

Rocky Flats Environmental Technology Site

Closure Project Baseline

Cost Estimate Report

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APPROVED FOR PUBLIC RELEASE

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Kaiser-Hill Company, L.L.C.

EXECUTIVE SUMMARY

This document summarizes the Closure Project Baseline (CPB) cost estimate to perform the Rocky Flats Closure Project (RFCP) contract completion criteria by Dec. 15, 2006. This cost estimate covers the Rocky Flats Environmental Technology Site (RFETS) scope of work covered by Contract No. DE-AC34-00RF01904.

The CPB cost estimate totals \$3.963 billion and includes escalation and contingency. The \$3.963 billion estimate covers all of the scope identified in the nine Project Baseline Descriptions (PBDs) of the CPB and includes costs from Feb. 1, 2000 through Dec. 15, 2006. It does not include the cost of DOE change directives that have yet to be negotiated or anticipated, but not yet received, new directives. The costs for Feb. 1, 2000 through May 31, 2000 are based on the actual cost of work performed (ACWP) during the period. The costs for June 1, 2000 through Dec. 15, 2006 are estimated in FY00 dollars with escalation and contingency added. This cost estimate has been developed using standard industry cost estimating practices and meets all the requirements of the closure contract.

This cost estimate improves on a series of cost estimates previously developed for the closure of the site. The original plan was the Baseline Environmental Management Report (BEMR) that estimated a cost of \$37 billion (unescalated) to close the site by 2060. Since then, Kaiser-Hill has initiated a series of plans focusing on completing the project sooner resulting in a significant reduction in cost. Figure 1 compares this CPB cost estimate to the previous cost estimates for closing Rocky Flats.

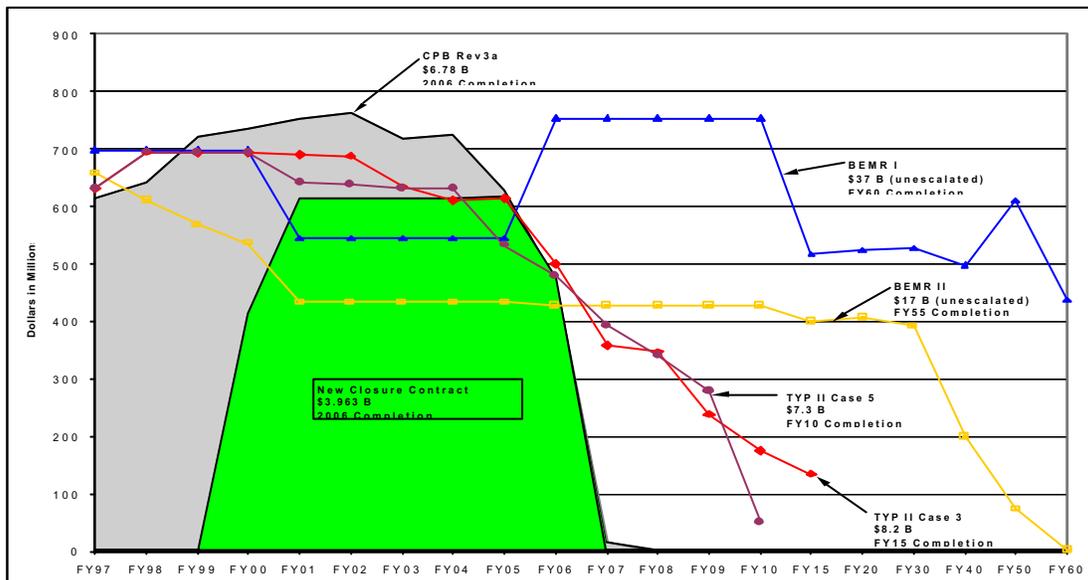


Figure 1
Cost Estimate Comparison

The available funding for FY00 (February through September) is \$427.2 million, which provides \$16.4 million for incentive fee and \$410.8 million for Rocky Flats Closure Project (RFCP) activities. For FY01 and the out-years, the projected available annual funding (EW-05) is \$657 million. The \$657 million annual EW-05 funding provides funds for the RFCP, Department of Energy (DOE) Rocky Flats Field Office (RFFO) project support activities and incentive fee. Other funding (non EW-05) is not included in the CPB total.

Adequate annual funding is essential to meet the project cost and schedule. Any reduction in the total annual funding could extend the baseline schedule. The annual funding level is key to the accuracy of the estimate and to project completion.

The development of the CPB cost estimate is consistent with standard industry cost estimating practices and meets DOE requirements and Kaiser-Hill L.L.C. (K-H) cost estimating guidance. The cost estimate is activity based to the extent practical. More than 50 percent of the unit costs in the estimates are based on historical costs for similar activities at the site. Standard estimating tools and techniques were used, and the organizations performing the work have developed the individual cost estimates. The RFCP is subdivided into nine individual projects and 91 individual cost accounts. Approximately 30,000 individual estimates at the line item level cost estimates form the basis for the CPB cost estimate.

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ACRONYMS

ABC	Activity based Cost
ACWP	Actual Cost of Work Performed (Actuals)
BCP	Baseline Change Proposal
BCWP	Budgeted Cost of Work Performed (Earned Value)
BEMR	Baseline Environmental Management report
BEST	Basis of Estimate tool
BM	Benchmarks
BOE	Basis of Estimate
CA	Cost Account
CAD	Corrective Action Decision
CAM	Cost Account Manager
CAO	Carlsbad Area Office
CCI	Construction Cost Index
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CPB	Closure Project Baseline
D&D	Deactivation and Decommissioning
DEAR	Department of Energy Acquisition Regulation
DNFSB	Defense Nuclear Facilities Safety Board
DOE	Department of Energy
EAC	Estimate-at-Completion
EE	Estimators Experience
ER	Environmental Restoration
ETC	Estimate-to-Complete
EV	Earned Value
GFS/I	Government Furnished Services/Items
HC	Historical Cost
IHSS	Individual Hazardous Substance Site
ISM	Integrated Safety Management
IWCP	Integrated Work Control Program
K-H	Kaiser-Hill Company, L.L.C.

