



Department of Energy
Washington, DC 20585

September 30, 2005

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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

The Honorable A. J. Eggenberger
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Suite 700
Washington, D.C. 20004-2901

Dear Mr. Chairman:

The purpose of this letter is to transmit the National Nuclear Security Administration (NNSA) and Office of Environmental Management (EM) listings of new facilities and facilities undergoing major modification to meet Deliverable 8.1 of the *Department of Energy Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 2004-2, Active Confinement Systems*, August 2005. Attachment 1 provides the list of EM facilities and Attachment 2 provides the NNSA list of facilities. Consistent with the Implementation Plan, it is our intention that these facilities receive higher priority when completing future activities addressed by the Implementation Plan, specifically the safety-related ventilation system evaluations.

We recognize that some of these facilities have progressed to the point where physical design modifications, (e.g., redesignation of a non-safety system to a safety system) would be difficult and costly. We will continue to work with your staff as we develop an approach to address these situations. If you or your staff have any questions, I can be reached by telephone at (301) 903-0078 or by e-mail at richard.black@eh.doe.gov.

Sincerely,

for Richard L. Black
Director

Office of Nuclear and Facility Safety Policy

2 Attachments

cc: R. Shaw, EH-1
D. Garman, US
L. Brooks, NA-1
J. Paul, NA-2



I. Triay, EM-3
M Whitaker, DR-1
R. Shearer, EH-1
J. McConnell, NA 2.1
R. Lagdon, EH-31
R. Hardwick, EH-2
J. Kimball, NA-1
D. Chung, EM-24

SEPARATION

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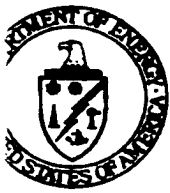
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DEFENSE SAFETY BOARD

ATTACHMENT 1

Office of Environmental Management Input for
Commitment 8.1 of Defense Nuclear Facilities Safety
Board Recommendation 2004-2



Department of Energy
Washington, DC 20585

SEP 28 2005

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SAFETY BOARD

MEMORANDUM FOR RICHARD BLACK
DIRECTOR
OFFICE OF NUCLEAR AND FACILITY
SAFETY POLICY

FROM: DR. INÉS R. TRIAY *Inés Triay*
CHIEF OPERATING OFFICER FOR
ENVIRONMENTAL MANAGEMENT

SUBJECT: Office of Environmental Management Input for
Commitment 8.1 of Defense Nuclear Facilities Safety
Board Recommendation 2004-2

The attached table provides the listing of New Facilities and Facilities Undergoing Major Modification for the Office of Environmental Management. This listing is provided as delineated in Commitment 8.1 of the Implementation Plan (IP) for Defense Nuclear Facilities Safety Board Recommendation 2004-2, *Active Confinement Systems*. The listing is for planning purposes only. All new facilities and major modifications will receive appropriate reviews, approvals, and budget authorizations.

The appropriate concurrences are attached as specified on page 15 of the IP: "The appropriate Central Technical Authority and Program Secretarial Officer will review this listing and provide concurrence."

If you have any further questions, please call me at (202) 586-0738 or Dae Y. Chung, Acting Deputy Assistant Secretary for Integrated Safety Management and Operations Oversight, at (202) 586-5151.

Attachment

cc: M. Whitaker, DR-1



TABLE 1 - EM Listing of New Facilities and Facilities Undergoing Major Modification

Office of Environmental Management				
Facility	Site/ Location	Description	Current Status	Completion Date
	SRS/K-Area	Major Modification: - Installing 3013 container storage and surveillance capability. Includes installation of ventilation, power, furnaces and storage racks.	CD-1 schedule to be complete on 11/1/05.	3/09
	SRS/K-Area	Major Modification: - Installing Plutonium disposition capability. Includes installation of ventilation, melter, and milling process.	CD-0 approved 9/6/05	2012
	SRS/S-Area	Major Modification: - DWPF recycle evaporator	Pre-conceptual design is on hold.	Modification complete and operational when SWPF commences operation in 2009.
	SRS/S-Area	Major Modification: - HLW vitrified glass canister loading facility. Envisioned as a Hazard Category 2 segment of the Defense Waste Processing Facility.	Design to commence in 2009	Operational for shipping in 2012
	SRS/S-Area	New Facility: - Design and construction of a Salt Waste Processing Facility (SWPF)	CD-1 completed in 2004. CD-2 has been delayed PDSA developed and undergoing review.	Construction - 9/08 Commence Operations - 7/09 Note: Construction and operation dates will be impacted by DNFSB PC-2/PC-3 confinement issue
	Idaho	New Facility: Packaging and possible treatment (decision in 2009) of calcine destined for monitored geologic repository.	Design and construct 2010 to 2015.	2015
	Idaho	New Facility: Treating and packaging 900,000 gallons of Sodium Bearing Waste destined for WIPP	Design time frame awaiting SBW waste determination.	

