

RECLAMATION

Managing Water in the West

Auburn-Folsom South Unit **Update of Cost**



U.S. Department of the Interior
Bureau of Reclamation
Central California Area Office
7794 Folsom Dam Road
Folsom, CA 95630

June 2006

Appendix C
Updated Cost Estimates

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Engineers Opinion of
Probable Construction Cost
GENERAL REQUIREMENTS

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
June 2006

	QUANTITY	UOM	LABOR	EQUIPMENT	MATERIAL	OTHER	DIRECT	MARKUP	TOTAL	UNIT PRICE	%
PROJECT ADMINISTRATION AND MANAGEMENT	120.0	MO	82,260,000	4,860,000		1,332,000	88,452,000	13,267,800	101,719,800	847,665.00	19%
QUALITY ASSURANCE AND CONTROL	120.0	MO	79,002,000	85,620,000		2,210,000	166,832,000	25,024,800	191,856,800	1,598,806.67	36%
TEMPORARY FACILITIES AND CONSTRUCTION	120.0	MO	11,588,100	75,129,000	8,910,750	4,157,100	99,784,950	14,967,743	114,752,693	956,272.44	22%
EXECUTION	120.0	MO	14,994,000	2,814,000		1,830,000	19,638,000	2,945,700	22,583,700	188,197.50	4%
OPERATIONS	12.0	MO	954,000	201,600		54,000	1,209,600	181,440	1,391,040	115,920.00	0%
DECOMMISSION	6.0	MO	1,641,600	4,605,000	39,000		6,342,720	951,408	7,294,128	1,215,688.00	1%
Subtotal			190,439,700	173,229,600	8,949,750	9,583,100	382,259,270	57,338,891	439,598,161		
UNLISTED ITEMS	.20	%	38,087,940	34,645,920	1,789,950	1,928,044	76,451,854	11,467,778	87,919,632		
Total			228,527,640	207,875,520	10,739,700	11,511,144	458,711,124	68,806,669	527,517,793		
% of Total			43%	39%	2%	2%	87%	13%	100%		
Cost per Month	120.0	MO	1,904,397	1,732,296	89,498	95,926	3,822,593	573,389	4,395,982		

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CALIFORNIA

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Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
01310.0	PROJECT ADMINISTRATION AND MANAGEMENT									
0000.0	Project Management	120.0	MO	10,152,000	1,522,800	11,674,800			11,674,800.00	97,290.00
0000.0	Coordination	120.0	MO	3,180,000	477,000	3,657,000			3,657,000.00	30,475.00
0000.0	Meetings	120.0	MO	5,028,000	754,200	5,782,200			5,782,200.00	48,185.00
0000.0	Administration	120.0	MO	18,900,000	2,835,000	21,735,000			21,735,000.00	181,125.00
0000.0	Progress Monitoring	120.0	MO	5,424,000	813,600	6,237,600			6,237,600.00	51,980.00
0000.0	Procurement	120.0	MO	8,040,000	1,206,000	9,246,000			9,246,000.00	77,050.00
0000.0	Survey and Layout	120.0	MO	24,480,000	3,672,000	28,152,000			28,152,000.00	234,600.00
0000.0	Documentation	120.0	MO	7,824,000	1,173,600	8,997,600			8,997,600.00	74,980.00
0000.0	Submittals	120.0	MO	5,424,000	813,600	6,237,600			6,237,600.00	51,980.00
01310.0	PROJECT ADMINISTRATION AND MANAGEMENT	120.0	MO	88,452,000	13,267,800	101,719,800			101,719,800	847,665.00

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					15%		High, Medium, Low	% Amount		
01430.0	QUALITY ASSURANCE AND CONTROL									
0000.0	Regulatory Requirements	12.0	MO	888,000	133,200	1,021,200			1,021,200.00	85,100.00
0000.0	Testing and Qualifications	120.0	MO	11,220,000	1,683,000	12,903,000			12,903,000.00	107,525.00
0000.0	Field Quality Control	120.0	MO	63,600,000	9,540,000	73,140,000			73,140,000.00	609,500.00
0000.0	Field Samples	10,000.0	EA	2,900,000	435,000	3,335,000			3,335,000.00	333.50
0000.0	Testing and Inspection Service	120.0	MO	65,700,000	9,855,000	75,555,000			75,555,000.00	629,625.00
0000.0	Testing Laboratory	120.0	MO	22,524,000	3,378,600	25,902,600			25,902,600.00	215,855.00
01430.0	QUALITY ASSURANCE AND CONTROL	120.0	MO	166,832,000	25,024,800	191,856,800			191,856,800	1,598,806.67

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					15%		High, Medium, Low	% Amount		
01520.0	TEMPORARY FACILITIES AND CONSTRUCTION									
0000.0	Temporary Utilities	120.0	MO	3,096,000	464,400	3,560,400			3,560,400.00	29,670.00
0000.0	Field Offices	120.0	MO	11,820,000	1,773,000	13,593,000			13,593,000.00	113,275.00
0000.0	Maintenance and Repair Facilities	120.0	MO	18,240,000	2,736,000	20,976,000			20,976,000.00	174,800.00
0000.0	Safety and First Aid	120.0	MO	4,224,000	633,600	4,857,600			4,857,600.00	40,480.00
0000.0	Sanitary Facilities	120.0	MO	3,468,000	520,200	3,988,200			3,988,200.00	33,235.00
0000.0	Temporary Bridges	6.0	EA	10,068,000	1,510,200	11,578,200			11,578,200.00	1,929,700.00
0000.0	Earthmoving Equipment	60.0	EA	7,206,000	1,080,900	8,286,900			8,286,900.00	138,115.00
0000.0	Concrete Batch and Convey Equipment	24.0	EA	3,273,600	491,040	3,764,640			3,764,640.00	156,860.00
0000.0	Misc. Equipment	200.0	EA	12,340,000	1,851,000	14,191,000			14,191,000.00	70,955.00
0000.0	Scaffolding and Platforms	150,000.0	SF	13,125,000	1,968,750	15,093,750			15,093,750.00	100.63
0000.0	Access and Haul Roads	25,000.0	LF	3,600,000	540,000	4,140,000			4,140,000.00	165.60
0000.0	Parking and Staging Area(s)	15.0	AC	564,000	84,600	648,600			648,600.00	43,240.00
0000.0	Barricades	150.0	EA	1,605,300	240,795	1,846,095			1,846,095.00	12,307.30
0000.0	Dust Control	120.0	MO	3,768,000	565,200	4,333,200			4,333,200.00	36,110.00
0000.0	Fences	25,000.0	LF	725,000	108,750	833,750			833,750.00	33.35
0000.0	Noise Barriers	5,000.0	LF	2,185,000	327,750	2,512,750			2,512,750.00	502.55
0000.0	Erosion and Sediment Protection	55,000.0	LF	412,500	61,875	474,375			474,375.00	8.63
0000.0	Signs	50.0	EA	64,550	9,683	74,233			74,232.50	1,484.65
01520.0	TEMPORARY FACILITIES AND CONSTRUCTION	120.0	MO	99,784,950	14,967,743	114,752,693			114,752,693	956,272.44

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					15%		High, Medium, Low	% Amount		
01720.0	EXECUTION									
0000.0	Construction Layout	120.0	MO	4,776,000	716,400	5,492,400			5,492,400.00	45,770.00
0000.0	Field Engineering	120.0	MO	6,624,000	993,600	7,617,600			7,617,600.00	63,480.00
0000.0	Surveying	120.0	MO	5,220,000	783,000	6,003,000			6,003,000.00	50,025.00
0000.0	Security	120.0	MO	2,700,000	405,000	3,105,000			3,105,000.00	25,875.00
0000.0	Closeout Documentation	12.0	MO	318,000	47,700	365,700			365,700.00	30,475.00
01720.0	EXECUTION	120.0	MO	19,638,000	2,945,700	22,583,700			22,583,700	188,197.50

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					15%		High, Medium, Low	% Amount		
01800.0	OPERATIONS									
0000.0	Testing, Adjusting, Balancing	12.0	MO	403,200	60,480	463,680			463,680.00	38,640.00
0000.0	Demonstration and Training	12.0	MO	403,200	60,480	463,680			463,680.00	38,640.00
0000.0	Operation and Maintenance	12.0	MO	403,200	60,480	463,680			463,680.00	38,640.00
01800.0	OPERATIONS	12.0	MO	1,209,600	181,440	1,391,040			1,391,040	115,920.00

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					15%		High, Medium, Low	%	Amount		
01910.0	DECOMMISSION										
0000.0	Demo and Remove Temporary Facilities	6.0	MO	2,047,200	307,080	2,354,280				2,354,280.00	392,380.00
0000.0	Demo and Remove Temporary Bridges	6.0	MO	632,400	94,860	727,260				727,260.00	121,210.00
0000.0	Demo and Remove Access and Haul Roads	6.0	MO	671,400	100,710	772,110				772,110.00	128,685.00
0000.0	Demo and Remove Security, Dust Control	6.0	MO	503,400	75,510	578,910				578,910.00	96,485.00
0000.0	Demo and Remove Fences, Erosion and Sediment	6.0	MO	301,200	45,180	346,380				346,380.00	57,730.00
0000.0	Remove Construction Equipment	6.0	MO	2,187,120	328,068	2,515,188				2,515,188.00	419,198.00
01910.0	DECOMMISSION	6.0	MO	6,342,720	951,408	7,294,128				7,294,128	1,215,688.00

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					15%		High, Medium, Low	% Amount		
0000.0	UNLISTED ITEMS									
01310.0	PROJECT ADMINISTRATION AND MANAGEMENT	.20	%	17,690,400	2,653,560	20,343,960			20,343,960.00	101,719,800.00
01430.0	QUALITY ASSURANCE AND CONTROL	.20	%	33,366,400	5,004,960	38,371,360			38,371,360.00	191,856,800.00
01520.0	TEMPORARY FACILITIES AND CONSTRUCTION	.20	%	19,956,990	2,993,549	22,950,539			22,950,538.50	114,752,692.50
01720.0	EXECUTION	.20	%	3,927,600	589,140	4,516,740			4,516,740.00	22,583,700.00
01800.0	OPERATIONS	.20	%	241,920	36,288	278,208			278,208.00	1,391,040.00
01910.0	DECOMMISSION	.20	%	1,268,544	190,282	1,458,826			1,458,825.60	7,294,128.00
0000.0	UNLISTED ITEMS	.20	%	76,451,854	11,467,778	87,919,632			87,919,632	439,598,160.50

