



**Presentation to the Environmental Management
Advisory Board**

Project Management and Oversight

Karen Guevara, Project Planning and Controls

Jay Rhoderick, Performance Assessment

September 29, 2005

Agenda

- ❖ **EM and DOE Project Structure**
- ❖ **Federal Project Directors and Certification**
- ❖ **Baseline Development**
 - **Key Documents**
 - **Risk Management**
 - **Value Engineering**
- ❖ **Baseline Reviews**
- ❖ **Performance Reporting, Monitoring and Control**
- ❖ **Issues**
- ❖ **Where we want EMAB advice**



EM Project Structure

- ❖ **EM Projects = EM Operating Project Baseline Summaries + Line Item Construction Projects**
- ❖ **Project Baseline Summaries (77 “Operations-Funded” Cleanup Projects)**
 - Nuclear Material Stabilization and Disposition
 - Spent Nuclear Fuel Stabilization and Disposition
 - Solid Waste Stabilization and Disposition
 - Radioactive Liquid Waste Tank Stabilization and Disposition
 - Soil and Water Remediation
 - Nuclear Facility D&D
 - Non-Nuclear Facility D&D
- ❖ **Line Items (6 Construction Projects)**
 - Hanford Waste Treatment Plant, Immobilized HLW Interim Storage
 - Idaho Sodium Bearing Waste Treatment Facility
 - Portsmouth/Paducah DUF6 Conversion Plants
 - Savannah River Site Salt Waste Processing Facility, Glass Waste Storage



DOE Project Structure

- ❖ **DOE Order 413.3 *Program And Project Management For The Acquisition of Capital Assets***
 - **Defines the various phases of a project life cycle, focusing on construction projects, rather than cleanup projects**
 - **Critical Decision (CD) -0 = Approve Mission Need**
 - **CD-1 = Approve Alternative Selection and Cost Range**
 - **CD-2 = Approve Performance Baseline**
 - **CD-3 = Approve Start of Construction**
 - **CD-4 = Approve Start of Operations or Project Closeout**
 - **Most EM PBS cleanup projects have been granted a CD-2/3 approval**
 - **Critical Decisions-0 and 1 grandfather in because cleanup activities were already under way at most sites**
 - **Critical Decisions 2/3 have been combined for cleanup projects**
 - **EM approval of CD-2/3 granted to allow earned value data to be reported and to place baselines under the EM Configuration Control Board**
 - **Acquisition Executive approval is pending**

EM Federal Project Directors

❖ EM Policy on Federal Project Directors says FPDs:

- Report directly to Site Manager for project
- For large/complex projects, nominally be Site Assistant Manager level
- Be trained as a Contracting Officer Representative (COR) and have COR responsibility
- Be responsible for project scope, schedule, cost, safety, regulatory and Government-Furnished Services and Items (GFSI)
- Be identified for all operating and line item projects (an FPD can manage more than one project) – total of 59 for EM projects
- For large projects, may have deputies/subproject directors
- Be certified by DOE's Certification Review Board by **May 31, 2006**

