Miamisburg Closure Project
OU-1
Baseline Summary

Background

The Miamisburg Mound plant was built in the late 1940s to support research and development, testing, and production activities for DOE's defense nuclear weapons complex and energy research programs. The plant's mission involved production of components, which contained plutonium-238, polonium-210, tritium, and large quantities of high explosives. This mission continued until 1994, when these activities were transferred to other DOE facilities. In 1989, the Mound site was placed on the United States Environmental Protection Agency's National Priorities List.

Although a final Record of Decision was issued in 1995 for a former Mound landfill, Operable Unit One (OU-1), the City of Miamisburg remained concerned over the potential public health and reuse impacts of the remaining landfill. In response to these concerns, Congress provided $30,000,000 and directed the DOE in November 2005 to take additional remedial actions at OU-1. It was decided to complete the ongoing Miamisburg Closure Contract and to accomplish this additional work under a separate contract.

The Miamisburg Closure Project contractor declared physical completion July 31, 2006, and DOE accepted completion of that scope in March 2007. A task order under an existing Indefinite Delivery, Indefinite Quantity contract was awarded in October 2006 for the OU-1 work.

Scope Description

The OU-1 Project consists of two distinct projects: the OU-1 Project and the Potential Release Site 441 (PRS 441) Project. The primary concern within the OU-1 area consists of residual contamination within a Site Sanitary Landfill that sits on top of an older Historic Waste Disposal Area. Congress appropriated $30M for this project. The goal of the PRS 441 (rail load out area) Project is to be compliant with the requirements defined by CERCLA as implemented by the Mound 2000 Work Plan. Funding for the PRS 441 Project scope is provided separately from the funding appropriated by Congress for the OU-1 Project scope.

<u>End States and End Dates</u>
The Miamisburg Closure Project contractor declared physical completion in July 2006, and DOE completed their physical acceptance review and declared physical acceptance in March 2007. The DOE Office of Legacy Management accepted custodianship of the site in October 2006. Transfer of this work scope for full operational responsibility for

the site in FY 2010 is pending final negotiations between EM and the Office of Legacy Management and completion of formal transfer documentation.

Except for funds reserved to return the OU-1 Landfill to a protective state, the $30,000,000 provided by Congress and an additional $4,500,000 provided by DOE-EM, has been expended. The contractor has backfilled the excavated areas and has returned them to a protective state. According to current estimates, over 12,000 cubic yards of LLW remain within the OU-1 landfill footprint. The City of Miamisburg continues to petition Congress for additional funding.

Remediation of the PRS 441 rail yard will be completed upon reaching compliance with the Mound 2000 clean-up goals. This work is scheduled to be completed in March 2009.

In order to resolve a Federal Facility Agreement Dispute between DOE and the Ohio Environmental Protection Agency, the removal of PRS 7, an historic off-property outfall line and two on-site abandoned sanitary sewer manholes, was added to the scope of the OU-1 contract. This removal work was funded separately from that appropriated by Congress for the OU-1 Project. Now that final verification surveys of the PRS 7 work area have been completed, DOE is completing the Record of Decision for Parcels 6, 7 and 8. These parcels will then be offered to the Miamisburg Mound Community Improvement Corporation for transfer by the end of FY 09.

Upon final verification surveys of the PRS 441 work area, DOE will be able to complete the Amended Record of Decision for OU-1. This parcel will then be offered to the Miamisburg Mound Community Improvement Corporation for transfer by the end of FY 10. This will complete the transfer of all remaining parcels of the Mound Plant, except for two areas: Building 126 with adjoining land will be used by DOE-LM; and a portion of the OU-1 Landfill area having a no-dig institutional control. These two areas of the original Mound Site will continue to be owned by the Department of Energy.

