

Attachment C7

Cost Estimate Worksheets

Yokohl Valley Reservoir (Chapter 7)

CODE:D-8170

ESTIMATE WORKSHEET

SHEET 1 OF 3

FEATURE: YOKOHL VALLEY DAM AND APPURTENANT FEATURES ZONED EARTH FILL DAM, 260 FEET HIGH	PROJECT: USJRBSI
	DIVISION:
	P:\US_Bureau_Reclamation\DIQ_01CS20210B\Upper FILE: _San_Joaquin_Phase_1\Documents\Surface Storage Option TM\TM Yokohl\YOKOHL DAM ESTIMATE (revsd).xls

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	20	DAM STRUCTURE					
		PREVENTION OF WATER POLUTION		1	LS	\$250,000.00	\$250,000
		DIVERSION AND CARE OF WATER		1	LS	\$400,000.00	\$400,000
		EXCAVATION DAM FOUNDATION		560,000	CY	\$6.00	\$3,360,000
		EXCAVATION STIPPING OF BORROW PITS		1,140,000	CY	\$2.70	\$3,078,000
		EXCAVATION ROCK GROUT CAP		1,020	CY	\$8.00	\$8,160
		EXCAVATION TO EMBANKMENT		11,339,000	CY	\$4.15	\$47,056,850
		EXCAVATION TO SAND AND GRAVEL BEDDING		113,000	CY	\$12.00	\$1,356,000
		EXCAVATION ROCK TO EMBANKMENT		2,040,000	CY	\$6.45	\$13,158,000
		EMBANKMENT EARTHFILL IMPERVIOUS		9,638,000	CY	\$1.60	\$15,420,800
		EMBANKMENT ROCK		2,855,300	CY	\$1.60	\$4,568,480
		EMBANKMENT SAND AND GRAVEL		107,400	CY	\$5.00	\$537,000
		Dam Structure Subtotal					\$89,193,290
	30	DRILLING AND GROUTING					
		MOBILIZATION GROUTING		1	LS	\$100,000.00	\$100,000
		DRILL 0 TO 30 FT		11,550	FT	\$18.00	\$207,900
		DRILL 30 TO 60 FT		4,620	FT	\$20.00	\$92,400
		DRILL 60 TO 110FT		3,850	FT	\$22.00	\$84,700
		DRILL 110 TO 160 FT		1,925	FT	\$25.00	\$48,125
		FURNISH AND PLACE GROUT PIPE AND FITTINGS		6,754	LB	\$2.00	\$13,508
		CONCRETE IN GROUT CAP		1,020	CY	\$250.00	\$255,000
		HOOKUPS TO GROUT HOLES		307	EA	\$100.00	\$30,700
		PRESSURE GROUTING		22,300	SKS	\$20.00	\$446,000
		CEMENT		28,400	SKS	\$5.00	\$142,000
		GRAVEL IN CREST		1,100	CY	\$15.00	\$16,500
		Drilling and Grouting Subtotal					\$1,436,833

QUANTITIES		PRICES	
BY	Don Crone	CHECKED	Stephen Osgood 10/30/03
DATE PREPARED	10/30/2003	APPROVED	
BY	Don Crone	CHECKED	Stephen Osgood 10/30/03
DATE	10/30/03	PRICE LEVEL	Appraisal 03