EM Project List and FPDs

EM Federal Project Directors and Subproject Directors

No.	Site	PBS	Ops	L.I.	Federal Project Director			Federal Subproject Director					
1	Carlsbad	CB-0080 Operate Waste Disposal Facility - WIPP	1	1	Chuan-Fu Wu	\$ 1,748,621	4	1	George Basabilvazo	\$ 1,570,438			
2		CB-0090 Transportation - WIPP	1					1	Casey Gadbury	\$ 178,183			
3	Brookhaven	CH-BRNL-0030 Soil and Water Remediation	1	1	Rod Rimando, L2	\$ 261,566	3	1	Terri Kneitel	\$ 137,928			
4		CH-BRNL-0040 Nuclear Facility D&D Graphite Research Reactor	1					1	Mark Parsons	\$ 87,145			
5		CH-BRNL-0041 Nuclear Facility D&D High Flux Beam Reactor	1					1	Lloyd Nelson	\$ 36,493			
6	Idaho	04-D-414 SBW Treatment Facility		1	Rick Provencher	\$ 4,808,996	4	1	Joel Case	\$ 379,210			
7		HQ-SNF-0012Y SNF Stabilization and Disposition-New /Upgrade Facilities Awaiting Geologic Repository	1					1	TBD	\$ 1,546,216			
8		ID-INEEL-0014B Radioactive Liquid Tank Waste Stabilization and Disposition - 2012	1										
9		ID-INEEL-0012B-D SNF Stabilization - 2012	1										
10		ID-INEEL-0040B Nuclear Facility D&D - 2012	1										
11		ID-INEEL-0050B Non-Nuclear Facility D&D - 2012	1										
12		ID-INEEL-0013 Solid Waste Stabilization (includes AMWTP)	1								1	Ed Ziemanski	\$ 2,223,708
13		ID-INEEL-0030B Soil and Water Remediation - 2012	1								1	TBD	\$ 659,865
14		ID-INEEL-0012C SNF Stabilization - 2035	1								N/A	(Proj Not Started)	
15		ID-INEEL-0014C Radioactive Liquid Tank Waste Stabilization and Disposition - 2035	1								N/A	(Proj Not Started)	
16		ID-INEEL-0030C Soil and Water Remediation - 2035	1								N/A	(Proj Not Started)	
17		ID-INEEL-0040C Nuclear Facility D&D - 2035	1								N/A	(Proj Not Started)	
18		ID-INEEL-0050C Non-Nuclear Facility D&D - 2035	1								N/A	(Proj Not Started)	
19	Moab	ID-GJ-0031 Soil and Water Remediation - Moab	1	1	Don Metzler	\$ 70,699	2				N/A	N/A	
20	Oak Ridge	OR-0013A Solid Waste Stabilization and Disposition - 2006	1	1	Steve McCracken	\$ 3,973,924	4	1	Mildred Lopez-Ferre	\$ 1,772,787			
21		OR-0013B Solid Waste Stabilization and Disposition - 2012 (includes TRU Waste Treatment Facility Project)	1										
22		OR-0031 Soil and Water Remediation - Offsites	1										
23		OR-0041 Nuclear Facility D&D - Y-12	1										
24		OR-0042 Nuclear Facility D&D - ORNL	1										
25		OR-0030 Soil and Water Remediation - Melton Valley	1								1	Vince Adams	\$ 290,640
26		OR-0040 Nuclear Facility D&D - ETPP (D&D Fund, includes Three Building D&D Project)	1								1	Donna Perez	\$ 1,910,497
27	OR-0043 Nuclear Facility D&D - ETPP (Defense)	1											
28	Portsmouth/Paducah	PA-0011X NM Stabilization and Disposition - DUF6 Conversion	1	1	Jack Zimmerman	\$ 1,423,415	4	1	John Sheppard	\$ 326,949			
29		PO-0011X NM Stabilization and Disposition - DUF6 Conversion	1					1	John Shine	\$ 315,294			
30		02-U-101 DUF6 Conversion (Budget Line Item)						1	N/A	N/A			
31		PA-0013 Solid Waste Stabilization and Disposition	1					1	TBD	\$ 453,281			
32		PA-0040 Nuclear Facility D&D - Paducah	1										
33		PO-0013 Solid Waste Stabilization and Disposition	1					1	TBD	\$ 335,187			
34	PO-0040 Nuclear Facility D&D - Portsmouth	1											
35	PO-0041 Nuclear Facility D&D - Portsmouth GCEP	1											
36	Ashtabula	OH-AB-0030 Soil and Water Remediation	1	1	TBD	\$ 106,823	3	N/A	N/A				
37	Columbus	OH-CL-0040 Nuclear Facility D&D - West Jefferson	1	1	John Sattler*	\$ 84,738	4	N/A	N/A				
38	Fernald	OH-FN-0013 Solid Waste Stabilization and Disposition	1	1	Bill Taylor	\$ 2,416,266	4	0	John Sattler*	\$ 1,244,375			
39		OH-FN-0030 Soil & Water Remediation	1					1	Dave Lojek	\$ 960,121			
40		OH-FN-0050 Non-Nuclear Facility D&D	1					1	Johnny Reising	\$ 211,770			
41	Miamisburg	OH-MB-0013 Solid Waste Stabilization and Disposition	1	1	Margaret Marks	\$ 561,086	4	1	Geoff Gorsuch	\$ 232,241			
42		OH-MB-0040 Nuclear Facility D&D	1					1	Chris White	\$ 328,845			
43		OH-MB-0030 Soil and Water Remediation	1										