PROJECT MANAGEMENT

Based on the direction from EM Headquarters, MCP developed the near-term baseline for each of its projects. These project baselines have undergone an independent review to verify the reasonableness of the scope, cost, and schedule for each project. An approved near-term baseline reflects the identified scope that can reasonably be accomplished for the identified cost in the identified time period if near-term baselines are funded as profiled and contingency funds are provided as required during project execution. It also establishes the baseline as an acceptable point from which to track and control future change. The review and approval process accommodates the likely changes in the EM complex, site priorities and funding plans. These changes could affect both near-term (within the next five years) and life-cycle cost, schedule and scope. Such future changes may be required to comply with applicable environmental legal obligations while maintaining essential functions necessary to protect human health, the environment and national security; reflect funding different from the baseline assumptions; incorporate

technological advances; realize specific programmatic risks; or implement programmatic business cases

List of Projects:

Work Breakdown Structure

The OU-1 Work Breakdown Structure (WBS) is a hierarchically tiered framework that organizes and depicts elements representing manageable units of work to be performed in a logical sequence to allocate resources, schedule, and control at the product level.

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The WBS structure provides for the tracking of the following work activities:

- (PBS OH-MB-0031)OU-1 Landfill: This element includes removal of known areas of waste within and under the existing OU-1 landfill built in 1977. Since neither the DOE nor the Miamisburg Mound Community Improvement Corporation were confident that the funds provided by Congress would be sufficient to completely remediate the OU-1 site, areas of waste were prioritized to assure that the community's highest areas of concern were remediated before funds were possibly exhausted.
- (PBS OH-MB-0031)Potential Release Site (PRS) 441 (rail load-out area): The remediation of this area was scheduled for completion in 2006 as part of the Miamisburg Closure Contract, but was delayed to allow for support of rail shipment of material exhumed from the OU-1 Landfill.
- (PBS OH-MB-0030)PRS 7: This element consists of the removal of an off-site sanitary outfall line and two abandoned manholes. This is a part of the resolution of a Federal Facility Agreement dispute with the State of Ohio.

Contract Estimated Values (Millions)	
OU-1	$33.5
PRS 441	$ 9.5
PRS 7	$ 2.9

Cost Estimate by PBS

Three Mound PBSs remain active at this time:

		FY08	FY09	FY10	FY11	FY12
OH-MB-0030	Soil and Water Remediation-Miamisburg	5061	26350	3270*	2347*	2328*
OH-MB-0031	Soil and Water Remediation-OU-1	2218	0	0	0	0
OH-MB-0100	Miamisburg Post-Closure Administration	24971	26350	20963	21651	22702

*site transfers to LM in FY10 x $1000

Budget/Funding Targets

Mound five year funding profile:

	FY08	FY09	FY10	FY11	FY12
Miamisburg	30032	32462	31734*	27079*	24024*

*site transfers to LM in FY10 x $1000

Funding assumptions are based on the FY 2008 Five-year Plan (FYP) for the out years and the FY 2008 revised Omnibus.

There is no BA for the OU-1 remediation because costs are taken from carryover funds.

