**Attachment C2** 

**Cost Estimate Worksheets** 

# **Raise Friant Dam (Chapter 2)**

## FRI\_25\_1

			ESTIMATE WOR	PROJ			SHEET_1 OF3	
	ONE.		00-Jan-04		FRIANT DAM	1		
	Frian	t Dam Raise						
	25 Fc	oot Raise Opt	ion	DIVISIC	N:			
			FILE:	FILE: \\Ussac1s- muni1\Jobs\US_Bureau_Reclamation\\IDIQ_01CS20210B\Upper				
WOID: UI							ce Storage Option TMs	
PLANT	PAY						UNIT	
ACCT.	ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT
	1	Diversion and	care of river		1	LS	\$500,000.00	\$500,0
	2	Excavation, all	classes, for dam foundation		145,000	CY	\$12.00	\$1,740,0
	3	Excavation, co	ncrete		30,000	CY	\$200.00	\$6,000,0
	4	Backfill			63,300	CY	\$5.00	\$316,5
	5	RCC in dam			270,700	CY	\$45.00	\$12,181,
	6	Concrete facin	g elements		34,500	CY	\$120.00	\$4,140,0
	7	Concrete cap o	on top of dam		3,900	CY	\$250.00	\$975,0
	8	Leveling concr	ete in dam foundation		5,000	CY	\$200.00	\$1,000,0
	9	Concrete for d			N/A	CY		
	10	Conorata in an	(No gallery in this option)		12 600	CV	\$240.00	¢0.064.(
			illway crest and piers		13,600		\$240.00	\$3,264,0
	11	Concrete in sp	illway training walls		4,300	CY	\$320.00	\$1,376,0
	12	Concrete in sti	lling basin walls		3,200	CY	\$340.00	\$1,088,0
	13	Concrete in sti	lling basin floors and aprons		24,900	CY	\$185.00	\$4,606,
	14	Concrete in sic	lewalks, curbs and parapets or	dam	3,200	CY	\$370.00	\$1,184,0
	15	Furnishing and	I handling cement		62,400	TONS	\$100.00	\$6,240,0
	16	Furnishing and	I handling reinforcement		10,730,000	) LB	\$0.60	\$6,438,
			track rails for gantry cranes		85,000	LB	\$3.50	\$297,5
	18	Dismantling, m	odifying and reinstalling gantry	/ cranes	1	LS	\$1,000,000.00	\$1,000,
		Subtotal (shee						\$52,347,
		QUAN	ITITIES		PR	ICES		
Υ	S. Higin	botham	CHECKED	BY T. Articho	ker	CHECKED		
ATE PR	EPARED		APPROVED	DATE		PRICE LE	VEL	
					01/08/04		Appraisal	

#### FRI\_25\_2

CODE:D-81	CODE:D-8170 ESTIMATE WO								
FEATU	JRE:		08-Jan-04	PROJ	ECT:				
					FRIANT DAM				
	Frian	t Dam Raise							
	25 Fc	ot Raise Opt	ion	DIVISIC	DN:				
				FILE:					
WOID: UF	2010						bility Estimates\Friant	Dam	
	1				Alternatives\[Frian	t25.wk4]B			
PLANT	PAY			0005			UNIT		
ACCT.	ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT	
	19		ving and resetting gantry crane	6	1	LS	\$0.00	\$0	
		· · ·	lundant and deleted)						
	20	Installing outle	t pipe extensions		140,000	lb	\$2.50	\$350,000	
	21	F & I new whee	el gates and outlet valves		1	LS	\$4,000,000.0	) \$4,000,000	
	22	Dismantling ex	isting drum gate		1	LS	\$405,000.00	\$405,000	
	23	Dismantling ex	isting crest gates		1	LS	\$150,000.00	\$150,000	
	24	Dismantling co	ntrol system for crest gates		1	LS	\$13,000.00	\$13,000	
	25	Reinstalling cre	est gates		1	LS	\$165,000.00	\$165,000	
	26	Reinstalling co	ntrol system for crest gates		1	LS	\$50,000.00	\$50,000	
	27	Furnishing and	l installing one new crest gate		1	LS	\$1,500,000	\$1,500,000	
	28	Installing contr	ol system for new crest gate		1	LS	\$25,000.00	\$25,000	
	29	Furnishing and	l installing flat drains		54,000	LF	\$22.00	\$1,188,000	
	30	Setup for found	dation drain drilling		358	EA	\$200.00	\$71,600	
	31	Foundation dr	ain drilling outside the gallery		93,000	FT	\$35.00	\$3,255,000	
	32	Excavation			15,000	CY	\$9.00	\$135,000	
	33	U/S slope prote	ection		7,300	CY	\$15.00	\$109,500	
	34	D/S slope prote	ection		4,900	CY	\$15.00	\$73,500	
					, i i i i i i i i i i i i i i i i i i i				
	İ	1							
				l					
<b> </b>	1			1					
		Subtotal (shee	t 2 of 3)			<u> </u>		\$11,490,600	
<u> </u>	QUANTITIES				PR	ICES	I I	÷ · · ; · • • ; • • • ; • • • ; • • • •	
вү			CHECKED	вү		СНЕСКЕ	)		
ľ	S. Higin	botham		T. Articho		UNCORCL			
DATE PR		~~	APPROVED	DATE		PRICE LE	VEL		
	LFARED				01/08/04		Appraisal		
L				1	01/00/04		Applaisai		

