

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Oakland**

Site Summary Level: **Lawrence Livermore National Laboratory**

Project **OK-027 / LLNL Decontamination and Waste Treatment Facility**

Report Number: **GEN-01b**

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

HQ ID: **0285**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Purpose and Scope: Design, construction, and upgrading of new hazardous and rad waste facilities and RCRA closure of existing facilities. This will be accomplished in several phases to meet project schedule and funding constraints. The project will include the design and construction of several new buildings totaling approximately 79,360 sq. ft. These buildings will be located on a previously unoccupied 9 acre site in the northwest sector of LLNL. The project also includes the upgrade of 5,000 sq. ft. of the existing Bldg. 280 to store high curie/radioactive and mixed wastes, including TRU. A brief description of project scope by phases follows.

Phase 1- Site Utilities and Improvements. This phase includes debris removal, excavation, grading, trenching, electrical service, underground utilities, partial paving, curb and gutter, and sidewalks. This phase has been completed.

Phase 2 - Mixed Waste Management Facility Requirements. (Canceled by DOE/HQ)

Phase 3 - DWTF. In order to accommodate funding restrictions, this phase was split into Phase 3A and Phase 3B.

- Phase 3A includes the Truck Bay, the Solid Waste Processing Building, the Chemical Exchange Warehouse, and upgrades to Building 280.

- Phase 3B consists of construction of the Liquid Waste Processing Building and the Building 693 Annex.

Phase 4 - Operational Support Building. This phase consists of construction of the Operational Support Building.

Phase 5 - Final Site Improvements. This phase consists of all remaining site work for the project, such as final grading, paving, parking facility, fencing, landscaping, and exterior lighting.

Phase 6 - The project also includes the RCRA closure of treatment units in Areas 514 and 612, storage units in Area 514, and Building 233.

Technical Approach: This is a construction project, standard construction techniques will be used. Lowest and/or best value contracting will be used to select contractors for all aspects of the project, including A&E services. Peer reviews and outside consultant reviews will ensure cost effective designs and construction methods are employed.

Once completed, the DWTF will be capable of processing and treating for disposal a wider range of waste than is currently available at existing facilities. Treatment technologies including: evaporation, centrifugation, carbon adsorption, microfiltration, blending and size reduction units will be implemented. Each of these technologies will be of proven quality, and meet the most rigorous health and safety standards. The DWTF will provide the most current pollution prevention technologies available. Through the utilization of the Best Available Control Technology (BACT) DWTF will be capable of reducing airborne emissions from normal operations, while increasing the annual through put of waste treated. Completion of the DWTF will accelerate the treatment and processing of legacy waste. The new treatment units, hoods, and decontamination areas will allow legacy waste to be processed efficiently and shipped off site. With the removal of the legacy waste inventory, the health and safety risk posed by a TRU drum fire, based on inventory volume alone, would decrease by a factor of ten. DWTF will meet the building standards required for its hazard classifications. Current

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 1 of 7

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Oakland**

Site Summary Level: **Lawrence Livermore National Laboratory**

Project **OK-027 / LLNL Decontamination and Waste Treatment Facility**

Report Number: **GEN-01b**

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

HQ ID: **0285**

Project Description Narratives

HWM facilities do not meet the current building codes.

Project Status in FY 2006:

All aspects of the DWTF project will be complete, including design, construction, pre-start activities, and RCRA closure of existing facilities.

Post-2006 Project Scope:

There is no project scope post 2006.

Project End State

The DWTF project will be complete. All aspects of the DWTF complex will be in operation and the older facilities will be closed out.

Cost Baseline Comments:

Total Project Costs (TPC) and Total Estimated Costs (TEC) were last validated in April 7,1998. Cost estimates are prepared by LLNL and verified by the design contractor, Parsons Engineering. A value engineering study has been completed.

Safety & Health Hazards:

This is a construction project so the risks involved are those typical to construction activities; falls, power tools, heavy equipment, etc.

Hazardous/Radioactive waste operations at these facilities will not begin until FY01. The risks of operations are covered elsewhere under the LLNL Operations PBS and may be expected to remain the same or decrease after completion of this project

Safety & Health Work Performance:

All contractors must have an approved safety plan in place prior to beginning work. Prior to beginning operations in the new facilities after completion, ORR's or other appropriate safety reviews will be conducted. The modality of funding is through DWTF project funds. The cost of contractor safety efforts are reflected in their project bids and are not separated out by them or the project. Start-up costs are included in the project under the "Construction and Environmental/Permitting" WBS elements.

PBS Comments:

The cost schedule for this project does not reflect the numbers found in the current Validated plan. In FY 97, funds were cut \$500K and this amount was added back into the project in the outyears.

Baseline Validation Narrative:

Project was validated within OAK as per the FY98 validation guidance.