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
01310.0	PROJECT ADMINISTRATION AND MANAGEMENT								
	Project Management	120.0	MO	68,500.00	10,500.00		5,600.00	84,600.00	
				8,220,000	1,260,000		672,000	10,152,000	
	Coordination	120.0	MO	26,500.00				26,500.00	
				3,180,000				3,180,000	
	Meetings	120.0	MO	41,900.00				41,900.00	
				5,028,000				5,028,000	
	Administration	120.0	MO	152,000.00			5,500.00	157,500.00	
				18,240,000			660,000	18,900,000	
	Progress Monitoring	120.0	MO	45,200.00				45,200.00	
				5,424,000				5,424,000	
01310.0	PROJECT ADMINISTRATION AND MANAGEMENT	120.0	MO	82,260,000	4,860,000		1,332,000	88,452,000	

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01430.0	QUALITY ASSURANCE AND CONTROL							.00	
	Regulatory Requirements	12.0	MO	59,000.00	15,000.00			74,000.00	
				708,000	180,000			888,000	
	Testing and Qualifications	120.0	MO	78,500.00	15,000.00			93,500.00	
				9,420,000	1,800,000			11,220,000	
	Field Quality Control	120.0	MO	315,000.00	215,000.00			530,000.00	
				37,800,000	25,800,000			63,600,000	
	Field Samples	10,000.0	EA	165.00			125.00	290.00	
				1,650,000			1,250,000	2,900,000	
	Testing and Inspection Service	120.0	MO	189,000.00	356,000.00		2,500.00	547,500.00	
				22,680,000	42,720,000		300,000	65,700,000	
	Testing Laboratory	120.0	MO	56,200.00	126,000.00		5,500.00	187,700.00	
				6,744,000	15,120,000		660,000	22,524,000	
01430.0	QUALITY ASSURANCE AND CONTROL	120.0	MO	79,002,000	85,620,000		2,210,000	166,832,000	

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01520.0	TEMPORARY FACILITIES AND CONSTRUCTION								
	Temporary Utilities	120.0	MO				25,800.00	25,800.00	
							3,096,000	3,096,000	
	Field Offices	120.0	MO		98,500.00			98,500.00	
					11,820,000			11,820,000	
	Maintenance and Repair Facilities	120.0	MO		152,000.00			152,000.00	
					18,240,000			18,240,000	
	Safety and First Aid	120.0	MO		35,200.00			35,200.00	
					4,224,000			4,224,000	
	Sanitary Facilities	120.0	MO		28,900.00			28,900.00	
					3,468,000			3,468,000	
	Temporary Bridges	6.0	EA	256,000.00	523,000.00	899,000.00		1,678,000.00	
				1,536,000	3,138,000	5,394,000		10,068,000	
	Earthmoving Equipment	60.0	EA	25,600.00	89,500.00		5,000.00	120,100.00	
				1,536,000	5,370,000		300,000	7,206,000	
	Concrete Batch and Convey Equipment	24.0	EA	29,000.00	98,500.00		8,900.00	136,400.00	
				696,000	2,364,000		213,600	3,273,600	
	Misc. Equipment	200.0	EA	15,200.00	45,000.00		1,500.00	61,700.00	
				3,040,000	9,000,000		300,000	12,340,000	
	Scaffolding and Platforms	150,000.0	SF	11.50	63.00	12.00	1.00	87.50	

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				1,725,000	9,450,000	1,800,000	150,000	13,125,000	
	Access and Haul Roads	25,000.0	LF	25.00	105.00	11.00	3.00	144.00	
				625,000	2,625,000	275,000	75,000	3,600,000	
	Parking and Staging Area(s)	15.0	AC	10,500.00	25,600.00		1,500.00	37,600.00	
				157,500	384,000		22,500	564,000	
	Barricades	150.0	EA	1,520.00	3,560.00	5,622.00		10,702.00	
				228,000	534,000	843,300		1,605,300	
	Dust Control	120.0	MO	8,900.00	22,500.00			31,400.00	
				1,068,000	2,700,000			3,768,000	
	Fences	25,000.0	LF	4.20	6.80	18.00		29.00	
				105,000	170,000	450,000		725,000	
	Noise Barriers	5,000.0	LF	152.00	285.00			437.00	
				760,000	1,425,000			2,185,000	
	Erosion and Sediment Protection	55,000.0	LF	1.80	3.90	1.80		7.50	
				99,000	214,500	99,000		412,500	
	Signs	50.0	EA	252.00	50.00	989.00		1,291.00	
				12,600	2,500	49,450		64,550	
01520.0	TEMPORARY FACILITIES AND CONSTRUCTION	120.0	MO	11,588,100	75,129,000	8,910,750	4,157,100	99,784,950	

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01720.0	EXECUTION								
	Construction Layout	120.0	MO	30,500.00	5,800.00		3,500.00	39,800.00	
				3,660,000	696,000		420,000	4,776,000	
	Field Engineering	120.0	MO	45,200.00	6,500.00		3,500.00	55,200.00	
				5,424,000	780,000		420,000	6,624,000	
	Surveying	120.0	MO	30,500.00	6,500.00		6,500.00	43,500.00	
				3,660,000	780,000		780,000	5,220,000	
	Security	120.0	MO	16,500.00	4,500.00		1,500.00	22,500.00	
				1,980,000	540,000		180,000	2,700,000	
	Closeout Documentation	12.0	MO	22,500.00	1,500.00		2,500.00	26,500.00	
				270,000	18,000		30,000	318,000	
01720.0	EXECUTION	120.0	MO	14,994,000	2,814,000		1,830,000	19,638,000	

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01800.0	OPERATIONS								
	Testing, Adjusting, Balancing	12.0	MO	26,500.00	5,600.00		1,500.00	33,600.00	
				318,000	67,200		18,000	403,200	
	Demonstration and Training	12.0	MO	26,500.00	5,600.00		1,500.00	33,600.00	
				318,000	67,200		18,000	403,200	
	Operation and Maintenance	12.0	MO	26,500.00	5,600.00		1,500.00	33,600.00	
				318,000	67,200		18,000	403,200	
01800.0	OPERATIONS	12.0	MO	954,000	201,600		54,000	1,209,600	

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01910.0	DECOMMISSION								
	Demo and Remove Temporary Facilities	6.0	MO	85,200.00	256,000.00			341,200.00	
				511,200	1,536,000			2,047,200	
	Demo and Remove Temporary Bridges	6.0	MO	26,500.00	78,900.00			105,400.00	
				159,000	473,400			632,400	
	Demo and Remove Access and Haul Roads	6.0	MO	26,500.00	78,900.00	6,500.00		111,900.00	
				159,000	473,400	39,000		671,400	
	Demo and Remove Security, Dust Control	6.0	MO	15,200.00	65,200.00		3,500.00	83,900.00	
				91,200	391,200		21,000	503,400	
	Demo and Remove Fences, Erosion and Sediment	6.0	MO	15,200.00	32,500.00		2,500.00	50,200.00	
				91,200	195,000		15,000	301,200	
	Remove Construction Equipment	6.0	MO	105,000.00	256,000.00		3,520.00	364,520.00	
				630,000	1,536,000		21,120	2,187,120	
01910.0	DECOMMISSION	6.0	MO	1,641,600	4,605,000	39,000	57,120	6,342,720	

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Engineers Opinion of Probable Construction Cost
GENERAL REQUIREMENTS

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
0000.0	UNLISTED ITEMS							.00	
01310.0	PROJECT ADMINISTRATION AND MANAGEMENT	.20	%	82,260,000.00	4,860,000.00	.00	1,332,000.00	88,452,000.00	
				16,452,000	972,000		266,400	17,690,400	
01430.0	QUALITY ASSURANCE AND CONTROL	.20	%	79,002,000.00	85,620,000.00	.00	2,210,000.00	166,832,000.00	
				15,800,400	17,124,000		442,000	33,366,400	
01520.0	TEMPORARY FACILITIES AND CONSTRUCTION	.20	%	11,588,100.00	75,129,000.00	8,910,750.00	4,157,100.00	99,784,950.00	
				2,317,620	15,025,800	1,782,150	831,420	19,956,990	
01720.0	EXECUTION	.20	%	14,994,000.00	2,814,000.00	.00	1,830,000.00	19,638,000.00	
				2,998,800	562,800		366,000	3,927,600	
01800.0	OPERATIONS	.20	%	954,000.00	201,600.00	.00	54,000.00	1,209,600.00	
				190,800	40,320		10,800	241,920	
01910.0	DECOMMISSION	.20	%	1,641,600.00	4,605,000.00	39,000.00	57,120.00	6,342,720.00	
				328,320	921,000	7,800	11,424	1,268,544	
0000.0	UNLISTED ITEMS	.20	%	38,087,940	34,645,920	1,789,950	1,928,044	76,451,854	

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Engineers Opinion of
Probable Construction Cost
SITE PREPARATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
June 2006

	QUANTITY	UOM	LABOR	EQUIPMENT	MATERIAL	OTHER	DIRECT	MARKUP	TOTAL	UNIT PRICE	%
DEMOLITION	1.0	LS	1,529,775	3,175,780			4,705,555	705,833	5,411,388	5,411,388.25	6.8%
SITE CLEARING	32,000.0	AC	8,792,000	25,800,000			34,592,000	5,188,800	39,780,800	1,243.15	50.3%
DEWATERING	60.0	MO	5,148,640	10,444,600	1,120,000	1,284,000	17,997,240	2,699,586	20,696,826	344,947.10	26.1%
EXCAVATION SUPPORT AND PROTECTION	600,000.0	CY	3,303,000	8,235,000			11,538,000	1,730,700	13,268,700	22.11	16.8%
Subtotal			18,773,415	47,655,380	1,120,000	1,284,000	68,832,795	10,324,919	79,157,714		100.0%
UNLISTED ITEMS	.20	%	3,754,683	9,531,076	224,000	256,800	13,766,559	2,064,983.85	15,831,543		
Total			22,528,098	57,186,456	1,344,000	1,540,800	82,599,354	12,389,903	94,989,257		
% of Total			24%	60%	1%	2%	87%	13%	100%		

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Engineers Opinion of
Probable Construction Cost
SITE PREPARATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
june 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
02220.0	DEMOLITION									
0000.0	Pumphouse Mechanical: Remove, Load, Haul to Salvage	1.0	LS	876,000	131,400	1,007,400			1,007,400.00	1,007,400.00
0000.0	Pumphouse Concrete: Remove, Load, Haul to Recycle	4,500.0	CY	1,566,000	234,900	1,800,900			1,800,900.00	400.20
0000.0	Pumphouse Riprap: Remove, Load, Haul to Recycle	305.0	CY	64,355	9,653	74,008			74,008.25	242.65
0000.0	Pumphouse Backfill: Exc., Load, Haul, Place	24,000.0	CY	439,200	65,880	505,080			505,080.00	21.05
0000.0	Misc. Structures: Remove, Load, Haul to Disposal	1.0	LS	1,760,000	264,000	2,024,000			2,024,000.00	2,024,000.00
02220.0	DEMOLITION	1.0	LS	4,705,555	705,833	5,411,388			5,411,388	5,411,388.25