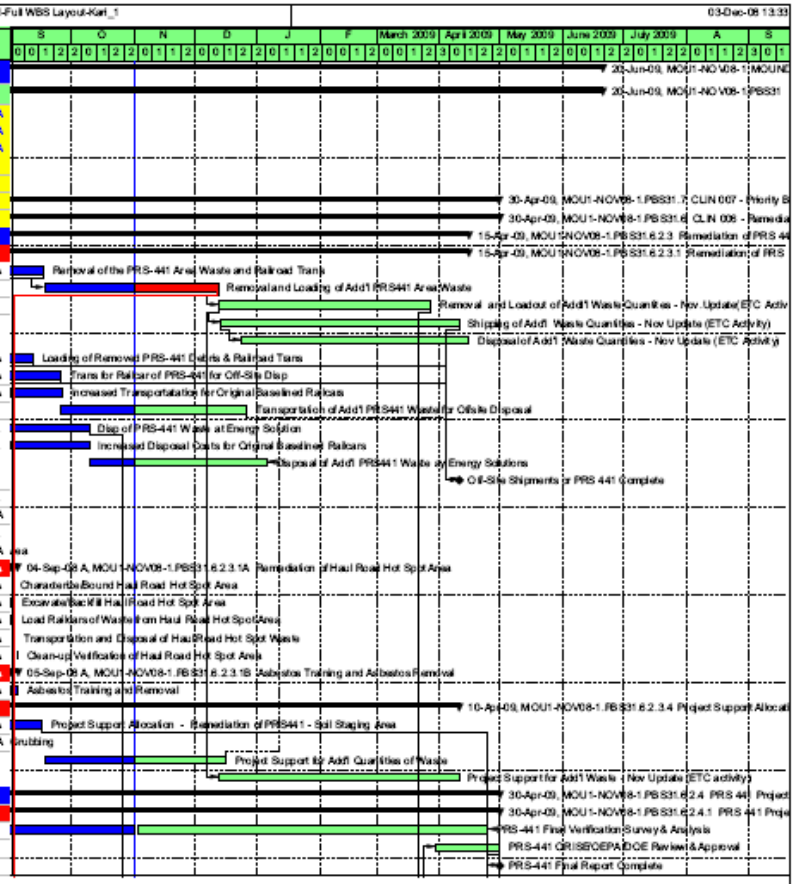
Risk Management

The project has matured to the point that the only significant remaining risk is the possibility of contaminated soil quantities exceeding those estimated in the current baseline. The only remaining area of concern is the remediation of the PRS 441 rail yard. Since remediation in approximately 80% of this area is complete, any quantity overruns should be minimal.

SUMMARY LIFECYCLE BASELINE SCHEDULE

MOUND OU1 Nov08 STATUS FILE with ETC activities | MOU1-Full WBS Layout-Karl_1 | 03-Dec-08 13:33