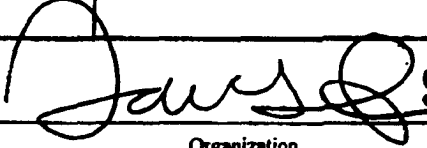



TABLE 1 - EM Listing of New Facilities and Facilities Undergoing Major Modification

Facility	Site/ Location	Description	Current Status	Completion Date
	Idaho	New Facility: Fuel canistering and dry storage facility for material destined for monitored geologic repository.	Construction to begin in 2005.	Shipping in 2010.
Melton Valley Solid Waste Storage Facilities (MVSWSF)	ORO-EM ORNL	<p>Major Modification: Scope of the DSA is being revised to add drum/box venting and sampling operations (sampling is intended to determine presence and concentration of hydrogen and VOC). New operations involve mechanical punching of metal drums to add ventilation filters and sampling ports. Operations will be performed in a portable explosion-resistant unit(s) equipped with a ventilation and HEPA filter system.</p> <p>MVSWSF are currently used for storage of CH-TRU waste in drums and boxes. When the Safety Basis is changed, the portable unit(s) will be located in staging areas outside the existing storage facilities.</p> <p>NOTE: The proposed activities represent a significant change in the scope of the safety basis and therefore were determined by ORO to meet the definition of Major Modification as given in guidance received for developing a response for DNFSB Recommendation 2004-2. However, the changes do not involve significant construction activities relative to the definition and guidance given for "major modification" in 10CFR830 and the associated guide (i.e. DOE G 421.1-2). Existing and "off-the-shelf" equipment will be used. The explosion-resistant unit(s) was/were used in the past at ORO for treatment of potential shock sensitive waste.</p>	<p>These facilities are currently evaluated only as storage facilities in the DSA.</p> <p>Analyses to address venting and sampling operations are currently in draft. It has not yet been determined if the ventilation system in the portable unit(s) will be credited as a safety system in the DSA.</p>	<p>The DSA for storage operations is implemented.</p> <p>Expected submittal to DOE for review and approval is September 2005.</p>
WTP - LAB	ORP/ Hanford	Analytical Laboratory (HC-3)	Design and Construct Contract	Startup NET 2010

TABLE 1 - EM Listing of New Facilities and Facilities Undergoing Major Modification

Facility	Site/ Location	Description	Current Status	Completion Date
WTP - PT	ORP/ Hanford	Liquid Waste Processing and Separation Facility (HC-2)	Design and Construct Contract	Startup NET 2010
WTP - HLW	ORP/ Hanford	High Activity Waste Vitrification Facility (HC-2)	Design and Construct Contract	Startup NET 2010
WTP - LAW	ORP/ Hanford	Low Activity Waste Vitrification Facility (HC-2)	Design and Construct Contract	Startup NET 2010
IDF	ORP/ Hanford	LLW/LLMW Disposal Trench (HC-2)	Open RCRA Trench. Liner under construction.	TBD
CH- TRUM	ORP/ Hanford	TRU Waste Drying and Packaging facility (one occupied HC-2 portable building, unoccupied HC-2 structures)	Conceptual Design	TBD
DBVS	ORP/ Hanford	LAW Treatment Facility (unoccupied HC-2 structures, no HC-2 buildings)	Design and Construct - currently on hold due to funding constraints	2006
	CB/WIPP	Major Modification: Remote-Handled TRU Waste Facility		
	Hanford/200 Area	New Facility: Interim Secure Storage Facility	Conceptual Design	TBD
2736-Z	Hanford/200 Area	Major Modification Support facility to the Interim Secure Storage Facility for examination of inventory during storage. It's not clear this will be a major modification, but included as a place holder as the project matures.	Conceptual Design	TBD
PPPO	Portsmouth Gaseous Diffusion Plant	New Facility: Depleted UF6 Conversion Facility Facility designed to convert Uranium Hexafluoride (UF6) isotope to a stable oxide. The UF6 generated from the gaseous diffusion process is depleted in the U-235 isotope.	Design completed, Construction of support buildings Initiated, Facility operation planned to begin in 2007	2007