KEY: Candidate CRB Certified No Package Received (position is vacant) No Package Received Package Received Package accepted by EM Undergoing EM review

Level 1 = \$5 - \$20 M Level 2 = \$20 - \$100 M Level 3 = \$100 - \$400 M Level 4 = >\$400 M

Submitted to CRB

EM Project List and FPDs (Cont'd)

44	West Valley	OH-WV-0013 Solid Waste Stabilization and Disposition	1						N/A	N/A	
45		OH-WV-0014 Radioactive Liquid Tank Waste Stabilization and Disposition	1		1	TJ Jackson	\$ 469,019	4	N/A	N/A	
46		OH-WV-0040 Nuclear Facility D&D	1						N/A	N/A	
47	Richland	RL-0011 NM Stabilization and Disposition - PFP	1			Matt McCormick	\$ 5,865,784	4	1	Stacy Charboneau, L1	\$ 1,231,482
48		RL-0012 SNF Stabilization and Disposition	1						1	Paul Pak	\$ 1,773,875
49		RL-0013 Solid Waste Stabilization and Disposition - 200 Area	1		1				1	Mark French	\$ 1,518,629
50		RL-0080 Operate Waste Disposal Facility	1						1	Briant Charboneau	\$ 409,510
51		RL-0030 Soil and Water Remediation - GW/VZ	1			1	Larry Romine	\$ 932,288			
52		RL-0040 Nuclear Facility D&D - Remainder of Hanford	1						N/A	N/A	\$ 1,253,935
53		RL-0041 Nuclear Facility D&D - River Corridor Closure Project	1		1	Leif Erickson, L4	\$ 1,491,759	4	N/A	N/A	\$ 237,824
54	RL-0042 Nuclear Facility D&D - FFTF	1						1	TBD	\$ 237,824	
55	River Protection	01-D-416 Waste Treatment and Immobilization Plant		1	1	John Eschenberg	\$ 5,781,000	4	N/A	N/A	
56		03-D-403 Immobilized HLW Interim Storage Facility			1	Zack Smith	\$ 5,732,177	4	1	Jim Thompson	\$ 77,750
57		ORP-0014 Radioactive Liquid Tank Waste Stabilization and Disposition	1						1	Delmar Noyes	\$ 5,732,177
58	Rocky Flats	RF-0123 Site Cleanup and Closure	1			Frazer Lockhart, L4	\$ 4,167,555	4	N/A	N/A	
					1	Rich Schassburger			N/A	N/A	
59	Savannah River	04-D-423 3013 Container Surveillance Capability in 235-F			1	Kevin Smith	\$ 4,151,985	4	1	John Phillips	
60		SR-0011B NM Stabilization and Disposition - 2012	1						N/A	N/A	
61		SR-0011C NM Stabilization and Disposition - 2035	1						N/A	(Proj Not Started)	
62		SR-0012 SNF Stabilization and Disposition	1						N/A	N/A	
63		04-D-408 Glass Waste Storage Building #2			1	1	Guy Girard, L2**	\$ 77,173	2	N/A	N/A
64		03-D-414 SWPF Alternative			1	1	Terry Spears, L4**	\$ 523,851	4	N/A	N/A
65		SR-0014C Radioactive Liquid Tank Waste Stabilization and Disposition - 2035	1			1	TBD	\$ 5,353,418	4	N/A	N/A
66		SR-0013 Solid Waste Stabilization and Disposition	1						1	Doug Hintze	\$ 817,740
67		SR-0030 Soil and Water Remediation	1						1	Wade Whitaker	\$ 1,056,155
68	SR-0040 Nuclear Facility D&D	1			1	Bill Spader	\$ 1,395,972	4	1	TBD	\$ 339,817
69	Los Alamos	VL-LANL-0013 Solid Waste Stabilization and Disposition - LANL Legacy	1			TBD	\$ 973,975	4	1	James Nunz	\$ 290,503
70		VL-LANL-0030 Soil and Water Remediation	1		1				1	David Gregory	\$ 683,472
71		VL-LANL-0040N Nuclear Facility D&D (Non-Defense)	1								
72	ETEC	VL-ETEC-0040 Nuclear Facility D&D	1		1	Rich Dailey	\$ 99,695	2	N/A	N/A	
73	Kansas City	VL-KCP-0030 Soil and Water Remediation	1		1	George Keary	\$ 4,526	1	N/A	N/A	
74	Pantex	VL-PX-0030 Soil and Water Remediation	1		1	Johnnie Guelker, L3	\$ 46,307	3	N/A	N/A	
75	Sandia	VL-SN-0030 Soil and Water Remediation	1		1	Joe Estrada, L1	\$ 9,769	1	N/A	N/A	
76	Nevada Test Site	VL-NV-0030 Soil and Water Remediation (includes Offsites)	1		1	Steve Mellington	\$ 313,781	3	N/A	N/A	
77		VL-NV-0013 Solid Waste Stabilization and Disposition	1			Frank DiSanza	\$ 41,508	2	N/A	N/A	
78		VL-NV-0080 Operate Waste Disposal Facility	1		1				N/A	N/A	
79	Lawrence Livermore	VL-LLNL-0013 Solid Waste Stabilization and Disposition	1		1	Robert Kong	\$ 148,185	3	N/A	N/A	
80		VL-LLNL-0030 Soil and Water Remediation (Main Site)	1		1	Philip Wong	\$ 14,800	1	N/A	N/A	
81		VL-LLNL-0031 Soil and Water Remediation (LLNL Site)	1		1	Claire Holtzaple	\$ 35,478	2	N/A	N/A	
82	SPRU	VL-SPRU-0040 Nuclear Facility D&D	1		1	Steve Feinberg	\$ 124,525	3	N/A	N/A	