Activity ID	Activity Name	Start	Finish
MOU1-NOV08-1	MOUND OU1 Nov 08 STATUS FILE with ETC activities	12-Oct-06 A	20-Jun-09
MOU1-NOV08-1.PBS31	Soil and Water Remediation - OU1	12-Oct-06 A	20-Jun-09
MOU1-NOV08-1.PBS31.1	CLIN 001 - Initial Mobilization and Site Sanitary Landfill Waste, ...	12-Oct-06 A	31-May-07 A
MOU1-NOV08-1.PBS31.2	CLIN 002 - Thorium Drum Area (PRS-11) and Volitale Organic C...	29-Jan-07 A	31-May-07 A
MOU1-NOV08-1.PBS31.3	CLIN 003 - Other Historic Waste Area	14-Feb-07 A	31-May-07 A
MOU1-NOV08-1.PBS31.4	CLIN 004 - Dayton Unit Trench		
MOU1-NOV08-1.PBS31.5	CLIN 005 - OU-1 Project Site Restoration and Demobilization		
MOU1-NOV08-1.PBS31.7	CLIN 007 - Priority Based WBS	01-Jun-07 A	30-Apr-09
MOU1-NOV08-1.PBS31.6	CLIN 006 - Remediation of PRS 441 - Soil Staging Area	08-Feb-07 A	30-Apr-09
MOU1-NOV08-1.PBS31.6.2.3	Remediation of PRS 441 - Soil Staging Area	08-Feb-07 A	15-Apr-09
MOU1-NOV08-1.PBS31.6.2.3.1	Remediation of PRS 441 - Soil Staging Area	08-Feb-07 A	15-Apr-09
M1623110	Removal of the PRS-441 Area Waste and Railroad Trans	10-Dec-07 A	17-Sep-08 A
M1623111	Removal and Loading of Add'l PRS441 Area Waste	18-Sep-08 A	12-Dec-08
M1623112	Removal and Loadout of Add'l Waste Quantities - Nov.Update(ETC Acti...	13-Dec-08	27-Mar-09
M1623113	Shipping of Add'l Waste Quantities - Nov Update (ETC Activity)	14-Dec-08	10-Apr-09
M1623114	Disposal of Add'l Waste Quantities - Nov Update (ETC Activity)	24-Dec-08	15-Apr-09
M1623120	Loading of Removed PRS-441 Debris & Railroad Trans	10-Jul-08 A	12-Sep-08 A
M1623130	Transfer Railcars of PRS-441 for Off-Site Disp	11-Jul-08 A	26-Sep-08 A
M1623131	Increased Transportation for Original Baselined Railcars	01-Sep-08 A	26-Sep-08 A
M1623132	Transportation of Add'l PRS441 Waste for Offsite Disposal	26-Sep-08 A	26-Dec-08
M1623140	Disp of PRS-441 Waste at Energy Solution	24-Jul-08 A	10-Oct-08 A
M1623141	Increased Disposal Costs for Original Baselined Railcars	01-Sep-08 A	10-Oct-08 A
M1623142	Disposal of Add'l PRS441 Waste at Energy Solutions	10-Oct-08 A	05-Jan-09
M1623150	Off-Site Shipments or PRS441 Complete		10-Apr-09
M1623160	Development and Comment Response of PRS-441 Public Fact Sheet	08-Feb-07 A	23-Apr-07 A
M1623170	Development of the PRS-441 Work Plan including VSAP	26-Feb-07 A	14-May-07 A
M1623180	Comment Response or PRS-441 Work Plan (incl. VSAP)	31-May-07 A	30-Oct-07 A
M1623190	Clearing and Grubbing Activities for 441 Area	21-May-08 A	22-May-08 A
MOU1-NOV08-1.PBS31.6.2.3.1A	Remediation of Haul Road Hot Spot Area	01-Sep-08 A	04-Sep-08 A
M1623 1A1	Characterize Bound Haul Road Hot Spot Area	01-Sep-08 A	01-Sep-08 A
M1623 1A2	Excavate/Backfill Haul Road Hot Spot Area	01-Sep-08 A	02-Sep-08 A
M1623 1A3	Load Railcars of Waste from Haul Road Hot Spot Area	01-Sep-08 A	02-Sep-08 A
M1623 1A4	Transportation and Disposal of Haul Road Hot Spot Waste	03-Sep-08 A	03-Sep-08 A
M1623 1A5	Clean-up Verification of Haul Road Hot Spot Area	04-Sep-08 A	04-Sep-08 A
MOU1-NOV08-1.PBS31.6.2.3.1B	Asbestos Training and Asbestos Removal	01-Sep-08 A	05-Sep-08 A
M1623 1B1	Asbestos Training and Removal	01-Sep-08 A	05-Sep-08 A
MOU1-NOV08-1.PBS31.6.2.3.4	Project Support Allocation	21-May-08 A	10-Apr-09
M1623410-0707	Project Support Allocation - Remediation of PRS441 - Soil Staging Area	01-Jun-08 A	17-Sep-08 A
M1623420	Project Support Allocation - Clearing and Grubbing	21-May-08 A	21-May-08 A
M1623430	Project Support for Add'l Quantities of Waste	18-Sep-08 A	16-Dec-08
M1623440	Project Support for Add'l Waste - Nov Update (ETC activity)	13-Dec-08	10-Apr-09
MOU1-NOV08-1.PBS31.6.2.4	PRS 441 Project Final Verification Survey	07-Jul-08 A	30-Apr-09
MOU1-NOV08-1.PBS31.6.2.4.1	PRS 441 Project Final Verification Survey	07-Jul-08 A	30-Apr-09
M1624211	PRS-441 Final Verification Survey & Analysis	07-Jul-08 A	24-Apr-09
M1624212	PRS-441 OR/SE/OEPA/DOE Review & Approval	30-Mar-09	30-Apr-09
M1624213	PRS-441 Final Report Complete		30-Apr-09



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
Actual Level of Effort | Remaining Work | Milestone