TABLE 1 - EM Listing of New Facilities and Facilities Undergoing Major Modification

Facility	Site/ Location	Description	Current Status	Completion Date
PPPO	Paducah Gaseous Diffusion Plant	New Facility: Depleted UF6 Conversion Facility Facility designed to convert Uranium Hexafluoride (UF6) isotope to a stable oxide. The UF6 generated from the gaseous diffusion process is depleted in the U-235 isotope.	Design completed, Construction of support buildings Initiated, Facility operation planned to begin in 2007	2007
Submitted By:		Approved By:		
				
PSO Concurrence:	CTA Concurrence:			
				
Signature Organization Date	Signature Organization Date			
SEP 26 2005	9/27/05			
	9/24/05			

SEPARATION

PAGE

ATTACHMENT 2

National Nuclear Security Administration Input for
Commitment 8.1 of Defense Nuclear Facilities Safety
Board Recommendation 2004-2

U. S. Department of Energy
National Nuclear Security
Administration

*Listing of New Facilities and Facilities
Undergoing Major Modification*

Commitment 8.1 of
Implementation Plan for Defense Nuclear
Facilities Safety Board Recommendation 2004-2



Washington, D.C. 20585

September 2005

Introduction:

This document represents the National Nuclear Security Administration (NNSA) *Listing of New Facilities and Facilities Undergoing Major Modification*, to satisfy Commitment 8.1 in DOE's Implementation Plan for Board Recommendation 2004-2. This listing of new category 2 and 3 defense nuclear facilities, including those undergoing major modification, will ensure the facilities listed are given the highest priority in completing the activities addressed by the Recommendation 2004-2 Implementation Plan.

The facility listing was tabulated (see Table below) and submitted for NNSA site office review and approval and Central Technical Authority (CTA) and Program Secretarial Office (PSO) concurrence. These signatures are displayed as part of the Table below.

As noted in the Table some of the NNSA facilities were excluded from further consideration under the Recommendation 2004-2 Implementation Plan in accordance with the *Recommendation 2004-2 Exclusion Reporting Process* (Commitment 8.2 draft document).

The format for the NNSA Table the *Listing of New Facilities and Facilities Undergoing Major Modification* provides the following information:

- Facility name and identifier
- Location (if applicable)
- Brief description of the new facility/major modification including identification of any active confinement ventilation system (CVS) or categorical exclusion.
- Current status of the design, construction, and testing of the new facility or major modification
- Project startup/completion date

NNSA Listing of New Facilities and Facilities Undergoing Major Modification

Los Alamos National Laboratory				
Facility/Project	Location	Description and Listing of Active CVS or Categorical Exclusion	Current Status	Completion Date
Radiography Facility	TA-55	Facility location not yet determined (new or existing facility)	CD0 granted January 2005. CD1 anticipated May 2006	TBD
Infrastructure Reinvestment Project	TA-55	PF-4 Subprojects include: Zone 1 HVAC Pleenums and HVAC ductwork bracing, Zone 2, 3, & 4 HVAC Pleenums, and UPS upgrades including new switchgear to support auto-start of Diesel Generator. Existing PF-4 active CVS include building recirculation, bleedoff, supply and exhaust with HEPA, and glovebox exhaust, both (SS).	CD0 granted March 2005. CD1 anticipated November 2006	TBD
Pads SST Facility	TA-55	Storage in SSTs on a pad. May be excluded once categorical exclusion criteria are finalized.	Operational Readiness Reviews underway	
MOX Storage Facility	TA-55 PF-185	Storage of nuclear material. May be excluded once categorical exclusion criteria are finalized.		
ROBOCAL Project	TA-55 PF-4	ROBOTIC store and retrieve of nuclear material, to be located in basement. Existing facility active CVS include building recirculation, bleedoff, supply and exhaust with HEPA, and glovebox exhaust, both (SS).		
Chemistry & Metallurgy Research Replacement Facility	TA-55	Facility Ventilation System (SS) and Vault Ventilation System (SS)†.	CD1 granted May 2005. CD2/3 anticipated August 2007.	
Waste Management Risk Mitigation	TA-50	New radioactive liquid waste tank. May be excluded once categorical exclusion criteria are finalized.	CD2/3 granted February 2003. CD4 anticipated November 2006.	
Radiological Liquid Waste Treatment Facility	TA-50	New Facility	CD0 granted October 2004. CD1 anticipated December 2005.	