#### FRI\_25\_3

CODE:D-8170 ESTIMATE WOR			RKSHEET SHEET_3_OF_3						
FEATU	JRE:		08-Jan-04	PROJE	ECT:				
				FRIANT DAM					
	Frian	t Dam Raise							
		oot Raise Opt	ion	DIVISIC	N:				
		· · ·		<b>L</b>					
				FILE:	\\Ussac1s-				
WOID: UP	sls						amation\IDIQ_01CS20		
PLANT	PAY	1		f		lento,e a	UNIT		
ACCT.	ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT	
//				0011	GO	0		/ 1110 0111	
	†	<u> </u>							
	35	Zone 3 shell m	aterial <sup>.</sup>						
	<u> </u>		vel, Cobbles, Boulders from Sto	L cknile)	114,000	CY	\$7.00	\$798,000	
	┼───	(Ound, Cra.			119000	0.	ψι	ψι σο,σου	
<u> </u>	36	Zone 2 filter ma	atorial						
			SP material)	<u> </u>	60,000	CY	\$25.00	\$1,500,000	
		(11000300	SF Illaterial)	<b> </b>	00,000		ψ20.00	ψ1,000,000	
	37	Zone 1 materia		┨────					
	<u> </u>		SC, SM, ML and GC materials)	<u></u>					
		1		1	120.000	CY	\$10.00	¢1 200 000	
	╂────	Core materi	a	┨────	129,000	UT	\$10.00	\$1,290,000	
	╂────			┨────					
	╂────	Outstatal (about	·	┨────				¢со рид оо	
<u> </u>	──	Subtotal (sheet		───				\$52,347,000	
	──	Subtotal (sheet		<b> </b>				\$11,490,600	
L	──	Subtotal (sheet	t 3)	───				\$3,588,000	
				┨────				<u>+</u>	
		Subtotal		<b> </b>				\$67,425,600	
L	<u> </u>							<u></u>	
L	40	Mobilization			(+/-)		5%	\$3,400,000	
				<b> </b>					
		Subtotal		<b> </b>				\$70,825,600	
	<b> </b>			<b> </b>					
		Unlisted Iter	ms	<b> </b>	(+/-)		15%	\$10,174,400	
	<u> </u>			ļ			ļ ļ		
	<u> </u>	Contract Cost		Ļ			ļ	\$81,000,000	
				Ļ					
	$\square$	Contingenci	ies	Ļ	(+/-)		30%	\$24,000,000	
				Ļ					
	ļ	Field Cost		ļ				\$105,000,000	
				<u> </u>					
	[			<u> </u>					
				<u> </u>					
		QUAN	ITITIES		PR	CES	·		
вү			CHECKED	вү		CHECKED	)		
	S. Higin	botham		T. Articho	ker				
DATE PRI	EPARED		APPROVED	DATE		PRICE LE	VEL		
				01/08/04	Appraisal				