Page 1 of 3

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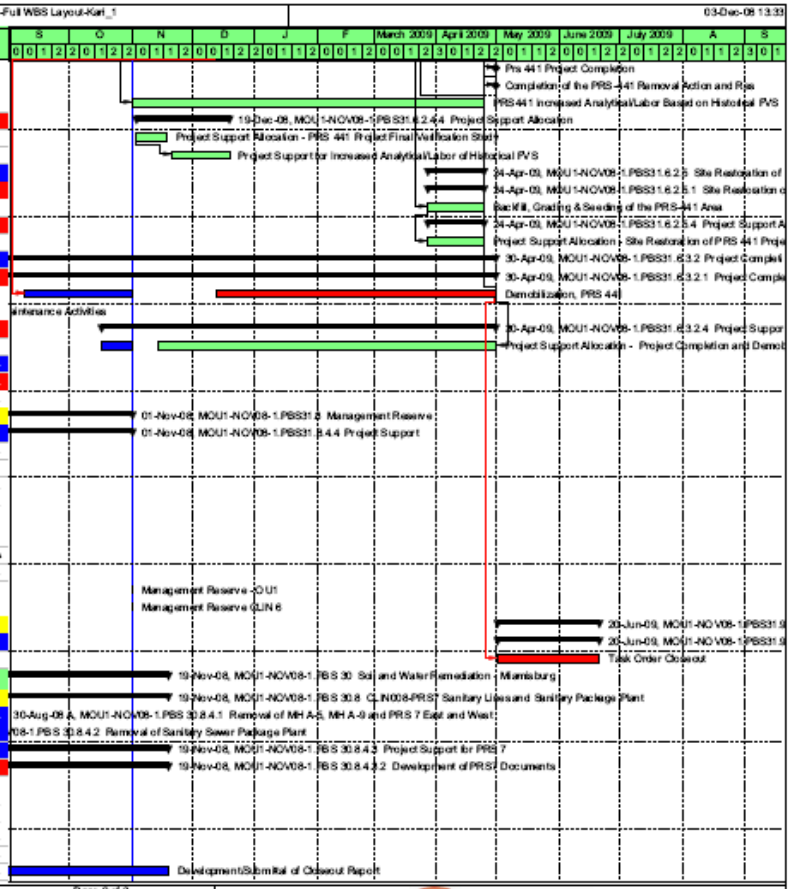
MOUND OU1Nov08 STATUS FILE with ETC activities | MOU1-Full WBS Layout-Karl_1 | 03-Dec-08 13:33