LLW	Low-Level Waste
LLMW	Low-Level Mixed Waste
PA	Protected Area
PBD	Project Baseline Description
PCSD	Project Control System Description
PMP	Project Management Plan
QAP	Quality Assurance Program
RAM	Responsibility Assignment Matrix
REA	Request for Equitable Adjustment
RFCA	Rocky Flats Cleanup Agreement
RFCP	Rocky Flats Closure Project
RFETS	Rocky Flats Environmental Technology Site
RFFO	Rocky Flats Field Office
ROD	Record of Decision
SNM	Special Nuclear Material
S&S	Safeguards and Security
TP	Trade Publications
TRM	Transuranic Mixed
TRU	Transuranic
VQ	Vendor Quote
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WBS	Work Breakdown Structure
WIPP	Waste Isolation Pilot Plant

1.0 INTRODUCTION

1.1 Overview

This cost estimate report provides the details on the development of the CPB cost estimate that supports completing the RFCP contract completion criteria by Dec. 15, 2006. The closure contract cost estimate totals \$3.963 billion. This cost estimate includes the costs for special nuclear material (SNM) management, facility decommissioning, waste management, environmental restoration, and infrastructure and support. DOE RFFO project support and program direction, which covers the Federal workforce; other funds (non EW-05); and K-H incentive fee are not included in the \$3.963 billion estimate. The projected annual funding of \$657 million annually covers the projected cost of the closure contract, RFFO project support, and incentive fee.

The \$3.963 billion covers all of the scope required to achieve the contract completion criteria and includes costs from Feb. 1, 2000 through project completion. It does not include the cost of DOE change directives that have yet to be negotiated or anticipated, but not yet received, new directives.

Costs after Dec. 15, 2006 are considered outside the scope of the contract and are not included in this cost estimate. Figure 1-1 illustrates the RFCP funding profiles by PBD.

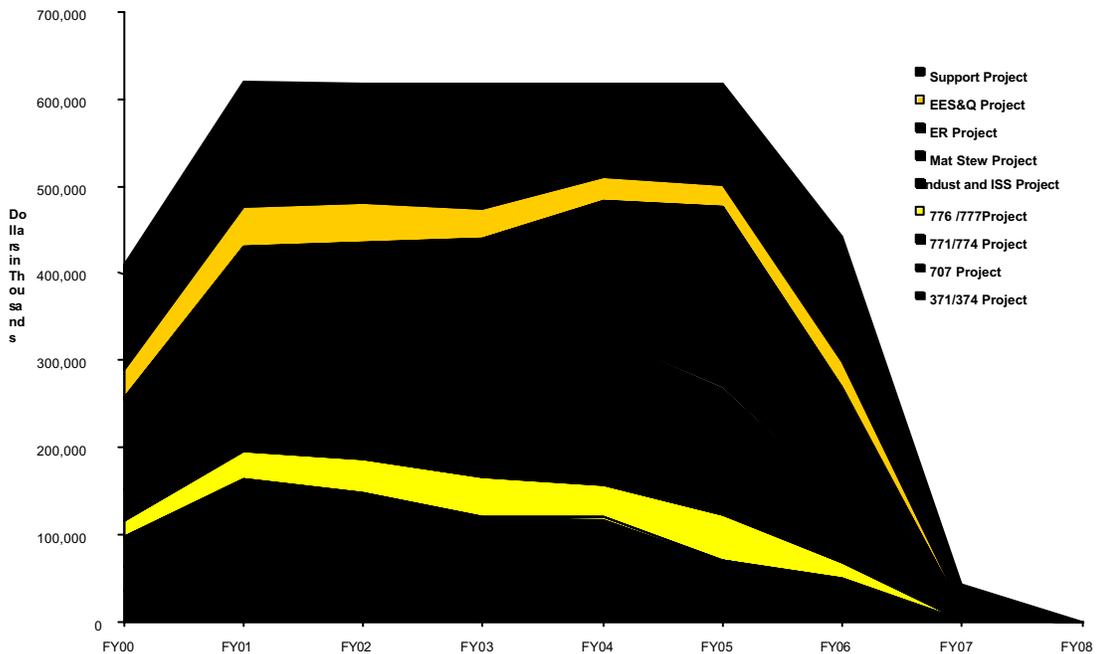


Figure 1-1: Annual Funding Profile by PBD

The costs for Feb. – May 2000 reflect ACWP. The costs from June 2000 through December 2006 are estimated in FY00 dollars and include escalation and contingency, as discussed in detail below. More than 50 percent of the unit costs in the out-year estimates are based on historical costs for similar activities in prior years at the site. In addition, vendor quotes, industry benchmarks, trade publications, and estimator experience have been used where historical data is not available. The details of the cost estimate and the Basis of Estimates (BOEs) are in Appendix A.

This cost estimate is one in a series of cost estimates developed for RFCP. In 1995, DOE developed a plan called the Baseline Environmental Management Report (BEMR) that estimated a cost of \$37 billion (unescalated) to close the site by 2060. In 1996, the BEMR II was developed that estimated a cost of \$17 billion to close the site by 2055.