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Engineers Opinion of
Probable Construction Cost
SITE PREPARATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
june 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
02230.0	SITE CLEARING									
0000.0	Heavy Timber: Cut, Slash, Load, Haul to Salvage	8,000.0	AC	10,616,000	1,592,400	12,208,400			12,208,400.00	1,526.05
0000.0	Brush: Cut, Load, Haul to Recycle Chipping	24,000.0	AC	23,976,000	3,596,400	27,572,400			27,572,400.00	1,148.85
02230.0	SITE CLEARING	32,000.0	AC	34,592,000	5,188,800	39,780,800			39,780,800	1,243.15

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Engineers Opinion of
Probable Construction Cost
SITE PREPARATION

AUBURN DAM
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CALIFORNIA

Effective Date:
june 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
02240.0	DEWATERING									
0000.0	Divert River Channel: Excavate, Place, Consolidate	250,000.0	CY	1,800,000	270,000	2,070,000			2,070,000.00	8.28
0000.0	Divert River Channel: Slope Protection Process and Haul	50,000.0	CY	230,000	34,500	264,500			264,500.00	5.29
0000.0	Divert River Channel: Slope Protection Place	50,000.0	CY	385,000	57,750	442,750			442,750.00	8.86
0000.0	Divert River Channel: Remove and Restore	300,000.0	CY	2,160,000	324,000	2,484,000			2,484,000.00	8.28
0000.0	Foundation: Drill and Case Wells	80.0	EA	177,040	26,556	203,596			203,596.00	2,544.95
0000.0	Foundation: Install Pumps	80.0	EA	953,600	143,040	1,096,640			1,096,640.00	13,708.00
0000.0	Foundation: Install Discharge Piping, Fittings, Pumps	8,000.0	LF	953,600	143,040	1,096,640			1,096,640.00	137.08
0000.0	Foundation: Construct Sediment Settle Basin(s)	300,000.0	CY	3,330,000	499,500	3,829,500			3,829,500.00	12.77
0000.0	Foundation: Operate and Maintain	60.0	MO	7,446,000	1,116,900	8,562,900			8,562,900.00	142,715.00
0000.0	Foundation: Dismantle System	1.0	LS	562,000	84,300	646,300			646,300.00	646,300.00
02240.0	DEWATERING	60.0	MO	17,997,240	2,699,586	20,696,826			20,696,826	344,947.10

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Engineers Opinion of
Probable Construction Cost
SITE PREPARATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
june 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
02260.0	EXCAVATION SUPPORT AND PROTECTION									
0000.0	Cofferdam US: Excavate,Load from Borrow	300,000.0	CY	1,518,000	227,700	1,745,700			1,745,700.00	5.82
0000.0	Cofferdam US: Haul, Place, Compact	300,000.0	CY	2,145,000	321,750	2,466,750			2,466,750.00	8.22
0000.0	Cofferdam DS: Excavate,Load from Borrow	300,000.0	CY	1,488,000	223,200	1,711,200			1,711,200.00	5.70
0000.0	Cofferdam DS: Haul, Place, Compact	300,000.0	CY	2,175,000	326,250	2,501,250			2,501,250.00	8.34
0000.0	Cofferdam US: Excavate,Load	150,000.0	CY	1,242,000	186,300	1,428,300			1,428,300.00	9.52
0000.0	Cofferdam US: Haul to Waste	150,000.0	CY	1,350,000	202,500	1,552,500			1,552,500.00	10.35
0000.0	Cofferdam DS: Slope Protection	75,000.0	CY	817,500	122,625	940,125			940,125.00	12.54
0000.0	Cofferdam US: Slope Protection	75,000.0	CY	802,500	120,375	922,875			922,875.00	12.31
02260.0	EXCAVATION SUPPORT AND PROTECTION	600,000.0	CY	11,538,000	1,730,700	13,268,700			13,268,700	22.11

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Engineers Opinion of
Probable Construction Cost
SITE PREPARATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
june 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
0000.0	UNLISTED ITEMS									
02220.0	DEMOLITION	.20	%	941,111	141,167	1,082,278			1,082,277.65	5,411,388.25
02230.0	SITE CLEARING	.20	%	6,918,400	1,037,760	7,956,160			7,956,160.00	39,780,800.00
02240.0	DEWATERING	.20	%	3,599,448	539,917	4,139,365			4,139,365.20	20,696,826.00
02260.0	EXCAVATION SUPPORT AND PROTECTION	.20	%	2,307,600	346,140	2,653,740			2,653,740.00	13,268,700.00
0000.0	UNLISTED ITEMS	.2	%	13,766,559	2,064,984	15,831,543			15,831,543	79,157,714.25

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Engineers Opinion of
Probable Construction Cost
SITE PREPARATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
june 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
02220.0	DEMOLITION								
	Pumphouse Mechanical: Remove, Load, Haul to Salvage	1.0	LS	356,000.00	520,000.00			876,000.00	
				356,000	520,000			876,000	
	Pumphouse Concrete: Remove, Load, Haul to Recycle	4,500.0	CY	98.00	250.00			348.00	
				441,000	1,125,000			1,566,000	
	Pumphouse Riprap: Remove, Load, Haul to Recycle	305.0	CY	55.00	156.00			211.00	
				16,775	47,580			64,355	
	Pumphouse Backfill: Exc., Load, Haul, Place	24,000.0	CY	6.50	11.80			18.30	
				156,000	283,200			439,200	
	Misc. Structures: Remove, Load, Haul to Disposal	1.0	LS	560,000.00	1,200,000.00			1,760,000.00	
				560,000	1,200,000			1,760,000	
02220.0	DEMOLITION	1.0	LS	1,529,775	3,175,780			4,705,555	

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Engineers Opinion of
Probable Construction Cost
SITE PREPARATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
june 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
02230.0	SITE CLEARING							.00	
	Heavy Timber: Cut, Slash, Load, Haul to Salvage	8,000.0	AC	397.00	930.00			1,327.00	
				3,176,000	7,440,000			10,616,000	
	Brush: Cut, Load, Haul to Recycle Chipping	24,000.0	AC	234.00	765.00			999.00	
				5,616,000	18,360,000			23,976,000	
02230.0	SITE CLEARING	32,000.0	AC	8,792,000	25,800,000			34,592,000	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
02240.0	DEWATERING								
	Divert River Channel: Excavate, Place, Consolidate	250,000.0	CY	2.10	5.10			7.20	
				525,000	1,275,000			1,800,000	
	Divert River Channel: Slope Protection Process and Haul	50,000.0	CY	1.20	3.40			4.60	
				60,000	170,000			230,000	
	Divert River Channel: Slope Protection Place	50,000.0	CY	2.90	4.80			7.70	
				145,000	240,000			385,000	
	Divert River Channel: Remove and Restore	300,000.0	CY	2.10	5.10			7.20	
				630,000	1,530,000			2,160,000	
	Foundation: Drill and Case Wells	80.0	EA	693.00	1,520.00			2,213.00	
				55,440	121,600			177,040	
	Foundation: Install Pumps	80.0	EA	1,500.00	920.00	9,500.00		11,920.00	
				120,000	73,600	760,000		953,600	
	Foundation: Install Discharge Piping, Fittings, Pumps	8,000.0	LF	18.90	55.30	45.00		119.20	
				151,200	442,400	360,000		953,600	
	Foundation: Construct Sediment Settle Basin(s)	300,000.0	CY	3.50	7.60			11.10	
				1,050,000	2,280,000			3,330,000	
	Foundation: Operate and Maintain	60.0	MO	36,900.00	65,800.00		21,400.00	124,100.00	
				2,214,000	3,948,000		1,284,000	7,446,000	
	Foundation: Dismantle System	1.0	LS	198,000.00	364,000.00			562,000.00	
				198,000	364,000			562,000	

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 Engineers Opinion of
 Probable Construction Cost
 SITE PREPARATION

AUBURN DAM
 CONCRETE CURVED-GRAVITY DAM
 800 MW INTEGRAL POWERPLANT
 CENTRAL VALLEY PROJECT

Effective Date:
 june 2006

<i>Specification</i>	<i>Description</i>	<i>Quantity</i>	<i>UOM</i>	<i>Labor</i>	<i>Equipment</i>	<i>Material</i>	<i>Other</i>	<i>Total</i>	<i>Notes</i>
02240.0	DEWATERING	60.0	MO	5,148,640	10,444,600	1,120,000	1,284,000	17,997,240	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
02260.0	EXCAVATION SUPPORT AND PROTECTION								
	Cofferdam US: Excavate,Load from Borrow	300,000.0	CY	1.56	3.50			5.06	
				468,000	1,050,000			1,518,000	
	Cofferdam US: Haul, Place, Compact	300,000.0	CY	2.05	5.10			7.15	
				615,000	1,530,000			2,145,000	
	Cofferdam DS: Excavate,Load from Borrow	300,000.0	CY	1.56	3.40			4.96	
				468,000	1,020,000			1,488,000	
	Cofferdam DS: Haul, Place, Compact	300,000.0	CY	2.05	5.20			7.25	
				615,000	1,560,000			2,175,000	
	Cofferdam US: Excavate,Load	150,000.0	CY	1.98	6.30			8.28	
				297,000	945,000			1,242,000	
	Cofferdam US: Haul to Waste	150,000.0	CY	2.30	6.70			9.00	
				345,000	1,005,000			1,350,000	
	Cofferdam DS: Slope Protection	75,000.0	CY	3.40	7.50			10.90	
				255,000	562,500			817,500	
	Cofferdam US: Slope Protection	75,000.0	CY	3.20	7.50			10.70	
				240,000	562,500			802,500	
02260.0	EXCAVATION SUPPORT AND PROTECTION	600,000.0	CY	3,303,000	8,235,000			11,538,000	

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Engineers Opinion of
Probable Construction Cost
SITE PREPARATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
june 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
0000.0	UNLISTED ITEMS								
02220.0	DEMOLITION	.20	%	1,529,775.00	3,175,780.00	.00	.00	4,705,555.00	
				305,955	635,156			941,111	
02230.0	SITE CLEARING	.20	%	8,792,000.00	25,800,000.00	.00	.00	34,592,000.00	
				1,758,400	5,160,000			6,918,400	
02240.0	DEWATERING	.20	%	5,148,640.00	10,444,600.00	1,120,000.00	1,284,000.00	17,997,240.00	
				1,029,728	2,088,920	224,000	256,800	3,599,448	
02260.0	EXCAVATION SUPPORT AND PROTECTION	.20	%	3,303,000.00	8,235,000.00	.00	.00	11,538,000.00	
				660,600	1,647,000			2,307,600	
0000.0	UNLISTED ITEMS	.20	%	3,754,683	9,531,076	224,000	256,800	13,766,559	

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Engineers Opinion of
Probable Construction Cost
CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
June 2006

