

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Ohio**

Site Summary Level: **Columbus Environmental Management Project**

Project **OH-CL-01 / King Avenue Site Decontamination**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0230**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Definition of Scope:

All planned decontamination in the nine major King Avenue buildings is complete. The decontamination followed a step-wise process for affected areas in each building: 1) pre-characterization/hazard assessment; 2) material/equipment removal; 3) radiometric characterization; 4) decontamination (scabbling, grit blasting, etc.); 5) final surveys; 6) independent verification. Restoration payments will be negotiated as a lump-sum settlement to Battelle, the facility owner, after consideration of fair wear and tear, and depreciated building value.

Project Status in FY 2006:

The King Avenue portion of the project is scheduled to be completed in FY 2000.

Post-2006 Project Scope:

None.

Project End State

The King Avenue portion of the project is scheduled to be completed in FY 2000. The end state will return the buildings and adjacent soil areas at this site to Battelle in a condition for use without radiological restrictions. All waste streams will be shipped off-site for treatment, storage, or disposal.

Cost Baseline Comments:

The DOE-approved baseline (Revision 2) was based on a "bottoms-up" estimating methodology, and was approved in 1994. A more recent draft summary baseline (Revision 3) was prepared by Battelle in June 1996, and was used to develop the FY 97,98, and 99 budget requests.

Safety & Health Hazards:

The radiological hazard at King Avenue has been completely eliminated as a result of the decontamination effort.

Safety & Health Work Performance:

Battelle is a non-government organization and thus primary support for many of the safety and health functional areas is provided by the owner's corporate organization. Battelle has issued a Corporate Safety Policy and has site wide program plans covering: Health and Safety, Radiation Protection, and Emergency Preparedness. The BCLDP prepared separate Health and Safety and Radiation Protection Plans in 1992; subsequently, the BCLDP Health and Safety Program was placed under the Corporate Safety Program. A set of implementing safety procedures now guides all work performed. These procedures are matched to the known and anticipated radiological, Industrial Safety and Industrial Hygiene hazards associated with decontamination activities at the site.

Approval to perform work on the project is granted through successive modifications to contract W-7405-ENG-92. Annual work plans are prepared by the contractor and approved by the DOE on-site project manager. DOE approval is contingent upon the contractor demonstrating that all required equipment, procedures, and trained staff are available to perform the work safely and effectively. Battelle operates under a Readiness Review

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procedure which offers a graded approach depending on the level of hazard and cost associated with specific activities. Individual work activities are authorized under a work instruction system maintained by Battelle. Prior to starting any activity within a building or area, a comprehensive physical and radiological survey is performed to verify the type, extent, and location of all hazards present. The work instruction describes the task to be performed, the relevant procedures, personnel requirements, and any required equipment. Attached to each work instruction is a safety checklist and, when necessary, a radiological work permit. Approval of the work instruction requires the sign-off of the building/functional manager, the safety manager, and the radiation protection manager.

PBS Comments:

The primary legal driver for the project is the government's contractual obligation to remediate Battelle (Columbus) facilities in a timely fashion as part of the closeout of Contract W-7405-ENG-92. Therefore, the major project stakeholder is Battelle Memorial Institute (Battelle) itself, owner of the facilities. Other stakeholders include the U.S. NRC and the Ohio EPA as well as local communities.

Stakeholders have expressed satisfaction with the progress made to date, particularly with the acceleration of the King Avenue cleanup over the last 4 years. Federal, State and local elected officials have expressed strong support for the accelerated cleanup of the West Jefferson site for both risk reduction and economic development reasons. Media articles highly favorable of the project have appeared in the Columbus Dispatch and the Business First weekly newspapers. Finally, the project is highly regarded by emergency management organizations at the state and county level because of its initiation and continued support of integrated response training.

The following paragraph is the Contractor (and Facility Owner's - Battelle Memorial Institute) comments and do not necessarily represent DOE's position:

Battelle, does not agree with the funding profile and schedule set forth in the Focus on 2006 Plan. Rather than specifying and commenting on each area of disagreement, Battelle is providing the following examples which illustrate some of those areas:

- a) The Plan extends both DOE's and Battelle's liability for a site with significant radiological hazards;
- b) The Plan does not support the schedule for project completion (FY 2000) approved by the U.S. NRC in 1993 as part of the Battelle's Decommissioning Plan;
- c) The Plan does not return the West Jefferson site for reuse by Battelle in a timely manner;
- d) The Plan unilaterally increases overall project costs significantly;
- e) The Plan impacts Battelle's strategic planning, effective utilization of its facilities, and places an unreasonable financial burden on Battelle by delay of restoration payments;
- f) Battelle does not agree that the present DOE-accepted King Avenue and West Jefferson project scope satisfies completion of DOE responsibility and liability relative to the closeout of Contract W-7405-ENG-92 contract.