Prior to receiving the January 2000 contract K-H developed a series of plans focused on closing the site sooner resulting in a significant cost reduction. This cost estimate was developed using the knowledge and understanding of the current CPB Rev 3a.

This closure contract cost estimate includes most, but not all, of the scope covered by the previous cost estimates. For example previous estimates included prior year costs, some post project completion costs, RFFO project support costs, and K-H incentive fee. This cost estimate reflects almost a \$200 million reduction from CPB Rev 3a when the same scope is compared. Figure 1-2 illustrates a comparison of previous project cost estimates.

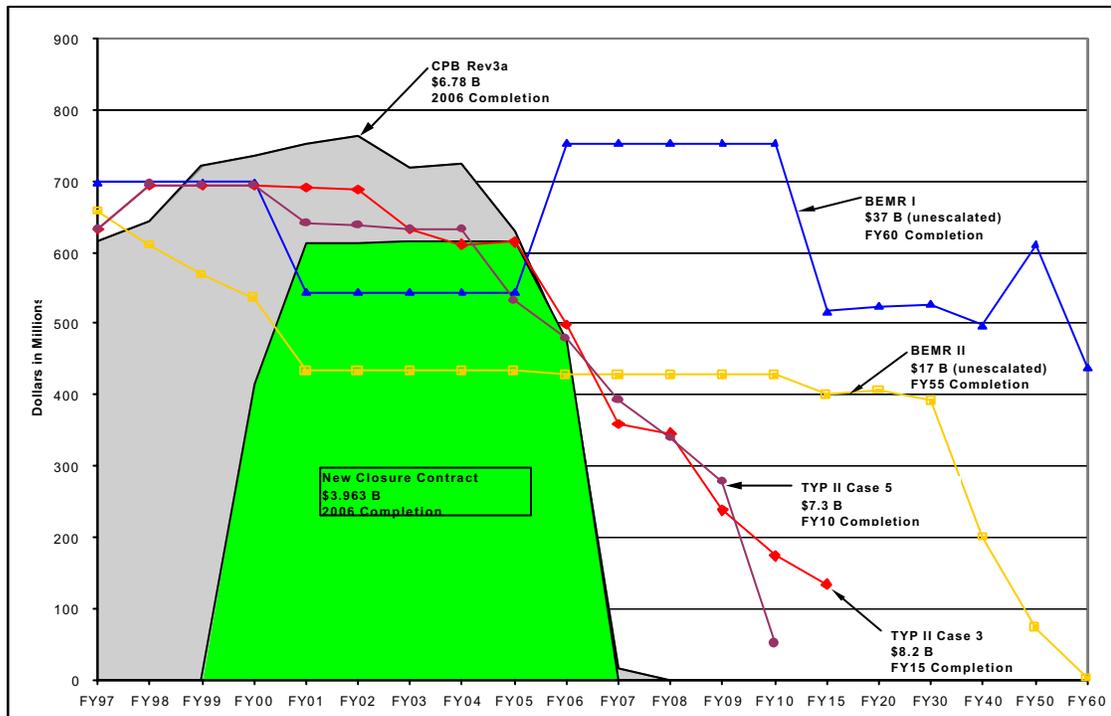


Figure 1-2 Cost Estimate Comparison

This cost estimate has been developed using standard industry cost estimating practices and meets the requirements of the closure contract. Kaiser-Hill (K-H) organizations that will perform the work provided the cost estimates for the individual activities in the cost estimate. Professional estimators assisted in the development of these estimates and provided an overall review for consistency and credibility.

1.2 General Assumptions

There are many assumptions associated with developing a cost estimate of this complexity and magnitude. The annual funding level is key to on schedule project completion. The cost estimate of \$3.963 billion requires the annual funding outlined in Table 1-1.

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	Total
Total EW-05 Funding	428,715	657,000	657,000	657,000	657,000	657,000	649,842	62,375	4,425,932
RFFO Project Support	12,533	18,800	18,800	18,200	17,600	16,600	16,300	4,100	122,933
Incentive Fee	16,404	24,575	24,575	24,575	24,575	24,575	188,432	12,288	340,000
K-H Closure Project Total	399,778	613,625	613,625	614,225	614,825	615,825	445,110	45,988	3,963,000

Table 1-1: CPB Annual Funding Requirements
(Dollars in Thousands)

2.0 CPB COST ESTIMATE

2.1 PBD Cost Estimate Summaries

The RFCP organizes work into nine PBDs. Collectively, the PBDs define the entire closure contract work scope. Section 2 of the each PBD provides the PBD total budget with a breakdown to the cost account level. Appendix A details the cost estimate by PBD and is subdivided by cost account, activity, charge number, and line items. The report describes each activity, the quantities and units required, the basis of estimate (BOE) type, the risk factors, and the level of resources required in labor hours and dollars.

Tables 2-1 and 2-2 provide the breakdown of the estimated costs of the project. Table 2-1 presents the cost by PBD in burdened dollars. Table 2-2 shows the costs by cost account in burdened dollars. Table 2-3 identifies the actual cost for Feb. - May 2000 that is included in the PBD budgets and Tables 2-1 and 2-2. The Feb. - May 2000 actual costs are not included in the Basis-of-Estimate Software Tool (BEST).

