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Department of Energy
Washington, DC 20585

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DNF SAFETY BOARD

The Honorable A.J. Eggenberger
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW, Suite 700
Washington, DC 20004-2941

Dear Mr. Chairman:

The purpose of this letter is to transmit the Office of Environmental Management (EM) response to Commitments 5.1.1 and 5.1.3 of the *Department of Energy Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 2007-1, Safety-Related In Situ Nondestructive Assay of Radioactive Materials*, October 2007.

The Enclosure lists EM Hazard Category 2 Nuclear Facilities and identifies existing criticality safety programs and their dependence on in-situ nondestructive assay. For EM facilities this number is less than 20 percent. EM Hazard Category 3 Nuclear Facilities with criticality safety programs have also been included. A prioritization of these facilities was also performed based upon criticality accident risk. Ranking was based on the following hierarchy from highest to lowest priority: Processing/storage of fissile solutions or transfers of potentially fissile solutions from favorable to unfavorable geometry vessels; operating critical assembly or research reactor facility; large quantities of suspected but uncharacterized holdup such as in a D&D situation of a former Pu facility; metal/oxide processing and handling; solid TRU waste along with input on current facility operations. All EM facilities were identified as low risk with the exception of the Plutonium Finishing Plant at Hanford and the HB Line at the Savannah River Site which have been identified as medium risk.

If you have any comments or feedback, please call me at (202) 586-0738 or Mr. Dae Y. Chung, Deputy Assistant Secretary for Safety Management and Operations, at (202) 586-5151.

Sincerely,

James M. Owendoff
Chief Operations Officer for
Environmental Management

Enclosure



cc:

J. Rispoli, EM-1

I. Triay, EM-2

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SEPARATION

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EM 2007-1 Nuclear Facilities

Facility Identification				2007-1 Information		
Operations office	Site	Facility name or name of cluster of facilities covered by Safety Basis (SB)	Hazard category (HC)	Facility Requiring Criticality Safety Program	Facility Criticality Safety Program Relies Upon In Situ Nondestructive Assay (NDA)	Facility Priority
OO	Site	Facility	HC	Crit	NDA	Priority
Carlsbad	Waste Isolation Pilot Project (WIPP)	Contact-Handled TRU Waste Facility	2	Yes	No	NA
Carlsbad	WIPP	Remote-Handled TRU Waste Facility	2	Yes	No	NA
Idaho (ID)	Idaho Cleanup Project (ICP)	Calcined Solids Storage Facilities (CSSFs)	2	No	No	NA
ID	ICP	Idaho Nuclear Technology and Engineering Center (INTEC) Underground Fuel Storage Facility (CPP-749 AND 2707)	2	Yes	No	NA
ID	ICP	INTEC FAST Fuel Storage Area (FSA) (CPP-666 and 767)	2	Yes	No	NA
ID	ICP	INTEC Fuel Processing Facility (CPP-601)	2	Yes	No	NA
ID	ICP	INTEC Fuel Processing Facility (CPP-601) Tap and Drain Operations	2	Yes	No	NA
ID	ICP	INTEC Tank Farm Facilities	2	No	No	NA
ID	ICP	INTEC Irradiated Fuel Storage Facility (IFSF) (CPP-603B)	2	Yes	No	NA
ID	ICP	INTEC Process Equipment Waste (PEW) System	2	No	No	NA
ID	ICP	INTEC Laboratory Facilities (CPP-602 and 630)	2	No	No	NA
ID	ICP	INTEC New Waste Calcining Facility (NWCF)	2	No	No	NA
ID	ICP	INTEC Waste Management Facilities	2	Yes	No	NA
ID	ICP	Integrated Waste Treatment Unit (IWTU)	2	No	No	NA
ID	ICP	INTEC Unirradiated Fuel Storage Facility (CPP-651)	2	Yes	No	NA
ID	ICP	Generic D&D	3	Yes	No	NA
ID	ICP	Radioactive Waste Management Complex (RWMC)	2	Yes	No	NA

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ID	ICP	Advanced Mixed Waste Treatment: Radioactive Waste Management Complex (AMWTP)	2	Yes	No	NA
ID	ICP	INEEL On-Site Transportation Activities	2	Yes	No	NA
Ohio	West Valley Demonstration Project (WVDP)	WVDP Waste Processing and Support Activities (Main Plant, Supernatant Treatment, Vitrification System Operations, Fuel Receiving and Storage Facilities, NRC Licensed Disposal Area, Liquid Waste Treatment, Chemical Process Cell Waste Storage Area, and Lag Storage)	3	Yes	No	NA
Oak Ridge (OR)	East Tennessee Technical Park (ETTP)	K-25 and K-27 Facilities at the East Tennessee Technology Park	2	Yes	No	NA
OR	ETTP	K-1065 Waste Management Complex	2	Yes	No	NA
OR	ETTP	K-33 Building	2	Yes	No	NA
OR	Oak Ridge National Lab (ORNL)	Building 3019B, High-Level Radiation Analytical Facility	2	Yes	No	NA
OR	ORNL	Building 7503, Molten Salt Reactor Experiment (MSRE)	2	Yes	No	NA
OR	ORNL	Melton Valley Solid Waste Storage Facilities (MVWSF)	2 and 3	Yes	No	NA
OR	ORNL	ORNL Liquid Low-Level Waste Management System (LLLW)	2	Yes	No	NA
OR	ORNL	Building 3038, Isotopes Development Laboratory	3	Yes	No	NA
OR	ORNL	Building 3517, Fission Product Development Laboratory	2	Yes	No	NA
OR	ORNL	Documented Safety Analysis for the Shielded Transfer Tanks	2	No	No	NA