	QUANTITY	UOM	LABOR	EQUIPMENT	MATERIAL	OTHER	DIRECT	MARKUP	TOTAL	UNIT PRICE	%
EARTHWORK	1,230,000.0	CY	4,116,700	9,839,000			13,955,700	2,093,355	16,049,055	13.05	0.8%
CONCRETE REINFORCEMENT	13,475,000.0	LB	3,818,750	1,617,500	8,758,750		14,195,000	2,129,250	16,324,250	1.21	0.8%
CAST-IN-PLACE CONCRETE	219,200.0	CY	31,075,960	16,094,490	19,681,080		66,851,530	10,027,730	76,879,260	350.73	3.7%
GROUT CONSOLIDATION AND CURTAIN	68,000.0	SKS	1,494,840	4,635,480	476,000		6,606,320	990,948	7,597,268	111.72	0.4%
MASS CONCRETE	9,950,000.0	CY	405,481,000	812,911,000	406,340,000		1,624,732,000	243,709,800	1,868,441,800	187.78	89.3%
METALS	2,575,000.0	LB	10,232,000	15,270,500	4,427,500		29,930,000	4,489,500	34,419,500	13.37	1.6%
GATES AND VALVES	14.0	EA	2,237,130	4,751,550	8,286,990		15,275,670	2,291,351	17,567,021	1,254,787.18	0.8%
ELECTRICAL	1.0	LS	10,545,000	5,113,300	31,939,000		47,597,300	7,139,595	54,736,895	54,736,895.00	2.6%
Subtotal			469,001,380	870,232,820	479,909,320		1,819,143,520	272,871,528	2,092,015,048		100.0%
UNLISTED ITEMS	.20	%	93,800,276	174,046,564	95,981,864		363,828,704	54,574,306	418,403,010		
Total			562,801,656	1,044,279,384	575,891,184		2,182,972,224	327,445,834	2,510,418,058		
% of Total			22%	42%	23%	0%	87%	13%	100%		
Cost per CY Mass Concrete Dam	9,950,000.0	CY	56.56	104.95	57.88	0.00	219.39	32.91	252.30		

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 Engineers Opinion of
 Probable Construction Cost
 CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
 CONCRETE CURVED-GRAVITY DAM
 800 MW INTEGRAL POWERPLANT
 CENTRAL VALLEY PROJECT
 CALIFORNIA

Effective Date:
 June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
02300.0	EARTHWORK									
0000.0	Excavate: Foundation Unclassified	330,000.0	CY	973,500	146,025	1,119,525			1,119,525.00	3.39
0000.0	Excavate: Foundation Drill and Blast	330,000.0	CY	452,100	67,815	519,915			519,915.00	1.58
0000.0	Excavate: Foundation Rock	330,000.0	CY	2,029,500	304,425	2,333,925			2,333,925.00	7.07
0000.0	Excavate: Foundation Load, Haul to Waste	660,000.0	CY	1,287,000	193,050	1,480,050			1,480,050.00	2.24
0000.0	Excavate: Dn Stm Channel Unclassified	200,000.0	CY	590,000	88,500	678,500			678,500.00	3.39
0000.0	Excavate: Dn Stm Channel Drill and Blast	200,000.0	CY	274,000	41,100	315,100			315,100.00	1.58
0000.0	Excavate: Dn Stm Channel Rock	200,000.0	CY	1,230,000	184,500	1,414,500			1,414,500.00	7.07
0000.0	Excavate: Dn Stm Channel Load, Haul to Waste	400,000.0	CY	780,000	117,000	897,000			897,000.00	2.24
0000.0	Excavate: Plunge Pool Unclassified	90,000.0	CY	265,500	39,825	305,325			305,325.00	3.39
0000.0	Excavate: Plunge Pool Drill and Blast	80,000.0	CY	109,600	16,440	126,040			126,040.00	1.58
0000.0	Excavate: Plunge Pool Rock	80,000.0	CY	492,000	73,800	565,800			565,800.00	7.07
0000.0	Excavate: Plung Pool Load, Haul to Waste	170,000.0	CY	331,500	49,725	381,225			381,225.00	2.24
0000.0	Excavation: Level and Grade Waste Piles	1,230,000.0	CY	3,321,000	498,150	3,819,150			3,819,150.00	3.11
0000.0	Excavation: Clean and Prepare Foundation	130,000.0	SY	1,820,000	273,000	2,093,000			2,093,000.00	16.10
02300.0	EARTHWORK	1,230,000.0	CY	13,955,700	2,093,355	16,049,055			16,049,055	13.05

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 Engineers Opinion of
 Probable Construction Cost
 CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
 CONCRETE CURVED-GRAVITY DAM
 800 MW INTEGRAL POWERPLANT
 CENTRAL VALLEY PROJECT
 CALIFORNIA

Effective Date:
 June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
									16,049,055	
03200.0	CONCRETE REINFORCEMENT									
0000.0	Spillway Training Walls: Purchase, Set, Tie	2,000,000.0	LB	2,000,000	300,000	2,300,000			2,300,000.00	1.15
0000.0	Plunge Pool Linger: Purchase, Set, Tie	500,000.0	LB	500,000	75,000	575,000			575,000.00	1.15
0000.0	Sidewalk and Parapet: Purchase, Set, Tie	1,400,000.0	LB	1,400,000	210,000	1,610,000			1,610,000.00	1.15
0000.0	Elevator Tower: Purchase, Set, Tie	1,800,000.0	LB	2,520,000	378,000	2,898,000			2,898,000.00	1.61
0000.0	Retaining Wall: Purchase, Set, Tie	75,000.0	LB	75,000	11,250	86,250			86,250.00	1.15
0000.0	Tunnel Plug: Purchase, Set, Tie	1,100,000.0	LB	1,100,000	165,000	1,265,000			1,265,000.00	1.15
0000.0	Thrust Blocks and Water Barrier: Purchase, Set, Tie	6,600,000.0	LB	6,600,000	990,000	7,590,000			7,590,000.00	1.15
03200.0	CONCRETE REINFORCEMENT	13,475,000.0	LB	14,195,000	2,129,250	16,324,250			16,324,250	1.21

AUBURN DAM
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CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
									16,324,250	
03300.0	CAST-IN-PLACE CONCRETE									
0000.0	Concrete Aggregate: Excavate, Screen, Wash, Convey	285,000.0	CY	1,211,250	181,688	1,392,938			1,392,937.50	4.89
0000.0	Cement and Flyash	66,000.0	TN	8,250,000	1,237,500	9,487,500			9,487,500.00	143.75
0000.0	Batch and Convey	219,200.0	CY	10,609,280	1,591,392	12,200,672			12,200,672.00	55.66
0000.0	Leveling: Pour,	174,000.0	CY	23,664,000	3,549,600	27,213,600			27,213,600.00	156.40
0000.0	Grout Cap: Pour	19,000.0	CY	2,584,000	387,600	2,971,600			2,971,600.00	156.40
0000.0	Spillway Training Walls: Form,Pour, Finish	6,000.0	CY	2,076,000	311,400	2,387,400			2,387,400.00	397.90
0000.0	Plunge Pool Lining: Form, Pour, Finish	2,600.0	CY	741,000	111,150	852,150			852,150.00	327.75
0000.0	Sidewalk and Parapet: Form,Pour, Finish	6,000.0	CY	1,998,000	299,700	2,297,700			2,297,700.00	382.95
0000.0	Elevator Tower: Form, Pour, Finish	7,000.0	CY	2,842,000	426,300	3,268,300			3,268,300.00	466.90
0000.0	Retaining Wall: Form, Pour, Finish	300.0	CY	94,800	14,220	109,020			109,020.00	363.40
0000.0	Tunnel Plug: Form, Pour, Finish	4,300.0	CY	1,393,200	208,980	1,602,180			1,602,180.00	372.60
0000.0	Thrust Blocks and Water Barrier: Pour, Finish	39,000.0	CY	11,388,000	1,708,200	13,096,200			13,096,200.00	335.80
03300.0	CAST-IN-PLACE CONCRETE	219,200.0	CY	66,851,530	10,027,730	76,879,260			76,879,260	350.73

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 Engineers Opinion of
 Probable Construction Cost
 CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
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 CENTRAL VALLEY PROJECT
 CALIFORNIA

Effective Date:
 June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
									76,879,260	
03600.0	GROUT CONSOLIDATION AND CURTAIN									
0000.0	Grout Curtain: Drilling	138,000.0	LF	4,498,800	674,820	5,173,620			5,173,620.00	37.49
0000.0	Grout Curtain: Water Pressure Test	800.0	EA	30,120	4,518	34,638			34,638.00	43.30
0000.0	Grout Curtain: Inject Grout	68,000.0	SKS	2,077,400	311,610	2,389,010			2,389,010.00	35.13
0000.0	Grout Consolidation: Drilling NOT USED	.0	LF						0.00	
0000.0	Grout Consolidation: Water Pressure Test NOT USED	.0	EA						0.00	
0000.0	Grout Consolidation: Inject Grout NOT USED	.0	SKS						0.00	
03600.0	GROUT CONSOLIDATION AND CURTAIN	68,000.0	SKS	6,606,320	990,948	7,597,268			7,597,268	111.72

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Engineers Opinion of
Probable Construction Cost
CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
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CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
									7,597,268	
03700.0	MASS CONCRETE									
0000.0	Concrete Aggregate: Excavate, Screen, Wash, Convey	12,800,000.0	CY	106,880,000	16,032,000	122,912,000			122,912,000.00	9.60
0000.0	Cement and Flyash	3,000,000.0	TN	375,000,000	56,250,000	431,250,000			431,250,000.00	143.75
0000.0	Batch and Convey	9,800,000.0	CY	441,000,000	66,150,000	507,150,000			507,150,000.00	51.75
0000.0	Dam: Place and Finish	9,800,000.0	CY	623,280,000	93,492,000	716,772,000			716,772,000.00	73.14
0000.0	Spillway: Place and Finish	170,000.0	CY	12,648,000	1,897,200	14,545,200			14,545,200.00	85.56
0000.0	Contraction Joints: Grout	150,000.0	SKS	6,870,000	1,030,500	7,900,500			7,900,500.00	52.67
0000.0	Cooling System: Mass Concrete	9,800,000.0	CY	51,254,000	7,688,100	58,942,100			58,942,100.00	6.01
0000.0	Drains: Drill and Install Pipe	120,000.0	LF	7,800,000	1,170,000	8,970,000			8,970,000.00	74.75
03700.0	MASS CONCRETE	9,950,000.0	CY	1,624,732,000	243,709,800	1,868,441,800			1,868,441,800	187.78