Activity ID	Activity Name	Start	Finish
M1624214	Prs 441 Project Completion		30-Apr-09
M1624215	Completion of the PRS-441 Removal Action and Ras		30-Apr-09
M1624216	PRS441 Increased Analytical Labor Based on Historical FVS	01-Nov-08	24-Apr-09
MOU1-NOV08-1.PBS31.6.2.4.4 Project Support Allocation		03-Nov-08	19-Dec-08
M1624241-0708	Project Support Allocation - PRS 441 Project Final Verification Study	03-Nov-08	18-Nov-08
M1624241-0718	Project Support for Increased Analytical Labor of Historical FVS	21-Nov-08	19-Dec-08
MOU1-NOV08-1.PBS31.6.2.5 Site Restoration of PRS 441 Project		27-Mar-09	24-Apr-09
MOU1-NOV08-1.PBS31.6.2.5.1 Site Restoration of PRS 441 Project		27-Mar-09	24-Apr-09
M1625211	Backfill, Grading & Seeding of the PRS-441 Area	27-Mar-09	24-Apr-09
MOU1-NOV08-1.PBS31.6.2.5.4 Project Support Allocation		27-Mar-09	24-Apr-09
M1625241-0709	Project Support Allocation - Site Restoration of PRS441 Project	27-Mar-09	24-Apr-09
MOU1-NOV08-1.PBS31.6.3.2 Project Completion and Demobilization for PRS 441 Project		21-May-08 A	30-Apr-09
MOU1-NOV08-1.PBS31.6.3.2.1 Project Completion and Demobilization for PRS 441 Project		21-May-08 A	30-Apr-09
M1632110	Demobilization, PRS 441	09-Sep-08 A	30-Apr-09
M1632120	Rail Yard Maintenance Activities	21-May-08 A	31-Jul-08 A
MOU1-NOV08-1.PBS31.6.3.2.4 Project Support Allocation		17-Oct-08 A	30-Apr-09
M1632410-0707	Project Support Allocation - Project Completion and Demob for PRS441...	17-Oct-08 A	30-Apr-09
MOU1-NOV08-1.PBS31.6.4.3 PRS7 Proposal Development		03-Dec-07 A	04-Dec-07 A
MOU1-NOV08-1.PBS31.6.4.3.1 Development of Proposal for PRS7		03-Dec-07 A	04-Dec-07 A
M1643110	Proposal Development for PRS7	03-Dec-07 A	04-Dec-07 A
MOU1-NOV08-1.PBS31.8 Management Reserve		12-Oct-08 A	01-Nov-08
MOU1-NOV08-1.PBS31.8.4.4 Project Support		12-Oct-08 A	01-Nov-08
M1741111	Development of Operable Unit 1 Remedial Action Work Plan	12-Oct-08 A	17-Nov-08 A
M1741112	Development of Contractor Performance Measurement Baseline	16-Oct-08 A	26-Jan-07 A
M1741113	Development of Risk Analysis Report & Management Plan	23-Oct-08 A	04-Dec-08 A
M1741114	Development and Approval of Mob Work Plan	12-Oct-08 A	10-Nov-08 A
M1741117	DOE Regulatory Review	20-Nov-08 A	25-Jan-07 A
M1741118	Approval of Remedial Action Work Plan		26-Jan-07 A
M1741120	Regulatory (OEPA&USEPA) Review and Approval of Fact Sheet	13-Mar-07 A	11-May-07 A
M1741121	Public Review Period for PRS-441 Public Fact Sheet	12-May-07 A	31-Aug-07 A
M1741131	Management Reserve - OU1	01-Nov-08	01-Nov-08
M1741141	Management Reserve CLIN 6	01-Nov-08	01-Nov-08
MOU1-NOV08-1.PBS31.9 Task Order Closeout		01-May-09	20-Jun-09
MOU1-NOV08-1.PBS31.9.1.0 Task Order Closeout		01-May-09	20-Jun-09
M1910111	Task Order Closeout	01-May-09	20-Jun-09
MOU1-NOV08-1.PBS 30 Soil and Water Remediation - Miamisburg		26-Nov-07 A	19-Nov-08
MOU1-NOV08-1.PBS 30.8 CLIN008-PRS7 Sanitary Lines and Sanitary Package Plant		26-Nov-07 A	19-Nov-08
MOU1-NOV08-1.PBS 30.8.4.1 Removal of MH A-5, MH A-9 and PRS7 East and West		14-Jun-08 A	30-Aug-08 A
MOU1-NOV08-1.PBS 30.8.4.2 Removal of Sanitary Sewer Package Plant		01-Jul-08 A	02-Jul-08 A
MOU1-NOV08-1.PBS 30.8.4.3 Project Support for PRS 7		26-Nov-07 A	19-Nov-08
MOU1-NOV08-1.PBS 30.8.4.3.2 Development of PRS7 Documents		26-Nov-07 A	19-Nov-08
M1843100	Develop/Incorporate CP for PRS 7	03-Dec-07 A	28-Jan-08 A
M1843110	Develop/Submit/Revise PRS7 Work Package	03-Dec-07 A	19-Feb-08 A
M1843120	DOE Concurrence on PRS 7 Work Package		01-Mar-08 A
M1843130	Develop/Submit/Revise Subsurface Soil Sampling Plan	03-Dec-07 A	19-Feb-08 A
M1843140	Mound Core Team Approve Subsurface Soil Sampling Plan		19-Feb-08 A
M1843150	Development/Submittal of Closeout Report	10-Jun-08 A	19-Nov-08 A



Remaining Level of Effort | Actual Work | Critical Remaining Work | Summary
Actual Level of Effort | Remaining Work | Milestone

