June 3, 2015

MEMORANDUM TO: Anthony H. Hsia, Deputy Director
Division of Spent Fuel Management, NMSS

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

SUBJECT: SUMMARY OF MAY 20, 2015, MEETING WITH HOLTEC INTERNATIONAL

Background

Holtec International (Holtec) is preparing an application for the Model No. HI-STAR 80 package. The meeting was noticed on March 4, 2015. The meeting attendance list and the presentation are provided as Enclosure Nos. 1 and 2, respectively.

Discussion

The Model No. HI-STAR 80 package is capable of transporting either (i) 12 PWR or 32 BWR fuel assemblies in a bare basket with a maximum heat load of 50 kW, or (ii) up to 5 metric tons of solid waste, e.g., fuel channels, core grids, control rods, burnable absorbers, in a non-fuel waste basket, or (iii) core component cassettes in a secondary packaging basket with a maximum heat load of 2 kW.

The closure system includes a double independently bolted closure lid as is the case for the Model Nos. HI-STAR 180 and 180D packages, and the closure lid seal joint remains leak-tight under both normal conditions of transport and hypothetical accident conditions.

Although most of the analyses will be "carried over" from the licensing approach for the Model Nos. HI-STAR 180 and 180 D, staff reminded Holtec that the application shall be "self-sufficient," complete, and include all the necessary information for a safety determination. The applicant confirmed that the 70,000 MWD/MTU burnup is an assembly average (thus, the peak burnup is higher) and that there is no change in the assembly pitch for the criticality analysis in line with what was done for the evaluation of the Model No. HI-STAR 180 package.

Regarding a potential deviation from a "typical" definition of package contents, staff stated that the 10 CFR 72.48 process by which licensees and certificate holders may make changes to their facilities, storage cask designs, and procedures without prior NRC approval does not exist in 10 CFR Part 71, and that entertaining this option for the Model No. HI-STAR 80 package may be very challenging.

The safety analysis considers all fresh fuel (both baskets), no burnup credit, and no more than 90% of the minimum B_4C content in Metamic-HT is credited. The applicant is only using CASMO-5 for sensitivity evaluations. This approach for moderator exclusion under accident

conditions, based on the double closure lid system, with a criticality analysis of hypothetical fuel reconfigurations has already been approved by staff. Staff asked if strain rate dependent foam properties had been considered in the structural crush evaluation, and also expressed concerns on the thermal analyses, as presented, with not enough margin for the maximum peak cladding temperatures.

Regarding non-fuel waste contents, staff asked the applicant to (i) quantify the source terms associated with those wastes, and (ii) justify the releasable contents. Staff recognized that no numerical analysis is required for the thermal evaluation due to the very low heat load (approximately 2 kW) but requested that the applicant selects one of the six provisions of 10 CFR 71.15 to demonstrate fissile exemption.

Staff made no regulatory commitments during the meeting.

Docket No. 71-9374
TAC No. L24996

Enclosure 1: Meeting Attendees
Enclosure 2: Presentation

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Enclosure 1: Meeting Attendees
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Distribution: Attendees, M. Lombard

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ADAMS Package No.: ML15155A546 Memo: ML15155A568 Presentation: ML15155A582

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Meeting Between HOLTEC and the
Nuclear Regulatory Commission
May 20, 2015
Meeting Attendees

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