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Engineers Opinion of
Probable Construction Cost
CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
									1,868,441,800	
05500.0	METALS									
0000.0	Discharge Pipe: Steel Fabrication	120,000.0	LB	1,014,000	152,100	1,166,100			1,166,100.00	9.72
0000.0	Galley Inteconnect Pipe: Steel Fabrication	50,000.0	LB	422,500	63,375	485,875			485,875.00	9.72
0000.0	Outlet Pipe: Steel Fabrication	650,000.0	LB	5,492,500	823,875	6,316,375			6,316,375.00	9.72
0000.0	Misc. Pipe: Steel Fabrication	50,000.0	LB	527,500	79,125	606,625			606,625.00	12.13
0000.0	Metalwork Fabrication	150,000.0	LB	1,920,000	288,000	2,208,000			2,208,000.00	14.72
0000.0	Misc. Metal Fabrication	500,000.0	LB	6,300,000	945,000	7,245,000			7,245,000.00	14.49
0000.0	Elevators: Steel Fabrication	170,000.0	LB	3,332,000	499,800	3,831,800			3,831,800.00	22.54
0000.0	Stoplogs: Steel Fabrication	750,000.0	LB	9,450,000	1,417,500	10,867,500			10,867,500.00	14.49
0000.0	Trashracks: Steel Fabrication	135,000.0	LB	1,471,500	220,725	1,692,225			1,692,225.00	12.54
05500.0	METALS	2,575,000.0	LB	29,930,000	4,489,500	34,419,500			34,419,500	13.37

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 Engineers Opinion of
 Probable Construction Cost
 CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
 CONCRETE CURVED-GRAVITY DAM
 800 MW INTEGRAL POWERPLANT
 CENTRAL VALLEY PROJECT
 CALIFORNIA

Effective Date:
 June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
									34,419,500	
11280.0	GATES AND VALVES									
0000.0	Gates: Radial 19' x 24' w/ SS Liner Plate 8 Each	1,510,000.0	LB	9,437,500	1,415,625	10,853,125			10,853,125.00	7.19
0000.0	Gates: Bulkhead 8.4' x 8.4' w/ seat and guides	219,000.0	LB	1,182,600	177,390	1,359,990			1,359,990.00	6.21
0000.0	Gates: Ring Follower 72" 2 Each	153,000.0	LB	826,200	123,930	950,130			950,130.00	6.21
0000.0	Gates: Jet Flow 14"	2,300.0	LB	18,170	2,726	20,896			20,895.50	9.09
0000.0	Valves: Hollow Jet 72" 2 Each	128,000.0	LB	1,011,200	151,680	1,162,880			1,162,880.00	9.09
0000.0	Hydraulic Hoist and Control Systems	250,000.0	LB	2,800,000	420,000	3,220,000			3,220,000.00	12.88
11280.0	GATES AND VALVES	14	EA	15,275,670	2,291,351	17,567,021			17,567,021	1,254,787.18

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AUBURN DAM
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 CENTRAL VALLEY PROJECT
 CALIFORNIA

Effective Date:
 June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
									17,567,021	
16000.0	ELECTRICAL									
0000.0	Electrical: Grounding	1.0	LS	16,450,000	2,467,500	18,917,500			18,917,500.00	18,917,500.00
0000.0	Electrical: Wiring, Boxes, Panels	1.0	LS	15,552,000	2,332,800	17,884,800			17,884,800.00	17,884,800.00
0000.0	Electrical: Transformers	1.0	LS	14,260,000	2,139,000	16,399,000			16,399,000.00	16,399,000.00
0000.0	Electrical: Lighting	1.0	LS	435,000	65,250	500,250			500,250.00	500,250.00
0000.0	Electrical: Telephone and Intercommunications	1.0	LS	900,300	135,045	1,035,345			1,035,345.00	1,035,345.00
16000.0	ELECTRICAL	1	LS	47,597,300	7,139,595	54,736,895			54,736,895	54,736,895.00

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Engineers Opinion of
Probable Construction Cost
CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
									54,736,895	
0000.0	UNLISTED ITEMS									
02300.0	EARTHWORK	.20	%	2,791,140	418,671	3,209,811			3,209,811.00	16,049,055.00
03200.0	CONCRETE REINFORCEMENT	.20	%	2,839,000	425,850	3,264,850			3,264,850.00	16,324,250.00
03300.0	CAST-IN-PLACE CONCRETE	.20	%	13,370,306	2,005,546	15,375,852			15,375,851.90	76,879,259.50
03600.0	GROUT CONSOLIDATION AND CURTAIN	.20	%	1,321,264	198,190	1,519,454			1,519,453.60	7,597,268.00
03700.0	MASS CONCRETE	.20	%	324,946,400	48,741,960	373,688,360			373,688,360.00	1,868,441,800.00
05500.0	METALS	.20	%	5,986,000	897,900	6,883,900			6,883,900.00	34,419,500.00
11280.0	GATES AND VALVES	.20	%	3,055,134	458,270	3,513,404			3,513,404.10	17,567,020.50
16000.0	ELECTRICAL	.20	%	9,519,460	1,427,919	10,947,379			10,947,379.00	54,736,895.00
0000.0	UNLISTED ITEMS	0.2	%	363,828,704	54,574,306	418,403,010			418,403,010	2,092,015,048.00

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
02300.0	EARTHWORK								
	Excavate: Foundation Unclassified	330,000.0	CY	.85	2.10			2.95	
				280,500	693,000			973,500	
	Excavate: Foundation Drill and Blast	330,000.0	CY	.52	.85			1.37	
				171,600	280,500			452,100	
	Excavate: Foundation Rock	330,000.0	CY	2.05	4.10			6.15	
				676,500	1,353,000			2,029,500	
	Excavate: Foundation Load, Haul to Waste	660,000.0	CY	.55	1.40			1.95	
				363,000	924,000			1,287,000	
	Excavate: Dn Stm Channel Unclassified	200,000.0	CY	.85	2.10			2.95	
				170,000	420,000			590,000	
	Excavate: Dn Stm Channel Drill and Blast	200,000.0	CY	.52	.85			1.37	
				104,000	170,000			274,000	
	Excavate: Dn Stm Channel Rock	200,000.0	CY	2.05	4.10			6.15	
				410,000	820,000			1,230,000	
	Excavate: Dn Stm Channel Load, Haul to Waste	400,000.0	CY	.55	1.40			1.95	
				220,000	560,000			780,000	
	Excavate: Plunge Pool Unclassified	90,000.0	CY	.85	2.10			2.95	
				76,500	189,000			265,500	
	Excavate: Plunge Pool Drill and Blast	80,000.0	CY	.52	.85			1.37	
				41,600	68,000			109,600	
	Excavate: Plunge Pool Rock	80,000.0	CY	2.05	4.10			6.15	

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Engineers Opinion of
Probable Construction Cost
CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
				164,000	328,000			492,000	
	Excavate: Plung Pool Load, Haul to Waste	170,000.0	CY	.55	1.40			1.95	
				93,500	238,000			331,500	
	Excavation: Level and Grade Waste Piles	1,230,000.0	CY	.65	2.05			2.70	
				799,500	2,521,500			3,321,000	
	Excavation: Clean and Prepare Foundation	130,000.0	SY	4.20	9.80			14.00	
				546,000	1,274,000			1,820,000	
02300.0	EARTHWORK	1,230,000.0	CY	4,116,700	9,839,000			13,955,700	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
03200.0	CONCRETE REINFORCEMENT							.00	
	Spillway Training Walls: Purchase, Set, Tie	2,000,000.0	LB	.25	.10	.65		1.00	
				500,000	200,000	1,300,000		2,000,000	
	Plunge Pool Linger: Purchase, Set, Tie	500,000.0	LB	.25	.10	.65		1.00	
				125,000	50,000	325,000		500,000	
	Sidewalk and Parapet: Purchase, Set, Tie	1,400,000.0	LB	.25	.10	.65		1.00	
				350,000	140,000	910,000		1,400,000	
	Elevator Tower: Purchase, Set, Tie	1,800,000.0	LB	.50	.25	.65		1.40	
				900,000	450,000	1,170,000		2,520,000	
	Retaining Wall: Purchase, Set, Tie	75,000.0	LB	.25	.10	.65		1.00	
				18,750	7,500	48,750		75,000	
	Tunnel Plug: Purchase, Set, Tie	1,100,000.0	LB	.25	.10	.65		1.00	
				275,000	110,000	715,000		1,100,000	
	Thrust Blocks and Water Barrier: Purchase, Set, Tie	6,600,000.0	LB	.25	.10	.65		1.00	
				1,650,000	660,000	4,290,000		6,600,000	
03200.0	CONCRETE REINFORCEMENT	13,475,000.0	LB	3,818,750	1,617,500	8,758,750		14,195,000	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
03300.0	CAST-IN-PLACE CONCRETE								
	Concrete Aggregate: Excavate, Screen, Wash, Convey	285,000.0	CY	1.40	2.85			4.25	
				399,000	812,250			1,211,250	
	Cement and Flyash	66,000.0	TN			125.00		125.00	
						8,250,000		8,250,000	
	Batch and Convey	219,200.0	CY	11.30	33.70	3.40		48.40	
				2,476,960	7,387,040	745,280		10,609,280	
	Leveling: Pour,	174,000.0	CY	105.00	29.00	2.00		136.00	
				18,270,000	5,046,000	348,000		23,664,000	
	Grout Cap: Pour	19,000.0	CY	105.00	29.00	2.00		136.00	
				1,995,000	551,000	38,000		2,584,000	
	Spillway Training Walls: Form,Pour, Finish	6,000.0	CY	125.00	55.00	166.00		346.00	
				750,000	330,000	996,000		2,076,000	
	Plunge Pool Lining: Form, Pour, Finish	2,600.0	CY	125.00	55.00	105.00		285.00	
				325,000	143,000	273,000		741,000	
	Sidewalk and Parapet: Form,Pour, Finish	6,000.0	CY	125.00	55.00	153.00		333.00	
				750,000	330,000	918,000		1,998,000	
	Elevator Tower: Form, Pour, Finish	7,000.0	CY	150.00	55.00	201.00		406.00	
				1,050,000	385,000	1,407,000		2,842,000	
	Retaining Wall: Form, Pour, Finish	300.0	CY	125.00	35.00	156.00		316.00	
				37,500	10,500	46,800		94,800	

