September 17, 2010

MEMORANDUM TO: Doug Weaver, Deputy Director
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

FROM: Jennie Rankin, Project Manager **/RA/**
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF SEPTEMBER 14, 2010, MEETING WITH GLOBAL NUCLEAR FUELS – AMERICAS, LLC, REGARDING DESIGN CHANGES AND TYPE B TESTING FOR THE MODEL NO. NPC PACKAGE

Background.

On September 14, 2010, a meeting was held in Rockville, Maryland, at the request of Global Nuclear Fuels – Americas, LLC (GNF) to discuss the planned design changes and Type B testing for the Model No. NPC package.

The meeting was noticed on August 30, 2010 [ML102430232]. The list of meeting attendees is provided as Enclosure 1. The meeting handouts are provided as Enclosure 2.

Discussion.

The primary purpose of the meeting was to discuss GNF's design changes to their existing Type A – fissile package which accommodates Low Enriched Uranium Oxide Powder/Pellets/Compounds to a Type B package to accommodate reprocessed uranium. GNF briefly highlighted three proposed designs to the inner containment canister assembly (ICCA). GNF does not intend to revise the design of the outer confinement assembly. The first design modifies the Type A design to accommodate a pressure fitting; thus allowing each ICCA to be leak tested. The second design changes the sealing method from a band clamp assembly to a double O-ring design to minimize leakage. The third design proposes a welded or threaded insert within the current ICCA with the standard clamp closure or an ICCA with the double o-ring type closure. To assist with design, GNF requested to obtain the staff guidance used for material evaluation of seals. Following the meeting, staff responded to the request, providing ASTM D 2000 as an example of the type of code or standard that could be used to help qualify seal material.

GNF discussed the testing plan for evaluating any impacts to the new sealing configurations and their use of a LS-Dyna model to assist in determining the drop test configurations. GNF is currently evaluating performing a "hot drop" at 130°F, 4 ft drops, 30 ft drops, and puncture testing at Oak Ridge test facility. Staff noted that cold temperature drop testing may reduce the

energy absorbing properties of the foam and should be considered in development of the drop test plan. Staff also noted Internal Staff Guidance (ISG) 21, and recommended the input / output data files be provided as a part of the application. GNF mentioned thermal testing will be conducted at South Carolina Fire Academy and the post test leakage rate test will follow guidelines of ANSI N14.5.

Due to the coordination of schedules with the test site facilities, GNF plans to submit the Type B application to accommodate reprocessed uranium in fall of 2011.

During the public comment period, discussion was noted that this type of reprocessed or recycled uranium is recognized as low specific activity material by foreign competent authorities and the International Atomic Energy Agency. The public further noted that obtaining such a robust package design is unnecessary and disproportionate to the risk. Discussion was also noted regarding incorporation of ISGs into the Standard Review Plans (SRPs) and the hierarchy of different types of guidance. Staff stated that revising a SRP is a multi-year effort that will include the ISGs when updated. Furthermore, the different types of guidance (SRPs, ISGs, etc.) are independent documents each with a unique purpose; therefore, there is not a hierarchy of importance.

Docket No. 71-9294
TAC No. L24469

Enclosures:
1. Meeting Attendees
2. Meeting Handouts

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SFST r/f NRC Attendees

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Meeting Attendees
Global Nuclear Fuels – Americas, LLC and NRC Meeting
September 14, 2010, 1:30 p.m. – 3:30 p.m.

NAME	AFFILIATION	PHONE NUMBER
Michele Sampson	NRC/NMSS/SFST	301-492-3292
Pierre Saverot	NRC/NMSS/SFST	301-492-3408
David Tang	NRC/NMSS/SFST	301-492-3328
Huda Akhavannik	NRC/NMSS/SFST	301-492-3273
Jennie Rankin	NRC/NMSS/SFST	301-492-3268
David Tarantino	NRC/NMSS/SFST	301-492-3413
Eli Goldfeiz	NRC/NMSS/SFST	301-492-3277
Ray Lorson	NRC/NMSS/SFST	301-492-3300
Luiz Cruz	NRC/NMSS/SFST	301-492-3270
Chris Allen	NRC/NMSS/SFST	301-492-3148
Peter Vescovi	Westinghouse Electric Co.	803-647-3167
Tanya Sloma	Westinghouse Electric Co.	803-647-1786
John Zino	GE-Hitachi Engineering	910-819-6116
Andy Langston	Global Nuclear Fuels	910-819-5433
John Hannah	GE-Hitachi Engineering	910-819-6821
Scott Murray	GE-Hitachi Engineering	910-819-5950

Enclosure 1

Enclosure 2
Meeting Handouts