ESTIMATE WORKSHEET

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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	40	SPILLWAY					
		EXCAVATION UNCLASSIFIED		112,000	CY	\$6.00	\$672,000
		BACKFILL		8,250	CY	\$15.00	\$123,750
		CONCRETE CREST STRUCTURE		110	CY	\$325.00	\$35,750
		CONCRETE IN FLOORS		900	CY	\$325.00	\$292,500
		CONCRETE WALLS		3,540	CY	\$325.00	\$1,150,500
		DRILL AND GROUT ANCHOR BARS		7,170	LF	\$8.00	\$57,360
		CEMENT		26,000	CWT	\$5.00	\$130,000
		RESTEEL		692,000	LB	\$0.75	\$519,000
		RIPRAP		1,450	CY	\$50.00	\$72,500
		ANCHOR BARS		53,330	LB	\$2.00	\$106,660
		Spillway Subtotal					\$3,160,020
	50	OUTLET WORKS					
		EXCAVATION UNCLASSIFIED		54,700	CY	\$6.00	\$328,200
		EXCAVATION TUNNEL 6.5 DIA		4,600	CY	\$290.00	\$1,334,000
		EXCAVATION TUNNEL 9 FT HORSESHOE		5,560	CY	\$260.00	\$1,445,600
		EXCAVATION GATE CHAMBER		300	CY	\$75.00	\$22,500
		CONCRETE CIRCULAR TUNNEL		2,780	CY	\$325.00	\$903,500
		CONCRETE HORSESHOE TUNNEL		2,800	CY	\$325.00	\$910,000
		CEMENT		31,500	CWT	\$5.00	\$157,500
		RESTEEL		558,000	LB	\$0.75	\$418,500
		CONCRETE IN GATE CHAMBER 1ST STAGE		126	CY	\$375.00	\$47,250
		CONCRETE IN GATE CHAMBER 2ND STAGE		34	CY	\$350.00	\$11,900
		CONCRETE IN CONTROL HOUSE		240	CY	\$400.00	\$96,000
		CONCRETE IN O. W. BASIN		753	CY	\$325.00	\$244,725
		TRASHRACKS		26,000	LB	\$4.00	\$104,000
		PENSTOCK		170,300	LB	\$2.50	\$425,750
		SLIDE GATE 3.5FT X 4 FT GATE 2EA		76,000	LB	\$4.00	\$304,000
		SLIDE GATE CONTROL HOUSE		1	LS	\$25,000.00	\$25,000
		HOLLOW JET VALVE		1	EA	\$15,000.00	\$15,000
		RIPRAP		1,220	CY	\$50.00	\$61,000
		BACKFILL		1,750	CY	\$15.00	\$26,250
		Outlet Works Subtotal					\$6,880,675

QUANTITIES		PRICES	
BY	CHECKED	BY	CHECKED
Don Crone	Stephen Osgood 10/30/03	Don Crone	Stephen Osgood 10/30/03
DATE PREPARED	APPROVED	DATE	PRICE LEVEL
10/30/03		10/30/03	Appraisal 03

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SHEET 3 OF 3

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PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	60	PUMPSTATIONS					
		PUMPSTATION 4EA 30MW UNITS		120	MW	\$500,000.00	\$60,000,000
		Pumpstation Subtotal					\$60,000,000
	70	CANAL AND PIPELINES					
		INTAKE CHANNEL EXCAVATION		5,500	CY	\$5.00	\$27,500
		CONCRETE CHANNEL		780	CY	\$300.00	\$234,000
		HEADWORKS		1	LS	\$50,000.00	\$50,000
		Canal and Pipelines Subtotal					\$311,500
	80	TUNNEL					
		TUNNEL 15FT DIA		7,600	LF	\$2,000.00	\$15,200,000
		CONCRETE LINING		13,300	CY	\$350.00	\$4,655,000
		TUNNEL OUTLET STRUCTURE		200	CY	\$350.00	\$70,000
		Tunnel Subtotal					\$19,925,000
	90	SWITCHYARDS					
		SWITCHYARD 60mva 115-13.8kv		1	LS		\$1,500,000
		Switchyards Subtotal					\$1,500,000
		SUMMARY OF COSTS					
		Dam Structure					\$89,193,290
		Drilling and Grouting					\$1,436,833
		Spillway					\$3,160,020
		Outlet Works					\$6,880,675
		Pump Station					\$60,000,000
		Canal and Pipelines					\$311,500
		Tunnel					\$19,925,000
		Switchyards					\$1,500,000
		Mobilization - 5%					\$9,100,000
		Subtotal					\$191,507,318
		Unlisted Items - 15%					\$28,492,682
		Contract Cost					\$220,000,000
		Contingencies - 30%					\$70,000,000
		Field Cost					\$290,000,000

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YV_TRANS

CONTRACT COST FOR RELOCATION OF TRANSMISSION LINE AT YK_790

Cost per Mile \$924,000

Description	Amount
Transmission line relocation (Yokohl Valley, el. 790 reservoir)	
6 mi 230kv @ \$924000/mi (source: Don Crone, MWH, 2003)	\$5,544,000
Mobilization (5%)	\$277,200
Subtotal	\$5,821,200
Unlisted items (~15%)	\$1,178,800
Contract Cost for Relocation of Yokohl Valley Transmission Line (Jul-2003 costs)	\$7,000,000