## FRI\_60\_1

			ESTIMATE WOR	-			SHEET_1_ OF _3		
FEATURE: 08-Jan-0					PROJECT: FRIANT DAM				
	Frian	t Dam Raise							
	60 Fc	ot Raise Opt	ion	DIVISIO	ON:				
					\\Ussac1s-				
WOID: UPSJS				FILE:	muni1\Jobs\US_B		amation\IDIQ_01CS2021		
PLANT	PAY				n_Phase_1\Docum	nents\Surta	ce Storage Option TMs\T UNIT	M Friant\USBR	
ACCT.	ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT	
	1	Diversion and	care of river		1	LS	\$750,000.00	\$750,00	
	2	Excavation, all	classes, for dam foundation		355,400	CY	\$10.00	\$3,554,00	
	3	Excavation, co	ncrete		30,000	CY	\$200.00	\$6,000,00	
	4	Backfill			144,000	CY	\$5.00	\$720,00	
	5	RCC in dam			934,000	CY	\$40.00	\$37,360,00	
	6	Concrete in sp	illway crest and piers		13,600	CY	\$240.00	\$3,264,00	
	7	Concrete in sp	illway training walls		4,300	CY	\$320.00	\$1,376,00	
	8	Concrete in sti	lling basin walls		3,200	CY	\$340.00	\$1,088,00	
	9	Concrete in sti	lling basin floors and aprons		24,900	CY	\$185.00	\$4,606,50	
	10	Concrete in sid	lewalks, curbs and parapets o	n dam	3,200	CY	\$370.00	\$1,184,00	
	11	Furnishing and	I handling cement		208,000	TONS	\$95.00	\$19,760,00	
	12	Furnishing and	I handling reinforcement		7,380,000	LB	\$0.60	\$4,428,00	
	13	Installing new	track rails for gantry cranes		85,000	LB	\$3.50	\$297,50	
	14	Dismantling, m	odifying and reinstalling gantr	y cranes	1	LS	\$1,000,000.00	\$1,000,00	
		(assume red	ving and resettling gantry cran undant and deleted)	es	1	LS	\$0.00	\$0	
		0	t pipe extensions		335,000	LB	\$2.50	\$837,50	
			el gates and outlet valves		1	LS	\$4,000,000	\$4,000,00	
	18	Dismantling ex	isting drum gate		1	LS	\$405,000.00	\$405,00	
		Subtotal (1 of 3	3) ITITIES					\$90,630,50	
		QUAN	Ĩ.	BV	PR				
	S. Higin	botham		BY T. Articho		CHECKED			
	EPARED		APPROVED	DATE	01/08/04		VEL Appraisal		

## FRI\_60\_2

CODE:D-8170 ESTIMATE WOR								
FEATU	JRE:		08-Jan-04	PROJ	ECT:			
					FRIANT DAM			
	Frian	t Dam Raise						
	60 Fc	ot Raise Opt	ion	DIVISIO	DN:			
				FILE:				
WOID: UF	WOID: UPSJS				C:\Artichoker\Appraisal-Feasibility Estimates\Friant Dam Alternatives\[FRIANT60.WK4]B			
PLANT	PAY				Alternatives (I TriA	100.00104	UNIT	
ACCT.	ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT
	19	Dismantling ex	isting crest gates		1	LS	\$150,000.00	\$150,000
	20	Dismantling co	ntrol system for crest gates		1	LS	\$13,000.00	\$13,000
	21	Reinstalling cre	est gates		1	LS	\$165,000.00	\$165,000
	22	Reinstalling co	ntrol system for crest gates		1	LS	\$50,000.00	\$50,000
	23	Furnishing and	installing one new crest gate		1	LS	\$1,500,000	\$1,500,000
		la stall'a su susta	-1			1.0	#05 000 00	<b>#05.000</b>
	24	Installing contr	ol system for new crest gate		1	LS	\$25,000.00	\$25,000
	05	<b>F</b> orm in him or and	line (alline (la caluation)		54.000		<b>#00.00</b>	¢4,400,004
	25	Furnishing and	l installing flat drains		54,000	LF	\$22.00	\$1,188,000
	26	Satur for found	dation drain drilling		327	EA	\$200.00	¢65.400
	20	Setup for found	dation drain drilling		521	LA	\$200.00	\$65,400
	27	Foundation dr	ain drilling outside the gallery		210,000	FT	\$35.00	\$7,350,000
	21		and drilling outside the gallery		210,000		φ33.00	ψ7,000,000
	28	Clearing and g	rubbing 6" to waste		45	AC	\$3,500.00	\$157,500
		<u> </u>						<b>.</b> ,
	29	Excavation			405,000	CY	\$7.50	\$3,037,500
	30	U/S slope prote	ection		199,000	CY	\$10.00	\$1,990,000
	31	D/S slope prote	ection		193,000	CY	\$10.00	\$1,930,000
	32	Zone 3 materia						
		(=====;=====	vel, Cobbles, Boulders from Bo	rrow)				<b>.</b>
		U/S			1,230,000	CY	\$11.00	\$13,530,00
		D/S			502,000	CY	\$11.00	\$5,522,000
		Filter motorial						
	33	Filter material	SP material)					
		U/S	or material)		154,000	CY	\$18.00	\$2,772,000
		D/S			205,000	CY	\$18.00	\$3,690,000
					_00,000	~ 1	÷10.00	<i>+0,000,000</i>
	1							
		Subtotal (2 of 3	3)					\$43,135,40
			ÍTITIES		PR	ICES	•	
вү	_		CHECKED	вү		CHECKEL	)	
	S. Higin	botham		T. Articho	ker			
DATE PR	EPARED		APPROVED	DATE		PRICE LE	EVEL	
					01/08/04		Appraisal	