Rocky Flats Environmental Technology Site
 Closure Project Baseline Cost Estimate Report

Project	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	Total
A 374/374 Closure Project	42,682	71,190	62,778	52,745	63,268	35,993	28,216	1,052	357,924
B 707 Closure Project	32,859	53,601	46,939	37,672	37,233	36,127	20,694	0	265,124
C B774/774 Closure Project	37,327	68,265	59,095	47,564	27,457	1,367	1,057	0	242,131
D B776/777 Closure Project	21,764	38,507	45,317	48,887	40,217	53,002	18,354	83	266,129
E Industrial D&D and Site Services Project	42,365	75,872	89,647	105,879	180,331	153,447	76,022	1,609	725,172
F Material Stewardship Project	115,989	182,538	164,875	139,814	101,422	114,192	93,833	5,010	917,673
G Environmental Remediation Project	3,501	7,181	16,598	49,106	64,229	103,738	40,574	6,295	291,221
H EES&Q Program Project	36,539	48,857	49,007	36,216	27,167	26,113	31,366	2,350	257,616
J Support Project	73,461	74,361	83,162	99,442	76,787	93,965	137,697	30,825	669,700
Subtotal	406,485	620,373	617,417	617,324	618,111	617,944	447,812	47,225	3,992,691
Non-EW05 Funding Included in Above	(6,707)	(6,748)	(3,792)	(3,099)	(3,286)	(2,120)	(2,702)	(1,237)	(29,691)
KH Closure Project EW05 Total	399,778	613,625	613,625	614,225	614,825	615,824	445,110	45,988	3,963,000
FEE	16,404	24,575	24,575	24,575	24,575	24,575	188,432	12,288	340,000
RFFO Support	12,533	18,800	18,800	18,200	17,600	16,600	16,300	4,100	122,933
Total EW05 Funding	428,715	657,000	657,000	657,000	657,000	657,000	649,842	62,375	4,425,932

Table 2-1: CPB Cost Estimate in Burdened Dollars
 (Dollars in Thousands)

Rocky Flats Environmental Technology Site
 Closure Project Baseline Cost Estimate Report

Project/Cost Account	F00 Feb-Sep	F01	F02	F03	F04	F05	F06	F07	Total
A 371 Complex Project									
AA 371 Closure									
AAA Project Management	1,509	5,602	4,611	1,709	346	474	0	0	14,252
AAB Facilities Management	14,634	19,196	16,057	12,600	6,268	8,283	0	0	77,039
AAC Deactivation	3,251	6,125	6,584	7,985	344	0	0	0	24,289
AAD Decommissioning	584	10,832	18,016	26,564	56,309	27,235	28,216	1,052	168,809
AAE B374 Waste Operations	3,066	5,091	4,478	3,886	0	0	0	0	16,521
AAF PuSPS	10,854	5,914	2,402	0	0	0	0	0	19,170
AAG Wet Residues	4,788	12,188	5,964	0	0	0	0	0	22,940
AAH Salt Residues	3,575	1,256	0	0	0	0	0	0	4,831
AAJ SS&C Residues	421	2,499	0	0	0	0	0	0	2,920
AAK Dry Residues	0	2,488	4,666	0	0	0	0	0	7,154
Project A Totals:	42,682	71,190	62,778	52,745	63,268	35,993	28,216	1,052	357,924
B 707 Complex Project									
BA 707 Closure									
BAA Project Management	3,946	7,653	6,436	3,199	3,023	2,066	929	0	27,252
BAB 707 Closure Project	11,367	14,681	12,653	5,391	3,118	1,725	0	0	48,937
BAC Deactivation	4,150	7,563	2,019	1,336	212	0	0	0	15,281
BAD Decommissioning	1,921	18,923	25,831	27,745	30,879	32,336	19,765	0	157,400
BAF Metal Size Reduction and Storage	2,285	1,004	0	0	0	0	0	0	3,290
BAG Salt Residues	1,787	0	0	0	0	0	0	0	1,787
BAH B707 Ash Residue Stabilization Project	5,767	3,052	0	0	0	0	0	0	8,819
BAJ Dry Residues	1,636	723	0	0	0	0	0	0	2,360
Project B Totals:	32,859	53,601	46,939	37,672	37,233	36,127	20,694	0	265,124

Table 2-2: CPB Cost Estimate by Cost Account in Burdened Dollars
 (Dollars in Thousands)

Rocky Flats Environmental Technology Site
 Closure Project Baseline Cost Estimate Report

Project/Cost Account	F00 Feb-Sep	F01	F02	F03	F04	F05	F06	F07	Total
C B771/774 Closure Project									
CA B771/774 Closure									
CAA B771/774 Project Management	446	1,768	1,838	1,559	374	308	0	0	6,293
CAB B771/774 Facilities Mtce (Landlord)	10,434	11,421	10,661	7,672	0	0	0	0	40,188
CAC B771/774 Deactivation	5,590	6,227	2,693	451	0	0	0	0	14,961
CAD B771/774 Decommissioning	5,207	15,199	25,261	27,598	21,609	0	0	0	94,874
CAE B771/774 Support Services	7,766	12,024	9,371	6,684	3,030	0	0	0	38,876
CAF D&D Program	7,883	21,626	9,272	3,600	2,443	1,059	1,057	0	46,939
Project C Totals:	37,327	68,265	59,095	47,564	27,457	1,367	1,057	0	242,131
D 776/666 Closure Project									
DA 776/666 Closure Project									
DAA Project Management	1,728	6,427	6,791	7,524	6,485	4,660	5,113	0	38,728
DAB Facility Management	8,850	11,855	11,958	13,074	9,397	4,860	0	0	59,994
DAC Deactivation/SNM Holdup Removal	3,039	245	0	0	0	0	0	0	3,284
DAD B776/777 Decommissioning	4,867	12,294	19,032	21,315	20,122	40,265	13,226	83	131,204
DAE B776 Material Stewardship	2,026	4,084	4,191	4,642	2,390	3,217	14	0	20,564
DAF B776 D&D Technology	1,253	3,602	3,345	2,332	1,824	0	0	0	12,356
Project D Totals:	21,764	38,507	45,317	48,887	40,217	53,002	18,354	83	266,129