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CONCRETE CURVED-GRAVITY DAM

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
	Tunnel Plug: Form, Pour, Finish	4,300.0	CY	125.00	29.00	170.00		324.00	
				537,500	124,700	731,000		1,393,200	
	Thrust Blocks and Water Barrier: Pour, Finish	39,000.0	CY	115.00	25.00	152.00		292.00	
				4,485,000	975,000	5,928,000		11,388,000	
03300.0	CAST-IN-PLACE CONCRETE	219,200.0	CY	31,075,960	16,094,490	19,681,080		66,851,530	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
03600.0	GROUT CONSOLIDATION AND CURTAIN								
	Grout Curtain: Drilling	138,000.0	LF	6.50	26.10			32.60	
				897,000	3,601,800			4,498,800	
	Grout Curtain: Water Pressure Test	800.0	EA	12.05	25.60			37.65	
				9,640	20,480			30,120	
	Grout Curtain: Inject Grout	68,000.0	SKS	8.65	14.90	7.00		30.55	
				588,200	1,013,200	476,000		2,077,400	
	Grout Consolidation: Drilling NOT USED		LF	6.50	26.10			32.60	
	Grout Consolidation: Water Pressure Test NOT USED		EA	12.05	25.60			37.65	
	Grout Consolidation: Inject Grout NOT USED		SKS	8.65	14.90	7.00		30.55	
03600.0	GROUT CONSOLIDATION AND CURTAIN	68,000.0	SKS	1,494,840	4,635,480	476,000		6,606,320	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
03700.0	MASS CONCRETE								
	Concrete Aggregate: Excavate, Screen, Wash, Convey	12,800,000.0	CY	2.90	5.45			8.35	
				37,120,000	69,760,000			106,880,000	
	Cement and Flyash	3,000,000.0	TN			125.00		125.00	
						375,000,000		375,000,000	
	Batch and Convey	9,800,000.0	CY	13.40	29.50	2.10		45.00	
				131,320,000	289,100,000	20,580,000		441,000,000	
	Dam: Place and Finish	9,800,000.0	CY	21.30	42.30			63.60	
				208,740,000	414,540,000			623,280,000	
	Spillway: Place and Finish	170,000.0	CY	25.30	49.10			74.40	
				4,301,000	8,347,000			12,648,000	
	Contraction Joints: Grout	150,000.0	SKS	15.20	23.60	7.00		45.80	
				2,280,000	3,540,000	1,050,000		6,870,000	
	Cooling System: Mass Concrete	9,800,000.0	CY	1.98	2.40	.85		5.23	
				19,404,000	23,520,000	8,330,000		51,254,000	
	Drains: Drill and Install Pipe	120,000.0	LF	19.30	34.20	11.50		65.00	
				2,316,000	4,104,000	1,380,000		7,800,000	
03700.0	MASS CONCRETE	9,950,000.0	CY	405,481,000	812,911,000	406,340,000		1,624,732,000	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
05500.0	METALS								
	Discharge Pipe: Steel Fabrication	120,000.0	LB	2.10	5.40	.95		8.45	
				252,000	648,000	114,000		1,014,000	
	Galley Inteconnect Pipe: Steel Fabrication	50,000.0	LB	2.10	5.40	.95		8.45	
				105,000	270,000	47,500		422,500	
	Outlet Pipe: Steel Fabrication	650,000.0	LB	2.10	5.40	.95		8.45	
				1,365,000	3,510,000	617,500		5,492,500	
	Misc. Pipe: Steel Fabrication	50,000.0	LB	4.20	5.40	.95		10.55	
				210,000	270,000	47,500		527,500	
	Metalwork Fabrication	150,000.0	LB	4.20	6.10	2.50		12.80	
				630,000	915,000	375,000		1,920,000	
	Misc. Metal Fabrication	500,000.0	LB	4.60	6.10	1.90		12.60	
				2,300,000	3,050,000	950,000		6,300,000	
	Elevators: Steel Fabrication	170,000.0	LB	6.30	10.20	3.10		19.60	
				1,071,000	1,734,000	527,000		3,332,000	
	Stoplogs: Steel Fabrication	750,000.0	LB	5.30	5.40	1.90		12.60	
				3,975,000	4,050,000	1,425,000		9,450,000	
	Trashracks: Steel Fabrication	135,000.0	LB	2.40	6.10	2.40		10.90	
				324,000	823,500	324,000		1,471,500	
05500.0	METALS	2,575,000.0	LB	10,232,000	15,270,500	4,427,500		29,930,000	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
11280.0	GATES AND VALVES							.00	
	Gates: Radial 19' x 24' w/ SS Liner Plate 8 Each	1,510,000.0	LB	.90	1.90	3.45		6.25	
				1,359,000	2,869,000	5,209,500		9,437,500	
	Gates: Bulkhead 8.4' x 8.4' w/ seat and guides	219,000.0	LB	.90	1.90	2.60		5.40	
				197,100	416,100	569,400		1,182,600	
	Gates: Ring Follower 72" 2 Each	153,000.0	LB	.90	1.90	2.60		5.40	
				137,700	290,700	397,800		826,200	
	Gates: Jet Flow 14"	2,300.0	LB	1.10	2.50	4.30		7.90	
				2,530	5,750	9,890		18,170	
	Valves: Hollow Jet 72" 2 Each	128,000.0	LB	1.10	2.50	4.30		7.90	
				140,800	320,000	550,400		1,011,200	
	Hydraulic Hoist and Control Systems	250,000.0	LB	1.60	3.40	6.20		11.20	
				400,000	850,000	1,550,000		2,800,000	
11280.0	GATES AND VALVES	14.0	EA	2,237,130	4,751,550	8,286,990		15,275,670	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
16000.0	ELECTRICAL								
	Electrical: Grounding	1.0	LS	2,400,000.00	1,750,000.00	12,300,000.00		16,450,000.00	
				2,400,000	1,750,000	12,300,000		16,450,000	
	Electrical: Wiring, Boxes, Panels	1.0	LS	3,600,000.00	1,752,000.00	10,200,000.00		15,552,000.00	
				3,600,000	1,752,000	10,200,000		15,552,000	
	Electrical: Transformers	1.0	LS	4,200,000.00	1,560,000.00	8,500,000.00		14,260,000.00	
				4,200,000	1,560,000	8,500,000		14,260,000	
	Electrical: Lighting	1.0	LS	160,000.00	25,000.00	250,000.00		435,000.00	
				160,000	25,000	250,000		435,000	
	Electrical; Telephone and Intercommunications	1.0	LS	185,000.00	26,300.00	689,000.00		900,300.00	
				185,000	26,300	689,000		900,300	
16000.0	ELECTRICAL	1.0	LS	10,545,000	5,113,300	31,939,000		47,597,300	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
0000.0	UNLISTED ITEMS								
02300.0	EARTHWORK	.20	%	4,116,700.00	9,839,000.00	.00	.00	13,955,700.00	
				823,340	1,967,800			2,791,140	
03200.0	CONCRETE REINFORCEMENT	.20	%	3,818,750.00	1,617,500.00	8,758,750.00	.00	14,195,000.00	
				763,750	323,500	1,751,750		2,839,000	
03300.0	CAST-IN-PLACE CONCRETE	.20	%	31,075,960.00	16,094,490.00	19,681,080.00	.00	66,851,530.00	
				6,215,192	3,218,898	3,936,216		13,370,306	
03600.0	GROUT CONSOLIDATION AND CURTAIN	.20	%	1,494,840.00	4,635,480.00	476,000.00	.00	6,606,320.00	
				298,968	927,096	95,200		1,321,264	
03700.0	MASS CONCRETE	.20	%	405,481,000.00	812,911,000.00	406,340,000.00	.00	1,624,732,000.00	
				81,096,200	162,582,200	81,268,000		324,946,400	
05500.0	METALS	.20	%	10,232,000.00	15,270,500.00	4,427,500.00	.00	29,930,000.00	
				2,046,400	3,054,100	885,500		5,986,000	
11280.0	GATES AND VALVES	.20	%	2,237,130.00	4,751,550.00	8,286,990.00	.00	15,275,670.00	
				447,426	950,310	1,657,398		3,055,134	
16000.0	ELECTRICAL	.20	%	10,545,000.00	5,113,300.00	31,939,000.00	.00	47,597,300.00	
				2,109,000	1,022,660	6,387,800		9,519,460	
0000.0	UNLISTED ITEMS	.20	%	93,800,276	174,046,564	95,981,864		363,828,704	

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AUBURN DAM
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CALIFORNIA

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June 2006

	QUANTITY	UOM	LABOR	EQUIPMENT	MATERIAL	OTHER	DIRECT	MARKUP	TOTAL	UNIT PRICE	%
EARTHWORK	1.0	LS	983,380	2,522,420	259,500		3,765,300	564,795	4,330,095	4,330,095.00	1%
CONCRETE REINFORCEMENT	12,100,000.0	LB	3,025,000	1,210,000	7,865,000		12,100,000	1,815,000	13,915,000	1.15	2%
CAST-IN-PLACE CONCRETE	78,000.0	CY	15,104,200	7,209,300	28,165,200		50,478,700	7,571,805	58,050,505	744.24	10%
STEEL FABRICATIONS	14,969,000.0	LB	25,447,300	11,226,750	41,927,400		78,601,450	11,790,218	90,391,668	6.04	16%
HYDRAULIC GATES AND VALVES	13.0	EA	4,254,500	1,091,600	11,484,200		16,830,300	2,524,545	19,354,845	1,488,834.23	3%
SPECIAL CONSTRUCTION	2,800.0	SF	322,000	135,240	686,000		1,143,240	171,486	1,314,726	469.55	0%
CONVEYING SYSTEMS	3.0	EA	3,935,000	1,378,700	10,207,000		15,520,700	2,328,105	17,848,805	5,949,601.67	3%
MECHANICAL	1.0	LS	2,902,500	1,460,750	6,493,500		10,856,750	1,628,513	12,485,263	12,485,262.50	2%
ELECTRICAL	1.0	LS	56,143,400	36,811,400	220,320,000		313,274,800	46,991,220	360,266,020	360,266,020.00	62%
Subtotal			112,117,280	63,046,160	327,407,800		502,571,240	75,385,686	577,956,926		100%
UNLISTED ITEMS	.20	%	22,423,456	12,609,232	65,481,560		100,514,248	15,077,137	115,591,385		
Total			134,540,736	75,655,392	392,889,360		603,085,488	90,462,823	693,548,311		
% of Total			19%	11%	57%	0%	87%	13%	100%		
Cost per MW	800.0	MW	168,176	94,569	491,112		753,857	113,079	866,935		

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AUBURN DAM
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Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
02300.0	EARTHWORK									
0000.0	Excavate: Service Yard	5,000.0	CY	43,500	6,525	50,025			50,025.00	10.01
0000.0	Excavate: Power Plant	2,000.0	CY	17,400	2,610	20,010			20,010.00	10.01
0000.0	Backfill: Service Yard	130,000.0	CY	1,469,000	220,350	1,689,350			1,689,350.00	13.00
0000.0	Drilling: Service Yard	5,000.0	LF	519,000	77,850	596,850			596,850.00	119.37
0000.0	Drilling: Power Plant	2,200.0	LF	228,360	34,254	262,614			262,614.00	119.37
0000.0	Drains: Power Plant	112,000.0	LB	1,086,400	162,960	1,249,360			1,249,360.00	11.16
0000.0	Crushed Rock: Service Yard	3,600.0	CY	186,840	28,026	214,866			214,866.00	59.69
0000.0	Hot Bit. Pavement: Service Yard	1,500.0	TN	214,800	32,220	247,020			247,020.00	164.68
02300.0	EARTHWORK	1.0	LS	3,765,300	564,795	4,330,095			4,330,095	4,330,095.00

