

SUMMARY: NUCLEAR REGULATORY COMMISSION/DEPARTMENT OF ENERGY TECHNICAL EXCHANGE ON DOE SPENT NUCLEAR FUEL

A technical exchange was held on July 30, 1997, in Vienna, Virginia, to present DOE's approach for categorizing DOE-owned spent nuclear fuel and summarize analyses for assessing disposal impacts. The purpose of the technical exchange was to present DOE's plans for disposal of DOE-owned spent nuclear fuel (SNF), the approach for categorizing DOE SNF for characterization and evaluation of the 250 fuel types, and to obtain NRC feedback on the DOE approach. The meeting was videoconferenced for Yucca Mountain Site Characterization Office (YMSCO) staff in Las Vegas, Nevada. The NRC was represented by staff from the Office of Nuclear Material Safety and Safeguards, specifically, the Division of Waste Management and Spent Fuel Project Office. The DOE was represented by staff from the Office of Civilian Radioactive Waste Management, the Office of Nuclear Material and Facility Stabilization, the Yucca Mountain Site Characterization Office, the National Spent Nuclear Fuel Program, Office of Naval Reactors, and DOE SNF management sites. In addition, staff from the Nuclear Waste Technical Review Board were present.

The technical exchange agenda, copies of the handout materials, and the list of attendees is attached. The morning session was dedicated to providing an overview of DOE's spent fuel program and describing in detail the inventory and characteristics of specific fuel types and near-term plans at the Idaho National Engineering and Environmental Laboratory, the Richland Operations Office, the Savannah River Site, and the Naval Nuclear Propulsion Program. These presentations discussed the concept of categorizing the many spent fuel types and using the categories as a basis to determine spent fuel acceptability in a geologic repository.

The afternoon session focused on assessing the disposability of DOE SNF, discussing DOE's planned approach for incorporating DOE SNF into repository design and licensing considerations, and summarizing results of preliminary analyses. The repository design basis for DOE SNF was presented, along with approaches for evaluating DOE SNF in performance assessments, criticality analyses, and preclosure radiological safety assessments. These analyses are similar to those for commercial SNF and are tailored to characteristics of DOE SNF. The relationship between DOE SNF analyses and development of waste acceptance criteria was explained. The DOE request for construction authorization will be based on compliance with specified acceptance criteria rather than individually addressing specific fuel types. In this way, although some DOE SNF may not be fully characterized at the time of LA submittal, the NRC could still evaluate an integrated safety analysis of the repository. In closing, DOE summarized the preceding discussion and finished by presenting the approach for a license application in year 2002 that would cover all commercial and DOE fuel types and HLW. Following the DOE presentations, NRC identified a need for a separate meeting with the Office of Naval Reactors to discuss Naval SNF on a classified basis.

NRC staff viewed the DOE licensing approach favorably, noting that the concepts of grouping fuel types and using bounding and sensitivity analyses seemed acceptable, particularly considering that the amount of each DOE-owned fuel type is a small part of the total repository inventory. Additionally, the NRC had no objection to establishing DOE-owned spent fuel groups to conduct criticality analyses and performance assessments, and to use the outcome of these analyses to

develop acceptance criteria for inclusion in the license application. However, NRC noted that performance objectives would be needed to develop the waste acceptance criteria and that these objectives would depend on the future Environmental Protection Agency (EPA) repository standard and NRC's revised 10 CFR Part 60 rule.