A decommissioning plan approved by the U.S. NRC commits to completion of the West Jefferson cleanup by FY 2000. Delays to the project, if significant, could result in enforcement action by the U.S. NRC to require Battelle to meet the original schedule using its own financial resources. This large financial burden on Battelle would most likely result in contractual claims against DOE for reimbursement of expenses over which the Department exercised no control. This would raise anti-deficiency questions for the government which are precedent setting. Moreover, delays in clean-up of the West Jefferson site may result in application of more restrictive release criteria, which could increase remediation costs up to 50%

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above the current baseline.

Timely completion of the BCLDP (also, called the CEMP) meets several priority goals and objectives listed in EM-40 Strategic Plan: 1) completion of 25 "small sites"; 2) remediation of non-DOE sites and facilities; 3) reduction of long-term costs associated with maintaining surplus facilities and structures; and 4) release of facilities and land for beneficial public use.

Completion of the efforts at West Jefferson will avoid any issues with the Ohio Congressional delegation and state officials who view Battelle as a major state asset. Acceleration of the clean-up will eliminate the health and safety hazard, lower total project cost, and result in a strong positive stakeholder response.

Baseline Validation Narrative:

Revision 2 of the CEMP baseline was utilized for the King Avenue work and amended through a rigorous change control process. The baseline estimate was independently confirmed in 1994 and again in 1996. Annual project and budget validations were also conducted by various HQ organizations and, most recently, by the Ohio Field Office. The consistent theme coming from all of these validations/reviews is that, based upon the best data available at the time of the reviews, the project was being managed in an appropriate manner, and the current plans and budgets were in fact reasonable for the scope of work known at that time.

General PBS Information

Project Validated? Yes Date Validated: 5/15/1996

Has Headquarters reviewed and approved project? No

Date Project was Added: 12/1/1997

Baseline Submission Date: 7/8/1999

FEDPLAN Project? No

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	N	Y	N	Y	N	N	N	Y

Project Identification Information

DOE Project Manager: Thomas A. Baillieul

DOE Project Manager Phone Number: 614-760-7372

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General PBS Information

Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS Baseline (current year dollars)	18,092	0	18,092	9,758	9,291	5,615	5,615	1,219	1,500	0	0	0	0	0	0	
PBS Baseline (constant 1999 dollars)	18,053	0	18,053	9,758	9,291	5,615	5,615	1,219	1,461	0	0	0	0	0	0	
PBS EM Baseline (current year dollars)	18,092	0	18,092	9,758	9,291	5,615	5,615	1,219	1,500	0	0	0	0	0	0	
PBS EM Baseline (constant 1999 dollars)	18,053	0	18,053	9,758	9,291	5,615	5,615	1,219	1,461	0	0	0	0	0	0	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Baseline Escalation Rates

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1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/1/1998

Current Projected End Date of Project: 9/30/2000

Explanation of Project Completion Date Difference (if applicable):

Issues relating to the scope and cost of removing the drain lines in King Avenue have not been resolved between DOE and Battelle. As a result, the completion date has been postponed to the end of FY 2000.

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	17,955	Actual 1997 Cost:	9,291	Actual 1998 Cost:	5,615
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	3,049	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			82
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	3,131				

Project Cost Changes

Cost Adjustments Reconciliation Narratives

Cost Change Due to Scope Deletions (-):

Cost Reductions Due to Efficiencies (-):

Cost Associated with New Scope (+):

Cost Growth Associated with Scope Previously Reported (+): 300 Due to schedule extension, the King Avenue D&D costs are expected to increase by approx. \$300K.

Cost Reductions Due to Science & Technology Efficiencies (-):

Subtotal: 3,431

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Project Reconciliation

Additional Amount to Reconcile (+): -751 (\$493K) due to FY97/98 uncosted balances error. (\$258K) due to FY97 actuals not escalated to FY99 \$

Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): **2,680**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
King Avenue start milestone			1/1/1988								
Complete King Avenue external area survey & verification	17B999		9/30/1999								
King Avenue end milestone			9/30/2000							Y	

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
King Avenue start milestone				Y			1	1	1		Initiation of the BCL Decommissioning Project (planning, design, environmental assessment).
Complete King Avenue external area survey & verification	17B999						1	2	1		Complete final external area surveys; receive independent verification analysis Completion of D&D at the King Avenue site is an interim milestone for the project.
King Avenue end milestone					Y	Y	2	4	1		Complete D&D of all buidlings and external areas; return facilities to Battelle without radiological