## FRI\_60\_3

CODE:D-8170 ESTIMATE WC				ORKSHEET SHEET_3_ OF _3					
FEAT	JRE:		08-Jan-04	4 PROJECT:					
				FRIANT DAM					
	Frian	t Dam Raise							
	60 Fc	oot Raise Op	tion	DIVISIO	N·				
					<b>5</b> 11.				
				FILE:	\\Ussac1s-				
WOID: UI				FILE.	muni1\Jobs\US_B		amation\IDIQ_01CS		
	1				in_Phase_1\Docu	ments\Surf	ace Storage Option T	Ms\TM Friant\USBR	
PLANT	PAY						UNIT		
ACCT.	ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT	
			-1						
	34	Zone 1 materia							
		· · · · · · · · · · · · · · · · · · ·	SC, SM, ML and GC material	s)	072.000	CV	¢0.00	¢7 776 00	
		Core mater	181		972,000	CY	\$8.00	\$7,776,00	
	25	D/S Filter and	drainage blanket:						
	30		¥		266.000	CV	¢10.00	¢6 599 00	
			GP materials erforated, corrug. HDPE drain	nino	366,000 3,800		\$18.00 \$12.00	\$6,588,000 \$45,600	
				pipe		EA	\$12.00		
			5-ft dia, 20-ft high		50	EA			
		Weirs			50		\$700.00	\$35,000	
		Foundation	Treatment (grout curtain)		1	LS	\$1,100,000.0	0 \$1,100,000	
	26	Concrete facin	a clomente (unetreem and de	l	m) 116.000	CV	00.00	¢0,000,00	
	30	Concrete facin	g elements (upstream and do	wnstrea	m) 116,000	CY	\$80.00	\$9,280,00	
	07	Conorata aon	an tan of dam		E 000	CV	¢250.00	¢1.250.00	
	3/	Concrete cap			5,000	CY	\$250.00	\$1,250,00	
	20		into in dom foundation		5,500	CY	00.000	¢1 100 00	
	30	Leveling conci	ete in dam foundation		5,500	Cr	\$200.00	\$1,100,000	
	20	Concrete for d	rainago gallony		6,000	CY	\$300.00	\$1,800,000	
	38				0,000		φ300.00	\$1,800,00	
		Subtotal (1 of 3	3)					\$90,630,500.0	
		Subtotal (1 of 3						\$43,135,40	
		Subtotal (2 of 3						\$29,324,60	
			5)					φ20,024,00	
		SUBTOTAL						\$163,090,50	
		GODICIAL						\$100,000,00	
	40	Mobilization			(+/-)		5%	\$8,200,00	
		Mobilization			(., )		070	<i>\\</i> 0,200,000	
		Subtotal						\$171,290,50	
								<i>•••••••••••••••••••••••••••••••••••••</i>	
		Unlisted Ite	ms		(+/-)		15%	\$23,709,50	
								+ -,,	
		Contract Cost						\$195,000,00	
								. , , ,	
	1	Contingenc	ies		(+/-)		30%	\$59,000,00	
		<u> </u>			, <i>,</i> ,				
	Field Cost						\$254,000,00		
		QUAN	ITITIES		PR	ICES	,		
вү			CHECKED	ВΥ		CHECKED	)		
	S. Higin	botham		T. Articho	oker				
DATE PR	EPARED	)	APPROVED	DATE		PRICE LE	VEL		
					01/08/04				