Table 2-2: CPB Cost Estimate by Cost Account in Burdened Dollars
 (Dollars in Thousands)

Rocky Flats Environmental Technology Site
 Closure Project Baseline Cost Estimate Report

Project/Cost Account	F00 Feb-Sep	F01	F02	F03	F04	F05	F06	F07	Total
E Industrial and Site Services Project									
EA Project Management									
EAA Project Management	6,073	10,269	10,970	12,172	9,045	11,918	13,847	0	74,293
EB Site Services	0								
EBA Site Services Project Management	1,219	1,923	1,950	2,157	1,854	2,595	3,015	0	14,713
EBB Utilities	2,883	6,151	7,470	7,508	6,385	5,476	5,226	801	41,900
EBC Infrastructure	5,290	7,903	8,231	8,050	4,505	5,360	4,786	225	44,351
EBD Property & Logistics	3,399	4,610	4,807	4,948	4,168	5,292	3,460	10	30,693
EBE Facilities Maintenance and Services	7,357	15,279	15,250	15,396	10,318	13,581	0	0	77,180
EC Construction									
ECA Construction Project Mgmt	2,948	1,426	1,543	0	0	0	0	0	5,917
ECB Misc. Construction Projects	3,287	0	0	0	0	0	0	0	3,287
ED 400 Area									
EDA 400 Area - Project Management	0	292	296	328	282	394	510	441	2,543
EDB 400 Area - Facilities Management	1,425	2,731	2,691	1,388	880	253	0	0	9,368
EDC 400 Area - Deactivation	0	4,686	5,222	1,066	2,176	1,187	0	0	14,337
EDD 400 Area - Decommissioning	0	0	0	10,202	43,806	27,908	13,732	0	95,648
EE 800 Area									
EEA 800 Area - Project Management	739	292	296	328	283	384	470	87	2,880
EEB 800 Area - Facilities Management	3,981	6,349	5,652	5,675	23	0	0	0	21,681
EEC 800 Area - Deactivation	167	7,474	13,703	2,124	0	0	0	0	23,469
EED 800 Area - Decommissioning	0	0	6,050	23,873	35,039	46,083	1,718	0	112,764
EF 100/300/500/900 Area									
EFA 100/300/500/900 Area - Project Mgmt	1,208	292	296	328	282	392	0	0	2,798
EFB 100/300/500/900 Area - Facilities Mgmt	2,195	2,583	2,597	2,776	679	1,092	0	0	11,922
EFC 100/300/500/900 Area - Deactivation	0	0	1,436	5,888	994	5,338	20	0	13,677
EFD 100/300/500/900 Area - Decomm'ing	193	3,611	1,188	1,673	59,612	26,192	29,238	45	121,754
EFE 100/300/500/900 Area - Mat'l Stew'ship									
Project E Totals:	42,365	75,872	89,647	105,879	180,331	153,447	76,022	1,609	725,172

Table 2-2: CPB Cost Estimate by Cost Account in Burdened Dollars
 (Dollars in Thousands)

Rocky Flats Environmental Technology Site
 Closure Project Baseline Cost Estimate Report

Project/Cost Account	F00 Feb-Sep	F01	F02	F03	F04	F05	F06	F07	Total
F Material Stewardship Project									
FA Project Management									
FAA Material Stewardship Program Mgmt	4,502	9,598	7,500	7,886	6,489	5,783	5,990	221	47,969
FAB Environmental, Safety, Health, and Quality	6,050	15,378	14,975	14,331	11,686	6,226	4,550	10	73,206
FAC Procurement Systems	4,165	7,045	6,733	7,283	5,529	6,123	4,507	417	41,801
FB Waste Management, Transportation & Procurement									
FBA Traffic and Transportation	3,550	4,724	4,646	5,057	4,200	5,500	6,323	537	34,537
FBB Waste Facility Management	16,240	16,967	9,109	8,253	6,647	8,884	8,429	10	74,540
FBC Waste Programs & Operations	18,386	44,198	61,011	60,655	48,473	67,486	51,167	3,198	354,573
FC Safeguards, Security & SNM Removal									
FCA Safeguards and Security	22,448	29,740	22,868	13,296	6,169	6,367	5,119	208	106,213
FCB Onsite Rad Labs, 559/569 Landlord	6,274	6,543	6,828	6,534	3,593	935	712	0	31,419
FCC Measurements	17,330	17,706	16,469	10,974	5,712	5,217	5,051	285	78,743
FCD Material Control & Accountability	2,221	4,130	4,284	3,518	2,909	1,671	1,985	124	20,842
FCE SNM Removal	13,943	22,393	9,894	1,518	0	0	0	0	47,748
FCF Protected Area/Limited Area Closure	882	4,117	559	508	15	0	0	0	6,081
Project F Totals:	115,989	182,538	164,875	139,814	101,422	114,192	93,833	5,010	917,673
G Remediation Project									
GA ER									
GAA Project Management	326	947	972	1,079	929	1,281	1,531	306	7,372
GAB Buffer Zone	1,233	1,509	2,618	12,298	29,818	21,530	755	293	70,054
GAC Industrial Zone	1,942	4,725	13,007	35,728	33,483	80,926	38,288	5,696	213,795
Project G Totals:	3,501	7,181	16,598	49,106	64,229	103,738	40,574	6,295	291,221

Table 2-2: CPB Cost Estimate by Cost Account in Burdened Dollars
 (Dollars in Thousands)

2.2 Activity-Based Cost Estimating

Activity-based cost (ABC) estimating is the primary estimating method used to build the CPB cost estimate. ABC estimating is the method for preparing the cost estimates that break the work into discrete, quantifiable activities. DOE policy states that estimates for ongoing environmental cleanup operations should be activity based, whenever possible. The cost of each activity is estimated in terms of resource requirements.