General PBS Information

Project Validated? Yes **Date Validated:** 4/7/1998

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 2 of 7

Project Baseline Summary Report

Data Source: **EM CDB**
 Operations/Field Office: **Oakland**
 Site Summary Level: **Lawrence Livermore National Laboratory**
 Project **OK-027 / LLNL Decontamination and Waste Treatment Facility**

Report Number: **GEN-01b**
 Print Date: **3/9/2000**
 HQ ID: **0285**

General PBS Information

Has Headquarters reviewed and approved project? No
 Date Project was Added: 12/1/1997
 Baseline Submission Date: 7/13/1999
 FEDPLAN Project? No

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

Project Identification Information

DOE Project Manager: Samuel D. Brinker
 DOE Project Manager Phone Number: 925-422-0710
 DOE Project Manager Fax Number: 925-422-0832
 DOE Project Manager e-mail address: samuel.brinker@oak.doe.gov
 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)	29,328	0	29,328	9,500	6,052	11,250	7,892	4,578	2,000	2,000	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	29,182	0	29,182	9,500	6,052	11,250	7,892	4,578	1,947	1,907	0	0	0	0	0
PBS EM Baseline (current year dollars)	29,328	0	29,328	9,500	6,052	11,250	7,892	4,578	2,000	2,000	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	29,182	0	29,182	9,500	6,052	11,250	7,892	4,578	1,947	1,907	0	0	0	0	0

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Report Number: **GEN-01b**

Operations/Field Office: **Oakland**

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

Site Summary Level: **Lawrence Livermore National Laboratory**

HQ ID: **0285**

Project **OK-027 / LLNL Decontamination and Waste Treatment Facility**

	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

	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: 7/1/2002

Current Projected End Date of Project: 3/1/2003

Explanation of Project Completion Date Difference (if applicable):

Completion date has been delayed due to the delay in receiving the RCRA permit.

Project Cost Estimates (in thousands of dollars)

Dataset Name: **FY 1999 Planning Data**

Page 4 of 7

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Report Number: **GEN-01b**

Operations/Field Office: **Oakland**

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

Site Summary Level: **Lawrence Livermore National Laboratory**

HQ ID: **0285**

Project **OK-027 / LLNL Decontamination and Waste Treatment Facility**

Project Reconciliation

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	29,215	Actual 1997 Cost:	6,052	Actual 1998 Cost:	7,892
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	15,271	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			412
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	15,683				

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		None
Cost Reductions Due to Efficiencies (-):		None
Cost Associated with New Scope (+):		None
Cost Growth Associated with Scope Previously Reported (+):		None
Cost Reductions Due to Science & Technology Efficiencies (-):		None
Subtotal:	15,683	
Additional Amount to Reconcile (+):	-7,251	The difference in lifetime cost is due to carryover from prior years.
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	8,432	

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
COMPLETE CONSTRUCTION PHASE 3B	OK027-05		12/1/1999								
COMPLETE CONSTRUCTION PHASE 4	OK027-07		4/1/2000		12/30/1997	12/30/1997					
COMPLETE CONSTRUCTION PHASE 5	OK027-06		3/1/2000								
DTSC ISSUE NEGATIVE DECLARATION	OK027-01		6/1/1998		1/1/1999						
LLNL SUBMIT PHASE 3 FSAR TO DOE/OAK	OK027-04		11/1/1999								
PROJECT COMPLETE	OK027-12		3/1/2003								
RCRA CLOSURE COMPLETION	OK027-08		6/1/2000								

Dataset Name: **FY 1999 Planning Data**

Page 5 of 7

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Report Number: **GEN-01b**

Operations/Field Office: **Oakland**

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

Site Summary Level: **Lawrence Livermore National Laboratory**

HQ ID: **0285**

Project **OK-027 / LLNL Decontamination and Waste Treatment Facility**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
RCRA CLOSURE FINISH	OK027-11		3/1/2002								
RCRA CLOSURE PLAN COMPLETE	OK027-09		6/1/2000								
RCRA CLOSURE START	OK027-02		2/1/1999			8/1/1998					
START CONSTRUCTION PHASE 5	OK027-03		6/1/1999								
START OPERATIONS FOR DWTF	OK027-10		6/1/2000								
Project Start Date			1/1/1986								

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
COMPLETE CONSTRUCTION PHASE 3B	OK027-05										Forecast date 12/01/99, assuming RCRA permit is granted in a timely manner.
COMPLETE CONSTRUCTION PHASE 4	OK027-07										
COMPLETE CONSTRUCTION PHASE 5	OK027-06										
DTSC ISSUE NEGATIVE DECLARATION	OK027-01										Latest forecast date from the DTSC is 04/01/99. This milestone is on the project critical path, most other milestones are dependant on its timely completion.
LLNL SUBMIT PHASE 3 FSAR TO DOE/OAK	OK027-04										Forecast date is 04/01/99. FSAR was given a lower priority due to permit delay.
PROJECT COMPLETE	OK027-12					Y					Forecast date is 03/01/03.
RCRA CLOSURE COMPLETION	OK027-08									Y	This is a duplicate of ID 1452 and should be deleted.

Dataset Name: **FY 1999 Planning Data**

Page 6 of 7

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Oakland**

Site Summary Level: **Lawrence Livermore National Laboratory**

Project **OK-027 / LLNL Decontamination and Waste Treatment Facility**

Report Number: **GEN-01b**

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

HQ ID: **0285**

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
RCRA CLOSURE FINISH	OK027-11										Forecast date 03/01/02.
RCRA CLOSURE PLAN COMPLETE	OK027-09										
RCRA CLOSURE START	OK027-02										
START CONSTRUCTION PHASE 5	OK027-03										Forecast date 06/01/99
START OPERATIONS FOR DWTF	OK027-10										Forecast date 06/01/00
Project Start Date				Y							