## FRI\_140\_1

CODE:D-81	CODE:D-8170 ESTIMATE WOF				SHEET SHEET_1_OF_3			
FEAT	JRE:		08-Jan-04	PROJECT:				
					FRIANT DAM	1		
	Frian	t Dam Raise						
	140 F	Foot Raise Op	otion	DIVISIC	DN:			
		•						
				FILE:	\\Ussac1s-			
WOID: UF	PSJS						amation\IDIQ_01CS202	
PLANT	PAY				Phase_NDocume	nis\Sunace	Storage Option TMs\TM	I Fhaniluser
ACCT.	ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT
	1	Diversion and	care of river		1	LS	\$1,000,000.00	\$1,000,000
		Diversion and					<i>\\</i> ,000,000.00	φ1,000,000
	2	Excavation, all	classes, for dam foundation		900,000	CY	\$10.00	\$9,000,000
	3	Excavation, co	ncrete		30,000	CY	\$200.00	\$6,000,000
	4	Backfill			300,000	CY	\$4.50	\$1,350,000
	5	RCC in dam			3,880,000	CY	\$33.00	\$128,040,00
	6	Concrete in sp	illway crest and piers		13,600	CY	\$240.00	\$3,264,000
	7	Concrete in sp	illway training walls		4,300	CY	\$320.00	\$1,376,000
	8	Concrete in sti	ling basin walls		3,200	CY	\$340.00	\$1,088,000
	9	Concrete in sti	ling basin floors and aprons		24,900	CY	\$185.00	\$4,606,500
	10	Concrete in sic	lewalks, curbs and parapets or	ı dam	6,300	CY	\$370.00	\$2,331,000
	11	Furnishing and	handling cement		652,000	TONS	\$90.00	\$58,680,00
								<b>.</b>
			handling reinforcement		7,845,000		\$0.60	\$4,707,000
	13	Installing new t	rack rails for gantry cranes		85,000	LB	\$3.50	\$297,500
	14	Dismantling, m	odifying and reinstalling gantry	/ cranes	1	LS	\$1,000,000.00	\$1,000,000
	15	Moving, modify	ring and resettling gantry crane	s	1	LS	\$0.00	\$0
L			undant and deleted)					<b>A</b> ( <b>A A A A A A A A A A</b>
	16	Installing outle	t pipe extensions		915,000	LB	\$2.00	\$1,830,000
	17	Replacing whe	el gates and outlet valves		1	LS	\$4,000,000	\$4,000,000
	18	Dismantling ex	isting drum gate		1	LS	\$405,000.00	\$405,000
		Subtotal (1 of 3	,					\$228,975,00
		QUAN	ITITIES		PR	ICES		
BY	S. Higir	botham	CHECKED	BY T. Articho	ker	CHECKED		
DATE PR	EPARED		APPROVED	DATE	01/08/04	PRICE LE	VEL Appraisal	

## FRI\_140\_2

	70		ESTIMATE WOR				SHEET_2_ OF _3	
FEATU	JRE:		08-Jan-04	PROJI	ECT:			
				FRIANT DAM				
		t Dam Raise						
	140 F	oot Raise O	ption	DIVISIO	DN:			
					W. I 4 -			
				FILE:	\\Ussac1s- muni1\Jobs\US_B	ureau_Rec	lamation\IDIQ_01CS20	210B\Upper_San_J
WOID: UP	1				uin_Phase_1\Doc	uments\Sur	face Storage Option TM	Is\TM Friant\USBR
PLANT	PAY						UNIT	
ACCT.	ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT
	19	Dismantling e>	kisting crest gates		1	LS	\$150,000.00	\$150,00
	20	Dismantling co	ontrol system for crest gates		1	LS	\$13,000.00	\$13,000
								φ13,000
	21	Reinstalling cr	est gates		1	LS	\$165,000.00	\$165,00
	22	Reinstalling co	ontrol system for crest gates		1	LS	\$50,000.00	\$50,000
	23	Furnishing and	installing one new crest gate		1	LS	\$1,500,000	\$1,500,00
	24	Installing contr	rol system for new crest gate		1	LS	\$25,000.00	\$25,000
	25	Furnishing and	installing flat drains		54,000	LF	\$22.00	\$1,188,00
	26	Setup for foun	dation drain drilling		327	EA	\$200.00	\$65,40
			ain drilling, outside the gallery		262,000	FT	\$33.00	\$8,646,00
	28	8 Clearing and grubbing 6" to waste			165	AC	\$3,500.00	\$577,50
	29	Excavation			1,500,000	CY	\$7.00	\$10,500,00
	30	U/S slope prot	ection		572,000	CY	\$9.00	\$5,148,00
	31	D/S slope prot	ection		643,000	CY	\$9.00	\$5,787,00
	32	Zone 3 materia	al:					
		(Sand, Gra	vel, Cobbles, Boulders from Bo	rrow)				
		U/S			5,602,000		\$8.00	\$44,816,00
		D/S			3,914,000	CY	\$8.00	\$31,312,00
	22	Filtor motorial						
	33	Filter material	SP material)					
		· · · · · · · · · · · · · · · · · · ·			484.000	CV	¢16.00	¢7 744 00
		U/S materia D/S materia			484,000		\$16.00 \$16.00	\$7,744,00 \$10,112,00
			ai		032,000		\$10.0U	φτυ, ττ <b>2</b> ,00
		Subtotal (2 of 3)						\$127,798,90
		QUAN	ITITIES		PR	ICES		
BY	S. Higin	botham	CHECKED	BY T. Articho	ker	CHECKEI	)	
DATE PRI	-		APPROVED	DATE	01/08/04	PRICE LE	EVEL Appraisal	