Los Alamos National Laboratory				
Facility/Project	Location	Description and Listing of Active CVS or Categorical Exclusion	Current Status	Completion Date
RANT	TA-54-38	New Roof (major modification to improve seismic capacity). May be exclude once categorical exclusion criteria are finalized (material in safety class containers or sealed sources)		
RANT Mobile Loader	TA-50-38	Major modification, new nuclear process at RANT.		
WETF	TA-16	Major modification including new diesel generator, new fuel tank, electrical upgrades, modified N2 system, new dewar, fire-wall modification. May be excluded once categorical exclusion criteria are finalized (tritium facility)		
CMR	TA-3	Major modification in Wing 9 to support vessel clean out. (Part of BOLAS GRANDE Project)		
<p>Comments: (1) the overall safety system designation strategy for CMRR is being assessed as part of preliminary design.</p>				
Submitted By:		Approved By:		
<i>[Signature]</i>		<i>[Signature]</i>		
Signature	Organization	Date	Signature	Organization
		9/27/05	LASO	9/27/05
PSO Concurrence:		CTA Concurrence		
<i>[Signature]</i>		<i>[Signature]</i>		
Signature	Organization	Date	Signature	Organization
	NA70	9/30/05		9/30/05

Lawrence Livermore National Laboratory

Facility	Location	Description and Listing of Active CVS or Categorical Exclusion	Current Status	Completion Date
Tritium Facility Modernization	Building 331	Facility ventilation system with no HEPAs. This facility is anticipated to be excluded once exclusion criteria are finalized (tritium facility Categorical Exclusion CE8).	CD1 granted December 2003. CD2 TBD.	
Comments:				
Submitted By:			Approved By:	
<i>Andrew Lopez</i>			<i>Carol Sohn</i>	
Signature			Signature	
Organization			Organization	
Date			Date	
9/27/05			9/27/05	
PSO Concurrence:			CFA Concurrence:	
<i>M. Schmitt</i>			<i>[Signature]</i>	
Signature			Signature	
Organization			Organization	
Date			Date	
NA-10			9/29/05	

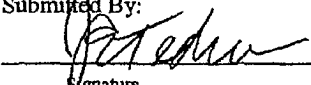
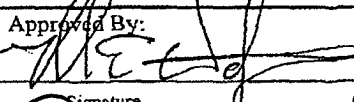
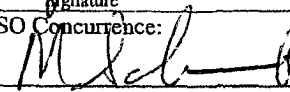
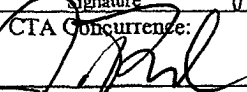
Nevada Test Site

Facility	Location	Description and Listing of Active CVS or Categorical Exclusion	Current Status	Completion Date
Criticality Experiments Facility (proposed modification)	DAF	For the affected buildings within DAF, the preliminary documented safety analysis (PDSA) reflects the HEPA-filtered ventilation systems as defense-in-depth. Nevada Site Office (NSO) has issues a preliminary safety evaluation report (PSER) requesting the contractor to perform additional analyses to provide the technical basis for this classification.	CD2a/3a granted April 2005. CD2/3 anticipated September 2006	
Down-draft Table (DDT) (new modification)	DAF	The DDT and associated HEPA-filtered ventilation system are classified as safety significant. The safety significant structures, systems, and components of the DDT include active confinement with associated TSR to address such aspects as face velocity, differential pressure, HEPA-filter efficiency, and confinement system structural integrity.	An Addendum to the DAF documented Safety analysis and additional TSRs were approved by NSO via a safety evaluation report Addendum, 9/2005.	
Comments:				
Submitted By:			Approved By:	
<i>R.T. Brook</i> <small>Signature</small>			<i>Laura Amberson</i> <small>Signature</small>	
NSO/AMSP <small>Organization</small>			NSO/AMNS <small>Organization</small>	
9/26/05 <small>Date</small>			9/26/05 <small>Date</small>	
PSO Concurrence:			ATA Concurrence:	
<i>M. Scher</i> <small>Signature</small>			<i>[Signature]</i> <small>Signature</small>	
NA 70 <small>Organization</small>			[Organization] <small>Organization</small>	
9/30/05 <small>Date</small>			9/30/05 <small>Date</small>	