Most of the approximately 30,000 estimates at the line item level comply with this guidance. However, there are some line item estimates that fall short of being activity based that will be corrected as the project progresses.

The CPB cost estimate is developed in prime dollars. Prime dollars represent the cost for labor, material, subcontracts, supplies, etc. The RFCP Work Breakdown Structure (WBS) elements include activities for overhead, general and administrative expenses, fringe benefits, taxes, etc. that are sometimes referred to as indirect costs. The indirect costs are estimated in prime dollars in the CPB. The cost estimates in the PBD documents are shown in both prime and burdened dollars. Burdened dollars are prime dollars plus an allocation of the fringe benefit cost that is applicable to the labor component. The fringe benefits are the only cost in the burden pool, and the fringe burden is applied only to the Kaiser-Hill Team's labor. In FY00 and FY01, the fringe associated with retiree benefits is recovered by spreading it in the burden. Starting in FY02, the retiree benefits remain as a fringe but are not spread in the burden.

2.3 Cost Estimating Software

The cost estimate and BOEs are contained in the BEST electronic database. BEST provides a structure for developing the cost estimate and documenting the basis for the unit costs. Estimates are activity based and tied directly to detailed work scope. Line items are the lowest level of input to the planning system. The sources of the unit costs in the cost estimate are based on historical data, vendor quotes, trade publications, industry benchmarking, and estimator experience. All cost estimates were developed in FY00 dollars. Escalation and contingency were calculated and distributed at the activity level.

The cost estimate reflects the assumptions and data developed by the technical groups that have responsibility for performing the work. A cost estimate was developed for each activity and line item in BEST. Where applicable, more detailed estimates were developed outside of BEST using estimating tools such as Timberline[®]. The total of the detailed estimate is entered into BEST as a cost for an activity. The detailed estimate is maintained by the cost estimator or Cost Account Manager and is available for review. Level-of-effort estimates are only used where appropriate. This methodology ensures that credible, consistent, and adequately documented estimates are developed.

The BOEs are also at the line item level. The BOE documents the justification for the required resources and associated costs.

2.4 Escalation

Escalation is the adjustment applied to cost estimates to account for the impact of inflation. The unit costs and labor rates used in the cost estimate are in FY00 dollars. An average escalation factor of 2.3 percent compounded per year has been applied to costs beyond FY00. Figure 2-1 shows the \$263.4 million of escalation included in the baseline spread by fiscal year.

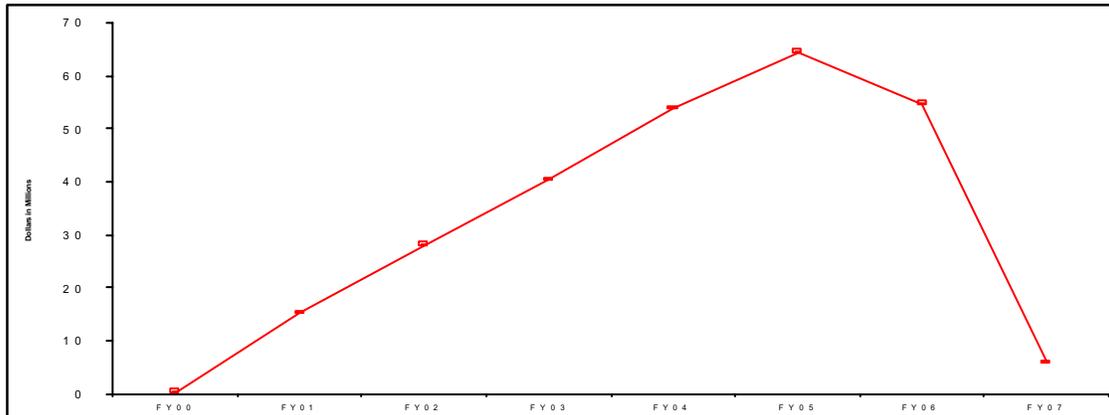


Figure 2-1: Escalation by Fiscal Year

Figure 2-2 illustrates the escalation of the Construction Cost Index (CCI), as reported by the *Engineering News-Record* (ENR) on March 29, 1999, compared to the escalation used for this cost estimate.

As shown in Figure 2-2, the 2.1 percent escalation applied to the cost estimate is reasonable when compared to historical cost indexes. The average of the cost indexes over the past six years is 2.4 percent.