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KEY:



Candidate CRB Certified



No Package Received
(position is vacant)



No Package Received



Package Received
Undergoing EM review



Package accepted by EM
Submitted to CRB

Baseline Development

- ❖ **Scope of Work**
 - **Work Breakdown Structure (WBS) Dictionary**
 - **Technical Specifications Defined**
 - **Regulatory Requirements Established**
 - **Drawings, Work Plans Developed**
- ❖ **Cost Development**
 - **Bottoms-up Cost Estimate Developed**
 - **Resources Identified**
 - **Life Cycle Funding Profile Established**
- ❖ **Schedules**
 - **Resource Loaded, Integrated Schedule Developed**
 - **Government Furnished Services & Items Identified**
 - **Earned Value Methods Identified**
- ❖ **Change Control Procedures in Place**
- ❖ **Baseline Reviews**
- ❖ **Monthly Reporting**

Key Project Management Documents

- ❖ **Mission Need Statement**
- ❖ **Integrated Project Team Charter**
- ❖ **Conceptual Design Report**
- ❖ **Acquisition Strategy**
- ❖ **Project Execution Plan**
- ❖ **Record of Decisions**
- ❖ **Work Plans**
- ❖ **Project Data Sheets**
- ❖ **Hazard Analysis**
- ❖ **Regulatory Documents**
- ❖ **Operational Readiness Review report(s)**
- ❖ **Project closeout/transition... Etc.**
- ❖ **RISK MANAGEMENT PLAN & VALUE ENGINEERING (VE)**

❖ Risk Management Plan

- Identifies and classifies potential risks (program and project)
- Quantifies risks through analysis to determine probability and consequences of occurrences
- Discusses techniques and methods to control, reduce or eliminate risks
- Requires lessons learned to resolve future risks
- Discusses project contingency to address risks
 - Funded contingency – included in EM annual funding appropriation
 - Unfunded contingency – identified in EM environmental liability audit