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					15%		High, Medium, Low	%	Amount		
03200.0	CONCRETE REINFORCEMENT										
0000.0	Service Yard: Purchase, Set, Tie	1,100,000.0	LB	1,100,000	165,000	1,265,000				1,265,000.00	1.15
0000.0	Power Plant: Purchase, Set, Tie	1,500,000.0	LB	1,500,000	225,000	1,725,000				1,725,000.00	1.15
0000.0	Water Way: Purchase, Set, Tie	8,000,000.0	LB	8,000,000	1,200,000	9,200,000				9,200,000.00	1.15
0000.0	Water Wheel, Turbine, Generator: Purchase, Set, Tie	1,500,000.0	LB	1,500,000	225,000	1,725,000				1,725,000.00	1.15
03200.0	CONCRETE REINFORCEMENT	12,100,000.0	LB	12,100,000	1,815,000	13,915,000				13,915,000	1.15

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					15%		High, Medium, Low	%	Amount		
03300.0	CAST-IN-PLACE CONCRETE										
0000.0	Concrete Aggregate: Excavate, Screen, Wash, Convey	102,000.0	CY	433,500	65,025	498,525				498,525.00	4.89
0000.0	Cement and Flyash	24,000.0	TN	3,000,000	450,000	3,450,000				3,450,000.00	143.75
0000.0	Batch and Convey	78,000.0	CY	3,775,200	566,280	4,341,480				4,341,480.00	55.66
0000.0	Service Yard: Form,Pour, Finish	10,000.0	CY	4,550,000	682,500	5,232,500				5,232,500.00	523.25
0000.0	Power Plant: Form,Pour, Finish	20,000.0	CY	10,400,000	1,560,000	11,960,000				11,960,000.00	598.00
0000.0	Water Way: Form,Pour, Finish	6,000.0	CY	3,540,000	531,000	4,071,000				4,071,000.00	678.50
0000.0	Water Wheel Turbine, Generator : Form,Pour, Finish	42,000.0	CY	24,780,000	3,717,000	28,497,000				28,497,000.00	678.50
03300.0	CAST-IN-PLACE CONCRETE	78,000.0	CY	50,478,700	7,571,805	58,050,505				58,050,505	744.24

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AUBURN DAM CONCRETE CURVED-GRAVITY DAM 800 MW INTEGRAL POWERPLANT CENTRAL VALLEY PROJECT CALIFORNIA

Effective Date:
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Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
05500.0	STEEL FABRICATIONS									
0000.0	Structural Steel: Power Plant	500,000.0	LB	2,625,000	393,750	3,018,750			3,018,750.00	6.04
0000.0	Structural Steel: Penstocks Water Way	9,000,000.0	LB	47,250,000	7,087,500	54,337,500			54,337,500.00	6.04
0000.0	Structural Steel: Transition Water Way	800,000.0	LB	4,200,000	630,000	4,830,000			4,830,000.00	6.04
0000.0	Structural Steel: Bifurcation Water Way	1,500,000.0	LB	7,875,000	1,181,250	9,056,250			9,056,250.00	6.04
0000.0	Structural Steel: Air Vent Water Way	1,100,000.0	LB	5,775,000	866,250	6,641,250			6,641,250.00	6.04
0000.0	Misc. Metal Work: Power Plant	100,000.0	LB	455,000	68,250	523,250			523,250.00	5.23
0000.0	Stoplog: 18' x 22' Water Way	280,000.0	LB	1,190,000	178,500	1,368,500			1,368,500.00	4.89
0000.0	Stoplog: Seats and Guides Water Way	333,000.0	LB	1,415,250	212,288	1,627,538			1,627,537.50	4.89
0000.0	Fabricated Metal Work: Water Way	126,000.0	LB	497,700	74,655	572,355			572,355.00	4.54
0000.0	Trashracks: Water Way	1,230,000.0	LB	7,318,500	1,097,775	8,416,275			8,416,275.00	6.84
05500.0	STEEL FABRICATIONS	14,969,000.0	LB	78,601,450	11,790,218	90,391,668			90,391,668	6.04

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AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
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CALIFORNIA

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Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency		Total	Unit Price
					15%		High, Medium, Low	%	Amount		
11280.0	HYDRAULIC GATES AND VALVES										
0000.0	Gate: Roller Mounted 13.5' x 17.0' Water Way	2,400,000.0	LB	5,352,000	802,800	6,154,800				6,154,800.00	2.56
0000.0	Gate: Draft Tube Bulkhead Water Way	550,000.0	LB	8,420,500	1,263,075	9,683,575				9,683,575.00	17.61
0000.0	Gate: Station Service Draft Tube Bulkhead	2,000.0	LB	15,300	2,295	17,595				17,595.00	8.80
0000.0	Hydraulic Hoist and Control System Water Way	430,000.0	LB	1,612,500	241,875	1,854,375				1,854,375.00	4.31
0000.0	Lift Frame, Seat and Guide: Water Way	130,000.0	LB	1,430,000	214,500	1,644,500				1,644,500.00	12.65
11280.0	HYDRAULIC GATES AND VALVES	13.0	EA	16,830,300	2,524,545	19,354,845				19,354,845	1,488,834.23

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Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
13100.0	SPECIAL CONSTRUCTION									
0000.0	Control Building: Power Plant	2,800.0	SF	1,143,240	171,486	1,314,726			1,314,726.00	469.55
13100.0	SPECIAL CONSTRUCTION	2,800.0	SF	1,143,240	171,486	1,314,726			1,314,726	469.55
14600.0	CONVEYING SYSTEMS									
0000.0	Elevator: Power Plant	1.0	EA	408,700	61,305	470,005			470,005.00	470,005.00
0000.0	Overhead Crane: 70 Ton Water Way	4.0	EA	5,200,000	780,000	5,980,000			5,980,000.00	1,495,000.00
0000.0	Travel Crane: 350 Ton Equipment	840,000.0	LB	9,912,000	1,486,800	11,398,800			11,398,800.00	13.57
14600.0	CONVEYING SYSTEMS	3	EA	15,520,700	2,328,105	17,848,805			17,848,805	5,949,601.67
15100.0	MECHANICAL									
0000.0	Sanitary Waste: Power Plant	45,000.0	LB	236,250	35,438	271,688			271,687.50	6.04
0000.0	Fire Protection: Power Plant	160,000.0	LB	1,248,000	187,200	1,435,200			1,435,200.00	8.97
0000.0	Process Piping: Water Wheel, Turbine, Generator	490,000.0	LB	2,572,500	385,875	2,958,375			2,958,375.00	6.04
0000.0	HVAC: Power Plant	1.0	LS	6,800,000	1,020,000	7,820,000			7,820,000.00	7,820,000.00
15100.0	MECHANICAL	1	LS	10,856,750	1,628,513	12,485,263			12,485,263	12,485,262.50

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AUBURN DAM CONCRETE CURVED-GRAVITY DAM 800 MW INTEGRAL POWERPLANT CENTRAL VALLEY PROJECT CALIFORNIA

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Specification	Description	Quantity	UOM	Direct	Mark Up 15%	Subtotal	Accuracy High, Medium, Low	Contingency % Amount	Total	Unit Price
16100.0	ELECTRICAL									
0000.0	Grounding	4.0	EA	1,168,800	175,320	1,344,120			1,344,120.00	336,030.00
0000.0	Cables, Wiring, Lighting	1.0	LS	13,700,000	2,055,000	15,755,000			15,755,000.00	15,755,000.00
0000.0	Conductors Phase Bus	1,000.0	LF	20,900,000	3,135,000	24,035,000			24,035,000.00	24,035.00
0000.0	Generators: w/ Turbine, Govenors	4.0	EA	203,200,000	30,480,000	233,680,000			233,680,000.00	58,420,000.00
0000.0	Generators: Mobile	3.0	EA	2,550,600	382,590	2,933,190			2,933,190.00	977,730.00
0000.0	Transformers	2.0	EA	305,400	45,810	351,210			351,210.00	175,605.00
0000.0	Circuit Breakers	4.0	EA	50,400,000	7,560,000	57,960,000			57,960,000.00	14,490,000.00
0000.0	Instrumentation	1.0	LS	21,050,000	3,157,500	24,207,500			24,207,500.00	24,207,500.00
16100.0	ELECTRICAL	1	LS	313,274,800	46,991,220	360,266,020			360,266,020	360,266,020.00
0000.0	UNLISTED ITEMS									
02300.0	EARTHWORK	.20	%	753,060	112,959	866,019			866,019.00	4,330,095.00
03200.0	CONCRETE REINFORCEMENT	.20	%	2,420,000	363,000	2,783,000			2,783,000.00	13,915,000.00
03300.0	CAST-IN-PLACE CONCRETE	.20	%	10,095,740	1,514,361	11,610,101			11,610,101.00	58,050,505.00
05500.0	STEEL FABRICATIONS	.20	%	15,720,290	2,358,044	18,078,334			18,078,333.50	90,391,667.50
11280.0	HYDRAULIC GATES AND VALVES	.20	%	3,366,060	504,909	3,870,969			3,870,969.00	19,354,845.00
13100.0	SPECIAL CONSTRUCTION	.20	%	228,648	34,297	262,945			262,945.20	1,314,726.00
14600.0	CONVEYING SYSTEMS	.20	%	3,104,140	465,621	3,569,761			3,569,761.00	17,848,805.00
15100.0	MECHANICAL	.20	%	2,171,350	325,703	2,497,053			2,497,052.50	12,485,262.50
16100.0	ELECTRICAL	.20	%	62,654,960	9,398,244	72,053,204			72,053,204.00	360,266,020.00
0000.0	UNLISTED ITEMS	.20	%	100,514,248	15,077,137	115,591,385			115,591,385	577,956,926.00

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June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
02300.0	EARTHWORK								
	Excavate: Service Yard	5,000.0	CY	2.40	6.30			8.70	
				12,000	31,500			43,500	
	Excavate: Power Plant	2,000.0	CY	2.40	6.30			8.70	
				4,800	12,600			17,400	
	Backfill: Service Yard	130,000.0	CY	3.80	7.50			11.30	
				494,000	975,000			1,469,000	
	Drilling: Service Yard	5,000.0	LF	18.60	85.20			103.80	
				93,000	426,000			519,000	
	Drilling: Power Plant	2,200.0	LF	18.60	85.20			103.80	
				40,920	187,440			228,360	
	Drains: Power Plant	112,000.0	LB	2.60	7.10			9.70	
				291,200	795,200			1,086,400	
	Crushed Rock: Service Yard	3,600.0	CY	5.60	11.30	35.00		51.90	
				20,160	40,680	126,000		186,840	
	Hot Bit. Pavement: Service Yard	1,500.0	TN	18.20	36.00	89.00		143.20	
				27,300	54,000	133,500		214,800	
02300.0	EARTHWORK	1.0	LS	983,380	2,522,420	259,500		3,765,300	