Page 2 of 3

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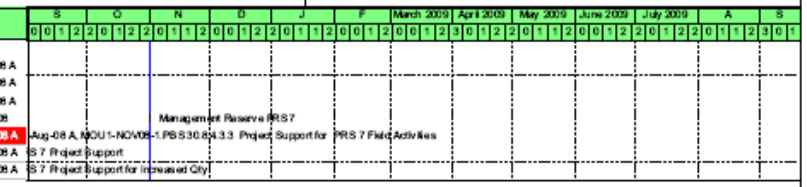
MOUND OU1Nov08 STATUS FILE with ETC activities | MOU1-Full WBS Layout-Karl_1 | 03-Dec-08 13:33

Activity ID	Activity Name	Start	Finish
M18432160	Award of PRS7	26-Nov-07 A	
M18432170	Receipt of Easement from Railroad for PRS7 East Line		17-Jan-08 A
M18432180	Approval from MCD for removal of PRS7 East and West Lines		02-Jan-08 A
M18432190	Approval from Miamisburg for removal of PRS7 West Line under Hwy 25		14-Jan-08 A
M18432200	Management Reserve PRS7	01-Nov-08	01-Nov-08
MOU1-NOV08-LPBS 30.8.4.3.3 Project Support for PRS 7 Field Activities		**19-Dec-07 A**	**22-Aug-08 A**
M18433110	PRS 7 Project Support	19-Dec-07 A	22-Aug-08 A
M18433120	PRS 7 Project Support for Increased Qty	22-May-08 A	22-Aug-08 A



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Page 3 of 3

SUMMARY OF APPROVED BASELINE CHANGES

Project	Approved at CD-2		Approved Baseline Changes (Scope, Cost or Schedule)	Current Approved	
	Near Term Baseline (NTB)	Out Year Planning Estimate Range (OPER)		Near Term Baseline (NTB)	Out Year Planning Estimate Range (OPER)
OH-MB-0031: Soil and Water Remediation - OU-1	Cost: 30,000 Schedule: 6/2008	Cost: 0 Schedule: complete	BCP **20070764** (9/04/2007) BCP 20081126 (2/4/2009)	Cost:43,000 Schedule: 03/2009	Cost: 0 Schedule: complete

* BCP **20060624 for New PBS** (9/29/2006)
During the August 2006 Quarterly Project Review, a decision was made by EM Senior Management to create a separate PBS for the OU-1 activities. Establishing a new PBS for this specific work activity allows the Ohio Field Office to proceed forward to document completion (i.e., CD-4) of the cleanup contractors scope of work under OH-MB-0030 and to apply appropriate project controls (e.g., performance metrics, earned value management, baseline management) to this new scope which is to be managed as a new procurement. The new PBS proposed is "OH-MB-0031, Soil and Water Remediation - OU-1". Project costs are controlled under PBS 0030, but project reporting in IPABS for the OU-1 Project is out of OH-MB-0031.

*BCP **20081126 for Increased PRS 441 Quantities** (2/4/2009)
As remediation of the PRS 441 rail yard progressed, it became evident that the initial estimate of contaminated soil was low. Based on some exploration excavations and experience gained through ongoing remediation in the area, the quantity of estimated contaminated soil was increased, resulting in a revision to both the estimated cost and the estimated schedule completion for excavation.

Appendix A:

Milestones:

Milestone/Activity	Original Date	Forecast Status	Source
Complete OU-1 Backfill and Seeding	**2/7/2008**	**8/29/2008**	**actual**
Complete PRS 441 Removal Action	**12/7/2007**	**3/30/2009**	**contractor's proposal**
Complete OU-1 Task Order	**12/31/07**	**3/30/2009**	**contractor's proposal**
Complete Remedy for Operable Unit 1.	**2/8/2008**	**4/30/2009**	**contractor's schedule**

Appendix B:

Key Project Risks:

Risk:
May experience quantity overruns in remaining remediation of PRS 441 rail yard
Planned Action:
Since area is approximately 80% complete, any overruns would be minimal.