# FRI\_140\_3

CODE:D-8170 ESTIMATE WOR				ORKSHEET SHEET_3_ OF _3				
FEATU	JRE:		08-Jan-04	PROJ	ECT:			
					FRIANT DAM			
	Frian	t Dam Raise						
	140 F	oot Raise Op	otion	DIVISIO	ON:			
				FILE:	\\Ussac1s-			
WOID: UF	212			.cc.				0210B\Upper_San_Joad
					Phase_1\Docum	ents\Surfac	ce Storage Option TMs	\TM Friant\USBR
ACCT.	ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	PRICE	AMOUNT
	2/	Zone 1 materia	N					
	34	1	SC, SM, ML and GC materials					
		Core materi		»/	3,358,000	CY	\$7.00	\$23,506,000
		Core materi	a		3,330,000		ψ7.00	ψ23,300,000
	35	D/S Filter and	drainage blanket:					
			GP materials		1,410,000	CY	\$17.00	\$23,970,000
		1	rforated, corrug. HDPE drain p	bipe	14,000		\$12.00	\$168,000
			5-ft dia, 20-ft high		50	EA	\$7,000.00	\$350,000
		Weirs			50	EA	\$700.00	\$35,000
			Treatment (grout curtain)		1	LS	\$1,100,000.0	
							, , , , , , , , , , , , , , , , , , ,	÷ ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;
	36	Concrete facin	g elements (upstream and dov	vnstream	) 116,000	CY	\$80.00	\$9,280,000
					, ,,,,,,,,			+-,,
	37	Concrete cap o	on top of dam		5,000	CY	\$250.00	\$1,250,000
							·	. , ,
	38	Leveling concr	ete in dam foundation		13,000	CY	\$200.00	\$2,600,000
		Ŭ						
	39	Concrete for dr	ainage gallery		6,000	CY	\$300.00	\$1,800,000
		Subtotal (1 of 3	3)					\$228,975,000.0
		Subtotal (2 of 3	3)					\$127,798,90
		Subtotal (3 of 3	3)					\$64,059,000
		SUBTOTAL						\$420,832,90
	40	Mobilization			(+/-)		5%	\$21,000,000
		Subtotal						\$441,832,90
		Unlisted Iter	ms		(+/-)		15%	\$68,167,100
		Contract Cost						\$510,000,00
		Contingenci	ies		(+/-)		30%	\$153,000,00
	Field Cost			}			\$663,000,00	
<u> </u>		QUAN		<u> </u>	PR	ICES	_	
BY	<b>.</b> :		CHECKED	BY		CHECKEI	ס	
	-	botham		T. Articho	oker			
DATE PR	EPARED		APPROVED	DATE		PRICE LI		
				1	01/08/04		Appraisal	

### CONTRACT COST FOR ADDITIONAL FRIANT GENERATION CAPACITIES

	Cost per MW	\$2,000,000
Description		Amount
5 MW Additional Generation Capacity at Friant Dam		
Cost at \$2 million per MW of replaced capacity		\$10,000,000
Mobilization (5%)		\$500,000
Subtotal		\$10,500,000
Unlisted items (~15%)		\$1,500,000
Contract Cost for 4.7MW of Additional Capacity		\$12,000,000
13 MW Additional Generation Capacity at Friant Dam		
Cost at \$2 million per MW		\$26,000,000
Mobilization (5%)		\$1,300,000
Subtotal		\$27,300,000
Unlisted items (~15%)		\$3,700,000
Contract Cost for 12.9MW of Additional Capacity		\$31,000,000
30 MW Additional Generation Capacity at Friant Dam		
Cost at \$2 million per MW		\$60,000,000
Mobilization (5%)		\$3,000,000
Subtotal		\$63,000,000
Unlisted items (~15%)		\$9,000,000
Contract Cost for 30.4MW of Additional Capacity		\$72,000,000