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
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Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
RS														
Assess.	NR	1.00	0.00	1.00						1.00				
RS														
Cleanup	NR	1.00	0.00	1.00						1.00				
Fac.														
Decom.- Assess.	NF	1.00	0.00	1.00	8.00			1.00						
Fac.														
Decom- Cleanup	NF	2.00	0.00	2.00	7.00			1.00		1.00				
MLLW														
Ship to DOE Disp.	M3	0.00	0.00	0.00	0.00		0.00							
LLW														
Comm. Disp.	M3	1.81	0.00	1.81				1.81						
Rem. Waste														
Disposed	M3	341.39	0.00	341.39	0.00		0.00	272.59	68.80	0.00	0.00	0.00	0.00	0.00
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	
RS														
Assess.	NR													
RS														
Cleanup	NR													
Fac.														
Decom.- Assess.	NF													

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Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035
Fac.													
Decom- Cleanup	NF												
MLLW													
Ship to DOE Disp.	M3												
LLW													
Comm. Disp.	M3												
Rem. Waste													
Disposed	M3	0.00	0.00	0.00									
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total			
RS													
Assess.	NR											1.00	
RS													
Cleanup	NR											1.00	
Fac.													
Decom.- Assess.	NF											9.00	
Fac.													
Decom- Cleanup	NF											9.00	
MLLW													
Ship to DOE Disp.	M3											0.00	
LLW													
Comm. Disp.	M3											0.00	
Rem. Waste													
Disposed	M3								0.00			0.00	

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Release Sites

Site Code	RSF ID	Change Flag	Description	Class/Subclass Name	Planned Assess. Year	Forecast Assess. Year	Actual Assess. Date	Planned Comp. Year	Forecast Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
CEMK	0010		KA-Ext \ King Avenue Site External Areas	Dispersed Surface Contamination/	2000	2000		2000	2000		1986	N	Pending	Y

Facility Decommissioning

Site Code	RSF ID	Change Flag	Description	Class/Subclass	Hazard	Plan. Assess. Year	Fore. Assess. Year	Actual Assess. Date	Plan. Deac. Year	Fore. Deac. Year	Actual Deac. Date	Plan. Comp. Year	Fore. Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
CEMK	0001		KA-1 \ King Avenue Site Building KA-1	Buildings & Equipment/Laboratory	Non-Nuclear Facility	1996		3/29/1996						9/29/1996	1986	N	Pending	Y
CEMK	0002		KA-2 \ King Avenue Site Building KA-2	Buildings & Equipment/Laboratory	Radiological Facility	1998	1998	3/31/1998				1998	1998	3/31/1998	1986	N	Pending	Y
CEMK	0003		KA-3 \ King Avenue Site Building KA-3	Buildings & Equipment/Laboratory	Radiological Facility	1994		11/23/1993						9/30/1994	1986	N	Approved	Y
CEMK	0004		KA-4 \ King Avenue Site Building KA-4	Buildings & Equipment/Laboratory	Non-Nuclear Facility	1994		9/29/1994						1/18/1995	1986	N	Pending	Y
CEMK	0005		KA-5 \ King Avenue Site Building KA-5	Buildings & Equipment/Laboratory	Non-Nuclear Facility	1995		2/6/1995						9/29/1995	1986	N	Pending	Y
CEMK	0006		KA-6 \ King Avenue Site Building KA-6	Buildings & Equipment/Laboratory	Non-Nuclear Facility	1996		4/15/1996						9/30/1996	1986	N	Pending	Y
CEMK	0007		KA-7 \ King Avenue Site Building KA-7	Buildings & Equipment/Laboratory	Non-Nuclear Facility	1996	1996	7/16/1996				2000	2000		1986	N	Pending	Y
CEMK	0008		KA-9 \ King Avenue Site Building KA-9	Buildings & Equipment/Laboratory	Non-Nuclear Facility	1991		6/30/1991						9/30/1991	1986	N	Approved	Y
CEMK	0009		KA-A \ King Avenue Site Building KA-A	Buildings & Equipment/Laboratory	Non-Nuclear Facility	1996		6/30/1996						7/31/1996	1986	N	Pending	Y

Technology Needs

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Technology Needs

Site Need Code: OH-C901

Site Need Name: Robotic Device to Improve Characterization of Underground Pipe Lines

Focus Area Work Package ID: DD-07

Focus Area Work Package: Hot Cell Facilities and Laboratory Equipment D&D

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Small Pipe Characterization System (SPCS)

In Situ Chemical Treatment of Asbestos

Pipe Crawler Internal Piping Characterization System

Cost Savings (in thousands of dollars)

Range of Estimate

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00003: A - LLW Soils from ER

Y

N

00008: F - LLW Contaminated Debris

Y

N

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