Accepted:



Richard Weller
Division of Waste Management
Office of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory Commission



Nancy Slater
Regulatory Coordination Division
Office of Civilian Radioactive
Waste Management
U.S. Department of Energy

DOE/NRC Technical Exchange

July 30, 1997

Back

Name (Printed)	Signature	Company Affiliation	Title	Telephone Number
JIM CLARK		JAI	Mgr.	(703) 204-8920
Alan Wells		FCI		(770) 495-9136
HUGH BENTON		M&O / FCF		702-227-6396
Dave Hought		DOE		702 794-5474
Howard Eckert		DOE	Eng	301-903-7173
M. J. ANDERSON		BDM	EM-67	301-601-5382
Elmer Naplos		DOE	NE-60	703-602-8229
KEN CHACEV		DOE	OFFICE DIRECTOR	202 586-0671
Roger M Carmack		DOE/ESH	Pl Manager, ^{SR with} _{Contract}	509 276-2057
P STRONDE		LMITCO	Mgr NSNF	207 526 0185
Doherty D. P.		DOE-NR		703-603-5522
C HANIFLI		DOE		301-903-3899
Bob Rosen		DOE/LLNL		301-906-7708
Deals Gwyn		MEOL/DEES	Eng. Supervisor	702-295-3964
Carl Benson		DOE-NR	Program Director	412-476-6097
Bob Holt		DOE-RL	Staff	509-376-9989
Bob Hiegel		DOE-RL	SNF	509 376 1060
Jim Follin		NR-Seattle		412 476 5934
Marissa Bailey		NRL / SFPO	Project Manager	301-415-8531

DOE/NRC Technical Exchange
July 30, 1997

Name (Printed)	Signature	Company Affiliation	Title	Telephone Number
Elaine Keegan	<i>Elaine Keegan</i>	NRC/NMSS/SFPO	Health Physicist	301-415-8517
MARSHALL DALL	<i>Marshall Dall</i>	SCIENTECH	SNFP SUPPORT	304 428 9583
Steve Gombarg	<i>Steve Gombarg</i>	DOE/RW-SI	Team leader	(202) 586-6497
Tae M. Ahn	<i>Tae M. Ahn</i>	NRC/NMSS/DWM	Materials Engineer	(301) 415-5812
JOSEPH M. FRANK	<i>Joseph M. Frank</i>	DOE-SR	PROGRAM MGR.	(803) 557-3987
Richard Peck	<i>Richard Peck</i>	ORNL/DOE	PE Manager	702-794-5556
Theodore Gmlich	<i>Theodore Gmlich</i>	DOE/BDM/EM-07	SNF	(202) 586-0671
Ernest Burns	<i>Ernest Burns</i>	DOE/WERC	Mgr. Proj. Int.	(301) 963-1431
PAUL HARRINGTON	<i>P.A. Harrington</i>	DOE/YMSCO	TEAM LEAD - LA	702-794-5415
Jeff Williams	<i>Jeff Williams</i>	DOE/RW-SI	Diagn. Systems Engineering	202-586-9620
Jim Duguid	<i>Jim Duguid</i>	INTERA/M&O	PA	703-204-8861
RICK WELLS	<i>Rick Wells</i>	NRC	SECTION CHIEF	301-415-7287
Kim Gross	<i>Kim Gross</i>	NRC	General Engineer	301-415-6612
KIEN CHANG	<i>Kien Chang</i>	NRC	Proj Mgr.	301 415-6612
ALI HAGHI	<i>Ali Haghi</i>	M&O/Duke	LICENSING	702-295-4873
JIM YORK	<i>Jim York</i>	Buzz Allen	SR scientist	202-484-8375
Denny Fillman	<i>Denny Fillman</i>	LMA/TEC	Adv SA	2085231091
Jennifer Davis	<i>Jennifer Davis</i>	NRC	MATLS ENGR	(301) 415-5874
Jim Boyd	<i>Jim Boyd</i>	DOE-ID	NSNFP	202-520-8990

NRC/DOE Technical Exchange on DOE Spent Nuclear Fuel

Las Vegas, Nevada Attendance Listing

**April Gil, DOE-YMSCO
Paige Russell, DOE-YMSCO
Donald Nitti, M&O, Las Vegas
Robert Fish, MTS, Las Vegas
Paul Daniel, MTS, Las Vegas
Venkataraman Pasupathi, M&O, Las Vegas
David Stahl, M&O, Las Vegas**