❖ VE (value engineering, value analysis and/or value planning)

- Analyzes function or process to determine “best value”
- Completed early in project to avoid delays and rework
- Federal Acquisition Regulation defines mandatory program
- DOE also acknowledges voluntary/incentive programs

Baseline Reviews

❖ EM Project Reviews

- Project Definition Rating Index (PDRI) review to determine if project is ready for a Critical Decision (0 through 3)
- Baseline review prior to CD-2 to determine if baseline cost, schedule and technical (scope) have been established and well defined
- Performance assessment reviews after CD-2 to determine how well contractor is performing
- Cost estimates in support of procurement actions
- Special performance reviews as requested

❖ Office of Engineering and Construction Management (OECM) External Independent Reviews

- Review of performance measurement baseline in preparation for CD-2
- For major construction projects only, review start of construction or execution readiness to determine if project is for CD-3

❖ Defense Contract Management Agency (DCMA) Earned Value Management System (EVMS) Reviews

- Review of DOE contractor EVMS, in accordance with ANSI/EIA-748 industry standard
- Contractor's system is certified by DOE once all corrective actions have been completed

Performance Reporting, Monitoring and Control

❖ Performance Reporting

➤ Contractor's Monthly Status Report

- Safety Report
- Monthly Accomplishments, Next Months Planned Accomplishments
- Cost Performance Report (Current and Cumulative EVMS Data)
- Variance Analysis (Causes, Corrective Actions, Impacts, Recovery)
- Schedule Status (ahead, behind, milestones completed)
- Funding, Regulatory....etc.

➤ Field Office Monthly Reporting

- All Project Information and Performance Data is entered into IPABS
- Earned Value Data (direct link to PARS)
- Gold Chart Metrics
- Baseline Change Proposals for Configuration Control Board

➤ Quarterly Performance Reviews

- Federal Project Directors (FPDs) report to EM senior management
- Overall project "health"
- EVMS data and trend analysis
- Estimates at Completion (Contractor, FPD, and EM)

Performance Reporting, Monitoring and Control (Cont'd)

❖ Performance Reporting (Continued)

➤ Quarterly Performance Reviews (Continued)

- Baseline change control activity (if any)
- Use or potential use of contingency
- Safety statistics
- Performance against corporate “Gold Chart” Metrics

➤ Office of Performance Assessment Monthly Analysis

➤ OECM Monthly Project Status Report for the Deputy Secretary

❖ Monitoring

➤ Corrective Action Plans for various project reviews

➤ EVMS surveillance plans corrective action responses

➤ Site oversight activities

❖ Control

➤ Configuration Control Board

- Disciplined HQ process to effectively manage baselines
- Formally reviews and approves changes to scope, end state and date, schedule, funding, metric measures, and regulatory agreements

- ❖ **Use of risk management plan and information**
- ❖ **Sufficiency of trained Federal resources**
- ❖ **Availability of funding per the contract**
- ❖ **Contingency adequacy/existence and spend rate**
- ❖ **Roles, responsibilities and expertise of Contracting Officers**
- ❖ **Linkage and use of performance measures to measure progress vs. costs incurred**
- ❖ **Lessons learned from recent projects**
- ❖ **Evolving or undefined end states and/or cleanup levels**
- ❖ **Accounting for cleanup project unknowns/uncertainties (e.g., extent of contamination, waste volumes, and dispositions paths)**

Where We Want EMAB Advice

❖ Contingency

- **DOE does not request contingency funding for EM operations-funded projects**
 - How should EM account for unfunded contingency in projects?
 - Should EM identify schedule contingency versus cost contingency?
- **How should EM improve project risk management?**

❖ Project Oversight

- **What additional project oversight should sites be performing?**
- **What additional project oversight should HQ be performing?**
- **Do we have the right tools in place to do proper oversight?**
- **How might we use them better or differently?**

❖ Risk Management

- **Where are we falling short in identifying and dealing with risk (programmatic, regulatory, technology, etc.)?**