Pantex Site

Facility	Location	Description and Listing of Active CVS or Categorical Exclusion	Current Status	Completion Date
Production Cell Upgrades	Building 12-44	This facility is anticipated to be excluded once exclusion criteria are finalized (Categorical Exclusion CE7)	CD3 granted December 2004. CD4 anticipated May 2007	
Production Bay Upgrades	Building 12-64	This facility is anticipated to be excluded once exclusion criteria are finalized (Categorical Exclusion CE7)	CD2 granted July 2004. CD3 anticipated October 2006	
SNM Component Requalification Facility	Building 12-86	This facility is under construction.	CD3B granted December 2003. CD4 anticipated April 2006	
Component Evaluation Facility		This facility is anticipated to be excluded once exclusion criteria are finalized (Categorical Exclusion CE7)	CD0 granted August 2004. CD1 TBD	

Comments:

Submitted By:		Approved By:	
	NUSA/PXSO/NE		PXSO/AM/NE
Signature	Organization	Signature	Organization
	9/24/05		9/28/05
	Date		Date
PSO Concurrence:		CTA Concurrence:	
	NAIO		
Signature	Organization	Signature	Organization
	9/30/05		9/30/05
	Date		Date

Savannah River Site (Non-Proliferation)				
Facility	Location	Description and Listing of Active CVS or Categorical Exclusion	Current Status	Completion Date
Pit Disassembly and Conversion Facility	F-Area	Process building ventilation system including Sand Filter with 3 confinement zones (SC and SS) ¹	CD1 granted October 1997. CD2 anticipated 4Q FY 2006.	
<p>Comments: (1) Only portions of the secondary and tertiary confinement zones required to be operational during and after design basis events (these are SC); primary confinement zone is SS</p>				
Submitted By:		Approved By:		
<i>R. Murkin</i>	NA-262	<i>9/26/05</i>	<i>[Signature]</i>	NA 262 <i>9/26/05</i>
Signature	Organization	Date	Signature	Organization Date
PSO Concurrence:		CTA Concurrence:		
<i>J. Paul</i>	NA-2, NA-20	<i>9/30/05</i>	<i>[Signature]</i>	CTA <i>9/30/05</i>
Signature	Organization	Date	Signature	Organization Date

Savannah River Site (Tritium)

Facility	Location	Description and Listing of Active CVS or Categorical Exclusion	Current Status	Completion Date
Tritium Extraction Facility ¹	H-Area	Categorical Exclusion CE8 applies. Facility Ventilation System exists.	CD3 granted July 1999. Major construction activities are complete. Cold testing is in progress.	CD4 July 2007
<p>Comments: (1) The TEF, consisting of the Remote Handling Building and the Tritium Processing Building has an active ventilation system, including HEPA filters, which is classified as production support. Accident analyses indicate that there is not a sufficient radioisotope source term other than Tritium to generate unacceptable exposures to the public.</p>				
Submitted By:			Approved By:	
<i>DW4</i> Signature SRSO Organization 09/22/05 Date			<i>RWal</i> Signature SRSO Organization 09/22/05 Date	
PSO Concurrence:			CTA Concurrence:	
<i>M. [Signature]</i> Signature NA-70 Organization 9/30/05 Date			<i>[Signature]</i> Signature Organization 9/30/05 Date	

Y12 Site				
Facility	Location	Description and Listing of Active CVS or Categorical Exclusion	Current Status	Completion Date
Highly Enriched Uranium Materials Facility	9720-82	Active ventilation secondary confinement system is designated as safety significant.	CD3D granted August 2004. Project is under construction.	Initial operational capability 2008
Uranium Processing Facility		Conceptual design underway, safety system designation yet to be determined; however project design incorporating active confinement ventilation system where applicable.	CD0 granted December 2004. CD1 anticipated February 2006.	Initial operational capability 2013
9204-2/2E		Active CVS is a process level system; QE re-location project is considered a major modification. However, this facility is anticipated to be excluded as not benefiting once exclusion criteria are finalized. (To be replaced by UPF).	Phase I glovebox move anticipated September 2005.	Phase I completion April 2006. Phase II completion April 2007.
Comments:				
Submitted By: <i>Laura Bohlen</i> Y-12 Site Office 9/26/05 Signature Organization Date			Approved By: <i>[Signature]</i> Y-12 Site Office 9/26/05 Signature Organization Date	
PSO Concurrence: <i>M Sch for NA 70</i> 9/30/05 Signature Organization Date			QTA Concurrence: <i>[Signature]</i> 9/30/05 Signature Organization Date	