### Discussion

Because staff had previously held a conference call with the applicant on November 26, 2013, to discuss the thermal RAIs, this meeting was only focused on the responses to the containment and shielding RAIs.

The applicant clarified the responses to the containment RAIs, in particular RAI 4.2, 4.3 and 7.1. The revision of the loading curve provided in Figure 7.5.1 to clarify the limitations of its use by a shipper, along with the new equations in Section 4.4.5 of the application to determine appropriate contents for loading if the curve cannot be used, as well as the consideration of the temperature effects on the G values, did answer staff's concerns. The applicant also revised its calculations of flammable gas generation to bound all authorized contents.

However, staff said that the remaining ambiguities in the containment evaluation need to be addressed: (i) justification of the assumption of 25% volume of free water; (ii) coherence between the response to RAI 4.3 (bounding G value for polyethylene) and the statements on page 4-20 of the application; (iii) potential use of Figure 7.5.1 if no liner is used or a statement in chapters 1, 4, and 7 that a liner is always used for shipment of resins and filters; (iv) justification that the analysis of the hydrogen gas generation addresses the entire cavity of the package to respond to staff's remarks that flammable gas may be generated in the void volume outside of the liner.

Because the current shielding evaluation, in response to the first round of RAIs, fell short of staff's expectations, staff summarized its position as follows: (i) contents have to be well defined to be analyzed and only analyzed contents can be shipped; (ii) shielding models should be conservative and all analyses shall converge, particularly for MCNP "backfitting" calculations, as

is the case in this application; (iii) the current method in Chapter 5, with an interpolation between calculated doses for discrete energies, needs to be changed to use the next energy line because staff does not allow interpolation; (iv) the dose rate/particle/energy response should be demonstrated to be still valid if the media changes; (v) code benchmarking is not done with measured dose rates for Co-60 gamma scan acceptance testing of a package.

The applicant responded that it appreciated such comments and that the objective of this meeting was to regain staff's confidence. The discussion then focused on the proposed responses to the shielding RAIs. While the overall approach, as presented during the meeting, appears now to be conducive to a proper resolution of staff's questions, staff said that the applicant still has to: (i) clarify that runs not meeting convergence criteria are not used to demonstrate compliance with dose limits; and (ii) explain the level of confidence in the results if all 10 convergence criteria are not met.

The applicant should also: (i) modify the post processing procedures to go to the next higher energy line; (ii) present in a structured fashion all the information that supports the shielding evaluation/design of the Model No. RT-100 package; (iii) explain the successive build-up of margins in the shielding calculations, i.e., not only by stating that the analysis was done at 95% of the regulatory limits; and (iv) perform a sensitivity analysis for different materials. Staff requested all input/output files, the evaluation of the interaction of the media in relation to the dose response (RAI 5.4), and the Quality Assurance files for the MCNP software verification. Staff said that the reliance on the shipper/user to qualify contents also has to be specified in Chapter 7 of the application.

Staff made no regulatory commitments during the meeting.

Docket No. 71-9365  
TAC No. L24686

Enclosure 1: Meeting Attendees  
Enclosure 2: Robatel Presentation

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Enclosure 1: Meeting Attendees

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Distribution: Attendees, M. Lombard

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**Meeting Between ROBATEL and the  
Nuclear Regulatory Commission  
December 18, 2013  
Meeting Attendees**

**NRC/NMSS/SFST**

|                 |              |  |
|-----------------|--------------|--|
| Pierre Saverot  | 301-287-0759 | <a href="mailto:pierre.saverot@nrc.gov">pierre.saverot@nrc.gov</a>   |
| Joe Borowsky    | 301-287-9062 | <a href="mailto:joseph.borowski@nrc.gov">joseph.borowski@nrc.gov</a> |
| Zhian Li        | 301-287-0686 | <a href="mailto:zhian.li@nrc.gov">zhian.li@nrc.gov</a>               |
| Meraj Rahimi    | 301-287-9233 | <a href="mailto:meraj.rahimi@nrc.gov">meraj.rahimi@nrc.gov</a>       |
| Michele Sampson | 301-287-9077 | <a href="mailto:michele.sampson@nrc.gov">michele.sampson@nrc.gov</a> |

**ENERCON**

|              |              |  |
|--------------|--------------|--|
| Curt Lindner | 770-497-8818 | <a href="mailto:clindner@enercon.com">clindner@enercon.com</a> |
|--------------|--------------|--|

**TLI**

|               |              |  |
|---------------|--------------|--|
| Andy Langston | 910-233-4529 | <a href="mailto:alangston@tliusa.com">alangston@tliusa.com</a> |
| Peter Vescovi | 910-620-8679 | <a href="mailto:pvescovi@tliusa.com">pvescovi@tliusa.com</a>   |

**ROBATEL**

|                  |              |  |
|------------------|--------------|--|
| Christopher Dane | 540-525-9522 | <a href="mailto:c.dane@robateltech.com">c.dane@robateltech.com</a> |
| Jared Bower      | 276-620-3769 | <a href="mailto:jbower@robateltech.com">jbower@robateltech.com</a> |