January 21, 2010

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

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

SUBJECT: SUMMARY OF OCTOBER 20, 2009, MEETING WITH WESTINGHOUSE ELECTRIC COMPANY LLC, REGARDING THE TRANSPORT OF IRRADIATED URANIUM IN CURRENT FRESH FUEL PACKAGES

Background.

On October 20, 2009, a meeting was held in Rockville, Maryland, at the request of Westinghouse Electric Company LLC (WEC) to discuss the inclusion of trace irradiated uranium in WEC fresh fuel and the implications for domestic and international transport, specifically for the Model Nos. Traveller and MCC transportation packages. In addition, WEC discussed the renewal schedule and the scope of a future amendment request for the Traveller package and future plans for the MCC packages. No proprietary information was discussed at the meeting. No regulatory decisions were requested nor made at the meeting.

The meeting was noticed on September 29, 2009 [ML092720592]. The list of meeting attendees is provided as Enclosure 1. The meeting handouts are provided as Enclosure 2 [ML093350579].

Discussion.

The primary purpose of the meeting was to discuss options for shipping fresh fuel which is fabricated from uranium that does not meet the definition of unirradiated uranium. WEC explained the industry description of “perfumed” or “blended” uranium, as unirradiated uranium that is processed in a system that has handled irradiated material. As a result of the exposure to the system, the enriched uranium that is produced is contaminated with artificial uranium isotopes, fission products and transuranics. The quantity of uranium-236 in the material WEC needs to ship exceeds the limits in the NRC and Department of Transportation (DOT) definition of unirradiated uranium. The problem for WEC is that their existing fresh fuel packages, the Model Nos. Traveller (Docket No. 71-9297), and MCC-3, MCC-4, and MCC-5 (Docket No. 71-9239), are certified as Type A fissile packaging. Irradiated uranium no longer qualifies to ship with an unlimited A_2 value. Therefore, a calculation would need to be performed to compare each radionuclide in the proposed shipment to the A_2 limits in 10 CFR Part 71, with the likely result that a Type B package would be required to transport these fuel assemblies. WEC

identified that they anticipated a need to transport this type of material in late 2010 or early 2011. The shipments will be international, so NRC, DOT, and other foreign Competent Authority approvals will be required.

WEC identified that they had discussed the need to ship this “perfumed” uranium with some of the foreign Competent Authorities where their shipments would need approval. Under the requirements of TS-R-1, many of the fresh fuel shipments in Europe are being shipped in fissile industrial packaging (IP-F) as low specific activity material. The IP-F packaging does not have the A2 value limit for contents that applies to Type AF packaging. WEC indicated that if the NRC and DOT would certify their fresh fuel packages as IP-F, it would resolve their problem. Staff confirmed that NRC and DOT did not adopt the TS-R-1 provisions to allow fissile material to be classified as low specific activity material. Therefore, this is not a viable option under the current U.S. transport regulations. As a second option, WEC discussed a rationale for assigning an unlimited A2 value to their “perfumed” material. Both 10 CFR Part 71 and the DOT regulations in 49 CFR Part 173, provide an option for a shipper to request to have a new A_2 value assigned to material. WEC provided analysis and comparison to material with unlimited A_2 values for consideration as a path forward for requesting an unlimited A_2 value for their “perfumed” uranium. Staff confirmed that the regulations do allow for an A_2 value to be assigned by the Competent Authority. However, staff noted that classification of material for transportation is the responsibility of DOT, in accordance with the 1979 MOU between NRC and DOT. Staff recommended that WEC review their proposal with DOT.

WEC also provided an overview of their anticipated future licensing actions. WEC identified the need to request modified fuel assemblies to be added to the contents for the Model Nos. MCC-3, MCC-4, and MCC-5 packaging, with the revision needed by late December 2009, or early January 2010. Westinghouse stated that these contents would be for domestic shipment only, and asked for consideration of how the material could be added to the Certificate without requiring foreign revalidation. Staff confirmed that if the contents would be shipped routinely, the licensing action should be processed as a Certificate revision, not a one-time only shipment authorization. WEC indicated that staff should expect to receive the renewal request for the Model No. Traveller package before the end of 2009. After completing the renewal request, WEC intends to submit package design modifications to the Traveller to facilitate handling of the package and to add additional fuel types to the approved contents.

Docket Nos. 71-9239, 71-9297
TAC No. L24378

Enclosures:
1. Meeting Attendees
2. Meeting Handouts

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DISTRIBUTION:
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G:\SFST\Sampson\MtgSummary10-20-09.doc **ADAMS Accession (Package) No.: ML100220577**

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NAME:	MSampson		MDeBose		EBenner							
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Meeting Attendees
Westinghouse Electric Company LLC and NRC Meeting
October 20, 2009, 1:00 p.m. – 3:00 p.m.

NAME	AFFILIATION	PHONE NUMBER
Norman Kent	Westinghouse Electric Co.	803-647-3552
Peter Vescovi	Westinghouse Electric Co.	803-647-3167
Tanya Sloma	Westinghouse Electric Co.	803-647-1786
Michele Sampson	NRC/NMSS/SFST	301-492-3292
JoAnn Ireland	NRC/NMSS/SFST	301-492-3309
Chris Bajwa	NRC/NMSS/SFST	301-492-3333
Pierre Saverot	NRC/NMSS/SFST	301-492-3408
David Tang	NRC/NMSS/SFST	301-492-3328
Ata Istar	NRC/NMSS/SFST	301-492-3409
Geoff Hornseth	NRC/NMSS/SFST	301-492-3330
Neil Day	NRC/NMSS/SFST	301-492-3335

Enclosure 1