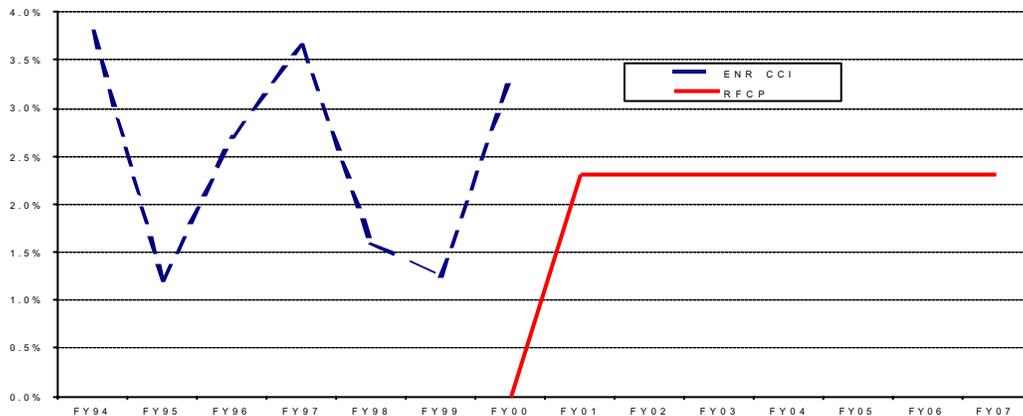


Figure 2-2: Cost Index Compared to R.F.C.P. Escalation

2.5 Contingency

Contingency is a specific provision for unforeseeable elements of cost within a defined project scope. Contingency is used to cover costs resulting from incomplete design, unforeseen and unpredictable conditions, and uncertainties within the defined project scope. Contingency does not include provisions for out-of-scope work or baseline changes. The application of a contingency cost covers the entire life cycle of a project from feasibility studies through operations to closeout. This section provides the approach used to determine the contingency.

The amount of contingency applied to the cost estimate was determined using an accepted cost engineering practice and complies with DOE guidance. The DOE's *Cost Estimating Guide*, Volume 6, provides guidance for the determination and application of contingency for cost estimates prepared for the DOE. The contingency reflects the cost risk associated with activities planned in each fiscal year. The Programmatic Risk Management Plan further defines the approach used to determine the cost risk.

DOE's *Cost Estimating Guide*, Volume 6 provides guidance on the application of contingency for various types of cost estimates. The guidance indicates that the expected contingency range for a standard budget estimate is 15 to 40 percent. Using the contingency range for the standard budget type estimate is conservative when compared to the contingency ranges for the various activities in an environmental restoration project. Figure 2-3 shows the amount of contingency in dollars by fiscal year that is included in the \$3.963 billion compared to the contingency range provided by DOE guidance. The RFCP contingency costs are at the low end of the range.

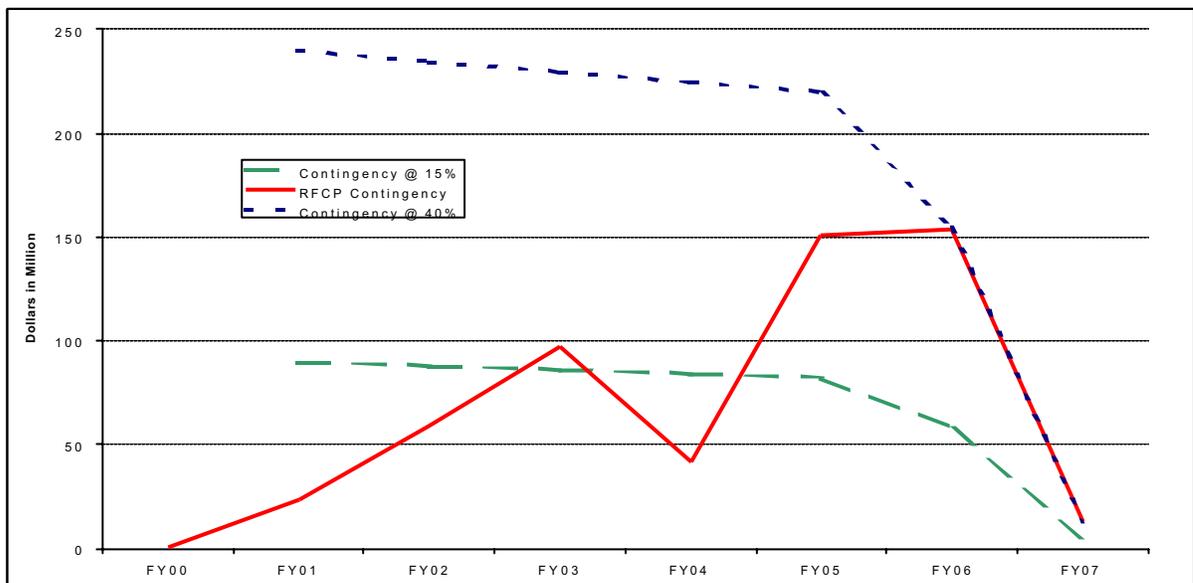


Figure 2-3: Contingency by Fiscal Year

3.0 RESOURCES

The resources required to fulfill the contract completion criteria of the closure contract by Dec. 15, 2006 have been analyzed and are presented below.

Figure 3-1 shows the projected headcount required by fiscal year. The graph segments the data by type of workforce. As expected, the labor resource requirements remain fairly constant until FY02. The labor mix, however, changes in that the number of craft headcount increases while the number of salaried headcount decreases. The headcount drops off significantly in the out-years when subcontracted services increase and work is completed. The security police officer workforce diminishes as the SNM is removed from the site. The figure also shows the salaried and craft labor drop proportionately in the out-years.

