

June 6, 2006

MEMORANDUM TO: William H. Ruland, Deputy Director
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

FROM: Meraj Rahimi, Senior Project Manager
Licensing Section /RA/
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF JUNE 1, 2006, MEETING WITH TALISMAN
INTERNATIONAL AND THE DEPARTMENT OF ENERGY (DOE)
CONCERNING THE DOE-OWNED SPENT NUCLEAR FUEL
CANISTERS

On June 1, 2006, staff of the Nuclear Regulatory Commission (NRC), Talisman International, and the Department of Energy (DOE) held a pre-application meeting to discuss standardized canisters designed for transporting DOE-owned spent nuclear fuels which are destined for Yucca Mountain. The purpose of the meeting was to discuss the DOE's approach in addressing the criticality safety requirements under 10 CFR 71 using moderator exclusion assumption based on the demonstrated structural integrity of the proposed canisters.

As described by DOE, the standardized canister is not a self-contained transportation package. Rather, it is a subpart of a transportation cask system with the canister providing robust containment. The DOE has developed four geometries: a 18-inch and 24-inch nominal diameters and 10 foot and 15 foot nominal lengths. These stainless steel canisters are designed for storing, transporting, and disposing spent nuclear fuels discharged from research reactors, production reactors, and other spent nuclear fuels owned and managed by the DOE. Multiple basket designs can be accommodated within the canisters.

The DOE is proposing to submit a series of topical reports which would demonstrate the ability of these canisters, once placed inside transportation overpacks, to keep water outside the canisters when subjected to transportation hypothetical accident conditions using the Interim Staff Guidance (ISG) -19. Furthermore, in these topical reports the DOE would also like to qualify these canisters as the "special design feature" in a transport package under 10 CFR 71.55(c) in order to assume that there is no water intrusion inside the canisters. These topical reports would then be submitted for review to the NRC and approved through the issuance of Safety Evaluation Reports (SERs). Then, cask vendors would be able to submit applications to the NRC for moderator exclusion-based transportation packages containing DOE-owned spent nuclear fuel using these canisters, as supported by the approved topical reports.

The staff informed the DOE that invoking 10 CFR 71.55(c) would require the Commission's approval because the use of this regulation would involve a policy decision. With regard to the use of ISG-19, the staff mentioned the need for material data at - 20 EF if the DOE wants to take credit in materials strength under plastic deformation in an elastic-plastic analysis. Furthermore, the plastic deformation in the containment for the canister welds needs to be considered in light of ISG-19 which is focused more on the bolted canisters.

No regulatory decisions were made at the meeting.

An attendance list and meeting materials are included.

TAC No. A10533

Enclosures: 1. Attendance List
 2. Meeting Materials

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NRC/Talisman International/DOE Meeting
June 1, 2006

ATTENDANCE LIST

<u>Name</u>	<u>Affiliation</u>
Meraj Rahimi	NRC/NMSS/SFPO
William Brach	NRC/NMSS/SFPO
Wayne Hodges	NRC/NMSS/SFPO
Ed Hackett	NRC/NMSS/SFPO
William Ruland	NRC/NMSS/SFPO
Gordon Bjorkman	NRC/NMSS/SFPO
Robert Nelson	NRC/NMSS/SFPO
Larry Campbell	NRC/NMSS/SFPO
Chris Brown	NRC/NMSS/SFPO
Bob Einziger	NRC/NMSS/SFPO
David Tang	NRC/NMSS/SFPO
Carl Withee	NRC/NMSS/SFPO
Geoff Hornseth	NRC/NMSS/SFPO
Jerry Chuang	NRC/NMSS/SFPO
Allen Hansen	NRC/NMSS/SFPO
Bob Tripathi	NRC/NMSS/SFPO
Elaine Keegan	NRC/NMSS/SFPO
Nancy Osgood	NRC/NMSS/SFPO
Michel Call	NRC/NMSS/SFPO
Dennis Galvin	NRC/NMSS/HLW
Don Kim	DOE/RW-9
Steve Gomberg	DOE/RW-9
Mark Arenez	DOE/INL
Dick Blaney	DOE/EM
John Scolah	DOE/EM
Brett Carlsen	INL/NSNFP
Phillip Wheatley	INL/SNSFP
Thomas Hill	INL/NSNFP
Mal Knapp	Talisman International
Charles Haughney	Talisman International
George Bidinger	Talisman International
Thecla Fabian	FCW
Mart Malsch	EFMC
Jim York	Bechtel-SAIC Co.
Maureen Conley	Platts/McGraw Hill
Bill Lake	ASE, Inc.