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OR	ORNL	Documented Safety Analysis for On-site Transportation of Remote Handled Waste at the Oak Ridge National Laboratory	2 and 3	Yes	No	NA
OR	ORNL	Documented Safety Analysis for On-site Transportation of CH-TRU Waste between BJC Facilities and FWENC's WPF	2	Yes	No	NA
OR	ORNL	Documented Safety Analysis for On-site Transportation of Molten Salt Reactor Experiment Charcoal Canister at Oak Ridge National Laboratory	2	Yes	No	NA
OR	ORNL	On-Site Transportation of RGRS Uranium Hexafluoride Traps	2	Yes	No	NA
OR	ORNL	On-Site Transportation of Molten Salt Reactor Experiment Residual Salts	2	Yes	No	NA
OR	ORNL	Documented Safety Analysis for the On-Site Transportation at ORNL of Three Casks from 7822K Solid Waste Storage Facility to 3525 Hot Cell	2	Yes	No	NA
OR	Various	SMP Description for HC 2 and 3 Nuclear Facilities	2 and 3	Yes	No	NA
OR	ORNL	TRU Waste Processing Center	2	Yes	No	NA
OR	ORNL	3019A Complex	2	Yes	No	NA
Richland (RL)	Hanford	Pu Finishing Plant (PFP): D&D mission	2	Yes	Yes	Medium
RL	Hanford	2736-Z (PFP stabilization and storage)	2	Yes	Yes	Medium
RL	Hanford	Tank 241-Z-361	2	Yes	No	NA
RL	Hanford	224-T (formerly TRU Storage and Assay Facility (TRUSAF)), TRU waste storage	2	Yes	No	NA
RL	Hanford	231-Z Metallurgical Research Facility	3	Yes	Yes	Low

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RL	Hanford	324 Bldg, Waste Technology Engineering Laboratory, Vault, hot cells, liquid waste tanks	2	No	No	NA
RL	Hanford	200 Area Interim Storage Area (ISA), Fuel/cask storage, HC-2 preliminary (storage pad)	2	Yes	No	NA
RL	Hanford	Canister Storage Building (CSB), Spent fuel stabilization and storage	2	Yes	No	NA
RL	Hanford	Cold Vacuum Drying Facility (CVDF), (Project W-441), Spent fuel drying	2	Yes	No	NA
RL	Hanford	K Basins Facility, Spent fuel storage	2	Yes	No	NA
RL	Hanford	Solid Waste Operations Complex (SWOC). Includes Low Level Burial Grounds (LLBG), Central Waste Complex (CWC), T Plant, and Waste Receiving and Processing (WRAP).	2	Yes	Yes	Low
RL	Hanford	Waste Encapsulation Storage Facility (WESF), Sr and Cs storage	2	No	No	NA
RL	Hanford	209-E Building Critical Mass Laboratory	3	Yes	Yes	Low
RL	Hanford	REDOX	2	Yes	No	NA
RL	Hanford	Pu Conc. Bldg., 224-B	3	Yes	Yes	Low
RL	Hanford	B-Plant Bulk Reduction Building	2	No	Yes	Low
RL	Hanford	PUREX (includes Pu/U separations and Tunnels)	2	Yes	Yes	Low
RL	Hanford	U Plant/UO3 PUREX	3	Yes	No	NA
RL	Hanford	Hanford On-Site Transportation Activities	2, 3 and <HC3	Yes	No	NA
RL	Hanford	Fast Flux Test Facility	2	Yes	No	NA
RL	Hanford	618-10 and 618-11 (underground waste sites)	3	Yes	No	NA
RL	Hanford	118-K-1 (underground waste sites)	3	Yes	No	NA

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Office of River Protection (ORP)	Hanford	Waste Tanks (includes Rotary Mode Core Sampling and 242-S and -T evaporators)	2	Yes	No	NA
ORP	Hanford	Liquid Effluent Project: 242-A Evaporator-Crystallizer, Liquid waste condensation	2	Yes	No	NA
ORP	Hanford	Analytical Service Program: 222-S Laboratory Complex	3	Yes	Yes	Low
ORP	Hanford	River Protection Project - Waste Treatment Plant (RPP-WTP)	2 and 3	Yes	No	NA
Savannah River (SR)	Savannah River Site (SRS)	K Area Material Storage Facility	2	Yes	Yes	Low
SR	SRS	L Area Material Storage	2	Yes	No	NA
SR	SRS	FDD Reactors: C Reactor	2	No	No	NA
SR	SRS	F Canyon Complex	2	Yes	Yes	Low
SR	SRS	H Canyon	2	Yes	No	NA
SR	SRS	HB-Line	2	Yes	Yes	Medium
SR	SRS	F Area Material Storage	2	Yes	No	NA
SR	SRS	Concentration, Storage, and Transfer Facilities (CSTF)	2	Yes	No	NA
SR	SRS	Defense Waste Processing Facility (DWPF)	2	Yes	No	NA
SR	SRS	Solid Waste Management Facilities (SWMF)	2	Yes	Yes	Low
SR	SRS	Analytical Labs (CLAB)	2	Yes	No	NA
SR	SRS	Savannah River National Laboratory (SRNL)	2	Yes	Yes	Low
SR	SRS	Savannah River On-Site Transportation Activities	2	Yes	No	NA
SR	SRS	Salt Waste Processing Facility (SWPF)	2	Yes	No	NA