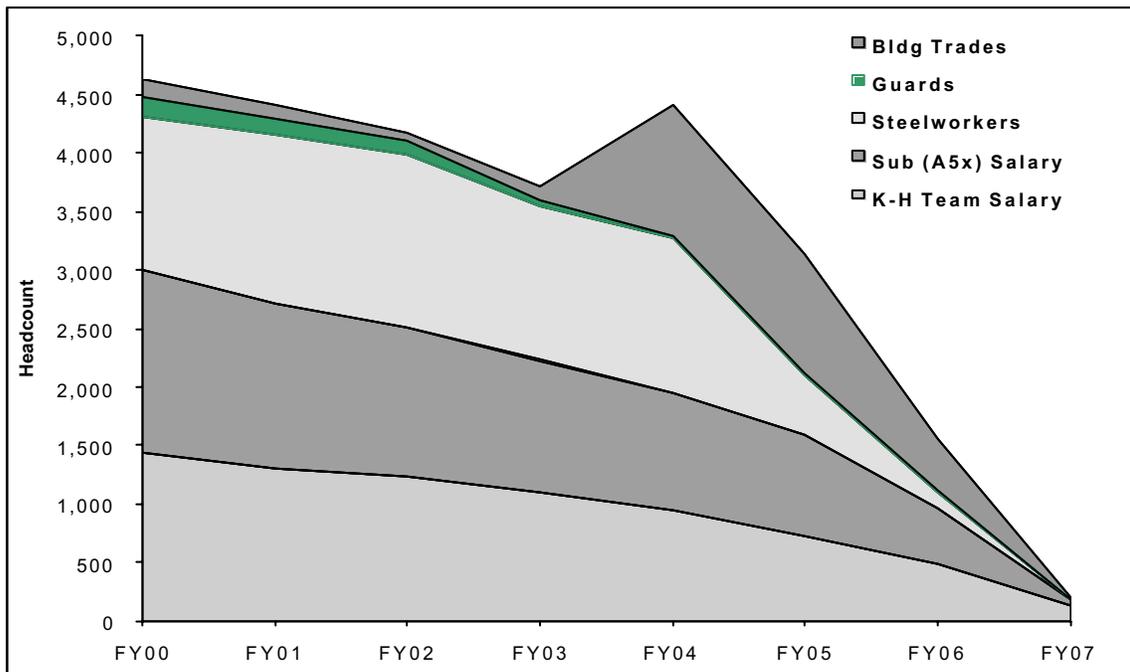


Figure 3-1: Workforce by Fiscal Year

Figure 3-2 shows subcontracted services, as a percentage of the total dollars subcontracted by fiscal year. This graph demonstrates that Kaiser-Hill has prepared this estimate with the goal of increasing subcontracted services.

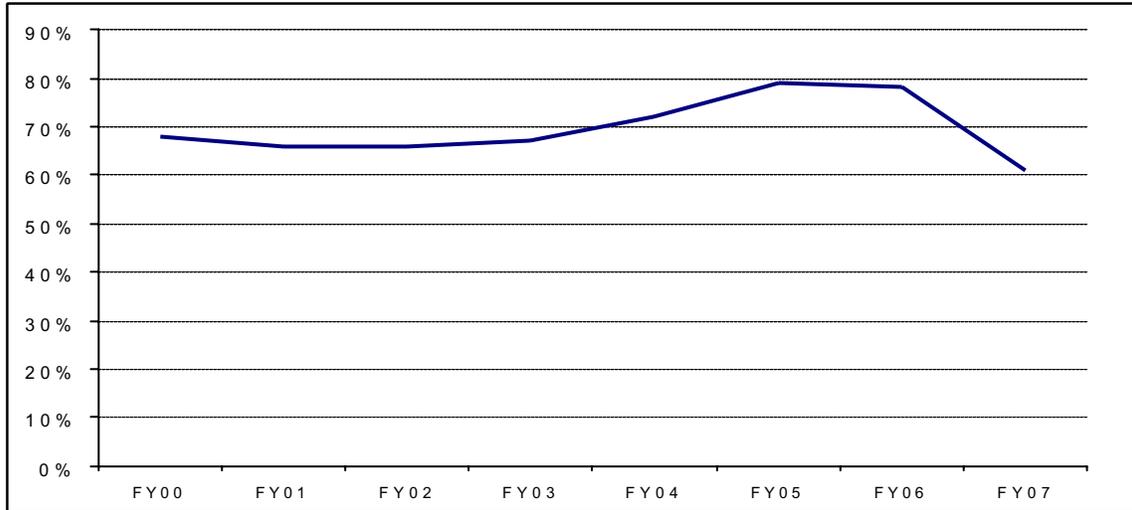


Figure 3-2: Percentage of Subcontracted Services by Fiscal Year

APPENDIX A

Appendix A provides the details of the cost estimate and the BOE. Appendix A is sorted by PBD and then by the cost account within each PBD. Each cost account is organized by activities and line items.

A cost summary provides the total for each cost account.

Cost estimates are developed at the line item level. Appendix A provides the following for each activity and line item:

1. WBS, activity, and line item number
2. WBS title, activity, and line item
3. Fiscal year in which the activity starts
4. Charge numbers associated with the work activity
5. Quantity required
6. Units of measure
7. BOE type. Available types are:
 - VQ Vendor Quote
 - HC Historical Cost
 - TP Trade Publications
 - BM Benchmarks
 - EE Estimator Experience.
8. Risk factors for cost, schedule, and technical areas. (See Section 2.5 for additional information on risk factors).
9. Unit labor hours for the Kaiser-Hill Team
10. Total labor hours for the Kaiser-Hill Team. (Unit labor hours x quantity)
11. Total labor cost
12. Costs for materials and subcontracts
13. Contingency and escalation
14. Total prime cost
15. Burden
16. Total cost (burdened)

The BOE provides the basis and the resources that support the cost estimate. The BOE documents the basis of the unit cost. The standard format for the BOE is to identify the source of the unit cost and any necessary adjustments to the unit costs. The basis for the adjustment will be noted. BOEs are not provided for contingency and escalation line items.

Appendix A also contains a list of resources contained in the cost estimates. The resources are in hours for Kaiser-Hill Team labor and in dollars for all other resources.

Appendix A provides the following for each resource:

1. Cost element designation and description
2. Skill code and description
3. Department number and name
4. Curve that represents the expenditure profile
5. Quantity
6. Units
7. Factors