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Engineers Opinion of Probable Construction Cost
HYDRO ELECTRIC POWER PLANT

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
03200.0	CONCRETE REINFORCEMENT							.00	
	Service Yard: Purchase, Set, Tie	1,100,000.0	LB	.25	.10	.65		1.00	
				275,000	110,000	715,000		1,100,000	
	Power Plant: Purchase, Set, Tie	1,500,000.0	LB	.25	.10	.65		1.00	
				375,000	150,000	975,000		1,500,000	
	Water Way: Purchase, Set, Tie	8,000,000.0	LB	.25	.10	.65		1.00	
				2,000,000	800,000	5,200,000		8,000,000	
	Water Wheel, Turbine, Generator: Purchase, Set, Tie	1,500,000.0	LB	.25	.10	.65		1.00	
				375,000	150,000	975,000		1,500,000	
03200.0	CONCRETE REINFORCEMENT	12,100,000.0	LB	3,025,000	1,210,000	7,865,000		12,100,000	

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CONCRETE CURVED-GRAVITY DAM
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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
03300.0	CAST-IN-PLACE CONCRETE								
	Concrete Aggregate: Excavate, Screen, Wash, Convey	102,000.0	CY	1.40	2.85			4.25	
				142,800	290,700			433,500	
	Cement and Flyash	24,000.0	TN			125.00		125.00	
						3,000,000		3,000,000	
	Batch and Convey	78,000.0	CY	11.30	33.70	3.40		48.40	
				881,400	2,628,600	265,200		3,775,200	
	Service Yard: Form,Pour, Finish	10,000.0	CY	150.00	55.00	250.00		455.00	
				1,500,000	550,000	2,500,000		4,550,000	
	Power Plant: Form,Pour, Finish	20,000.0	CY	185.00	55.00	280.00		520.00	
				3,700,000	1,100,000	5,600,000		10,400,000	
	Water Way: Form,Pour, Finish	6,000.0	CY	185.00	55.00	350.00		590.00	
				1,110,000	330,000	2,100,000		3,540,000	
	Water Wheel Turbine, Generator : Form,Pour, Finish	42,000.0	CY	185.00	55.00	350.00		590.00	
				7,770,000	2,310,000	14,700,000		24,780,000	
03300.0	CAST-IN-PLACE CONCRETE	78,000.0	CY	15,104,200	7,209,300	28,165,200		50,478,700	

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Engineers Opinion of Probable Construction Cost
HYDRO ELECTRIC POWER PLANT

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
05500.0	STEEL FABRICATIONS								
	Structural Steel: Power Plant	500,000.0	LB	1.70	.75	2.80		5.25	
				850,000	375,000	1,400,000		2,625,000	
	Structural Steel: Penstocks Water Way	9,000,000.0	LB	1.70	.75	2.80		5.25	
				15,300,000	6,750,000	25,200,000		47,250,000	
	Structural Steel: Transition Water Way	800,000.0	LB	1.70	.75	2.80		5.25	
				1,360,000	600,000	2,240,000		4,200,000	
	Structural Steel: Bifurcation Water Way	1,500,000.0	LB	1.70	.75	2.80		5.25	
				2,550,000	1,125,000	4,200,000		7,875,000	
	Structural Steel: Air Vent Water Way	1,100,000.0	LB	1.70	.75	2.80		5.25	
				1,870,000	825,000	3,080,000		5,775,000	
	Misc. Metal Work: Power Plant	100,000.0	LB	1.70	.75	2.10		4.55	
				170,000	75,000	210,000		455,000	
	Stoplog: 18' x 22' Water Way	280,000.0	LB	1.70	.75	1.80		4.25	
				476,000	210,000	504,000		1,190,000	
	Stoplog: Seats and Guides Water Way	333,000.0	LB	1.70	.75	1.80		4.25	
				566,100	249,750	599,400		1,415,250	
	Fabricated Metal Work: Water Way	126,000.0	LB	1.70	.75	1.50		3.95	
				214,200	94,500	189,000		497,700	
	Trashracks: Water Way	1,230,000.0	LB	1.70	.75	3.50		5.95	

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HYDRO ELECTRIC POWER PLANT

AUBURN DAM
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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
				2,091,000	922,500	4,305,000		7,318,500	
05500.0	STEEL FABRICATIONS	14,969,000.0	LB	25,447,300	11,226,750	41,927,400		78,601,450	

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
11280.0	HYDRAULIC GATES AND VALVES								
	Gate: Roller Mounted 13.5' x 17.0' Water Way	2,400,000.0	LB	.53	.20	1.50		2.23	
				1,272,000	480,000	3,600,000		5,352,000	
	Gate: Draft Tube Bulkhead Water Way	550,000.0	LB	3.86	.55	10.90		15.31	
				2,123,000	302,500	5,995,000		8,420,500	
	Gate: Station Service Draft Tube Bulkhead	2,000.0	LB	1.50	.55	5.60		7.65	
				3,000	1,100	11,200		15,300	
	Hydraulic Hoist and Control System Water Way	430,000.0	LB	1.10	.55	2.10		3.75	
				473,000	236,500	903,000		1,612,500	
	Lift Frame, Seat and Guide: Water Way	130,000.0	LB	2.95	.55	7.50		11.00	
				383,500	71,500	975,000		1,430,000	
11280.0	HYDRAULIC GATES AND VALVES	13.0	EA	4,254,500	1,091,600	11,484,200		16,830,300	

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
13100.0	SPECIAL CONSTRUCTION								
	Control Building: Power Plant	2,800.0	SF	115.00	48.30	245.00		408.30	
				322,000	135,240	686,000		1,143,240	
13100.0	SPECIAL CONSTRUCTION	2,800.0	SF	322,000	135,240	686,000		1,143,240	
14600.0	CONVEYING SYSTEMS							.00	
	Elevator: Power Plant	1.0	EA	103,000.00	26,700.00	279,000.00		408,700.00	
				103,000	26,700	279,000		408,700	
	Overhead Crane: 70 Ton Water Way	4.0	EA	307,000.00	86,000.00	907,000.00		1,300,000.00	
				1,228,000	344,000	3,628,000		5,200,000	
	Travel Crane: 350 Ton Equipment	840,000.0	LB	3.10	1.20	7.50		11.80	
				2,604,000	1,008,000	6,300,000		9,912,000	
14600.0	CONVEYING SYSTEMS	3.0	EA	3,935,000	1,378,700	10,207,000		15,520,700	

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Engineers Opinion of Probable Construction Cost
HYDRO ELECTRIC POWER PLANT

AUBURN DAM
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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
15100.0	MECHANICAL								
	Sanitary Waste: Power Plant	45,000.0	LB	1.50	.85	2.90		5.25	
				67,500	38,250	130,500		236,250	
	Fire Protection: Power Plant	160,000.0	LB	2.50	1.60	3.70		7.80	
				400,000	256,000	592,000		1,248,000	
	Process Piping: Water Wheel, Turbine, Generator	490,000.0	LB	1.50	.85	2.90		5.25	
				735,000	416,500	1,421,000		2,572,500	
	HVAC: Power Plant	1.0	LS	1,700,000.00	750,000.00	4,350,000.00		6,800,000.00	
				1,700,000	750,000	4,350,000		6,800,000	
15100.0	MECHANICAL	1.0	LS	2,902,500	1,460,750	6,493,500		10,856,750	

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
16100.0	ELECTRICAL								
	Grounding	4.0	EA	27,000.00	15,200.00	250,000.00		292,200.00	
				108,000	60,800	1,000,000		1,168,800	
	Cables, Wiring, Lighting	1.0	LS	6,500,000.00	5,300,000.00	1,900,000.00		13,700,000.00	
				6,500,000	5,300,000	1,900,000		13,700,000	
	Conductors Phase Bus	1,000.0	LF	4,200.00	1,500.00	15,200.00		20,900.00	
				4,200,000	1,500,000	15,200,000		20,900,000	
	Generators: w/ Turbine, Govenors	4.0	EA	7,700,000.00	5,600,000.00	37,500,000.00		50,800,000.00	
				30,800,000	22,400,000	150,000,000		203,200,000	
	Generators: Mobile	3.0	EA	85,000.00	15,200.00	750,000.00		850,200.00	
				255,000	45,600	2,250,000		2,550,600	
	Transformers	2.0	EA	15,200.00	2,500.00	135,000.00		152,700.00	
				30,400	5,000	270,000		305,400	
	Circuit Breakers	4.0	EA	2,500,000.00	1,500,000.00	8,600,000.00		12,600,000.00	
				10,000,000	6,000,000	34,400,000		50,400,000	
	Instrumentation	1.0	LS	4,250,000.00	1,500,000.00	15,300,000.00		21,050,000.00	
				4,250,000	1,500,000	15,300,000		21,050,000	
16100.0	ELECTRICAL	1.0	LS	56,143,400	36,811,400	220,320,000		313,274,800	

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
0000.0	UNLISTED ITEMS							.00	
02300.0	EARTHWORK	.20	%	983,380.00	2,522,420.00	259,500.00	.00	3,765,300.00	
				196,676	504,484	51,900		753,060	
03200.0	CONCRETE REINFORCEMENT	.20	%	3,025,000.00	1,210,000.00	7,865,000.00	.00	12,100,000.00	
				605,000	242,000	1,573,000		2,420,000	
03300.0	CAST-IN-PLACE CONCRETE	.20	%	15,104,200.00	7,209,300.00	28,165,200.00	.00	50,478,700.00	
				3,020,840	1,441,860	5,633,040		10,095,740	
05500.0	STEEL FABRICATIONS	.20	%	25,447,300.00	11,226,750.00	41,927,400.00	.00	78,601,450.00	
				5,089,460	2,245,350	8,385,480		15,720,290	
11280.0	HYDRAULIC GATES AND VALVES	.20	%	4,254,500.00	1,091,600.00	11,484,200.00	.00	16,830,300.00	
				850,900	218,320	2,296,840		3,366,060	
13100.0	SPECIAL CONSTRUCTION	.20	%	322,000.00	135,240.00	686,000.00	.00	1,143,240.00	
				64,400	27,048	137,200		228,648	
14600.0	CONVEYING SYSTEMS	.20	%	3,935,000.00	1,378,700.00	10,207,000.00	.00	15,520,700.00	
				787,000	275,740	2,041,400		3,104,140	
15100.0	MECHANICAL	.20	%	2,902,500.00	1,460,750.00	6,493,500.00	.00	10,856,750.00	
				580,500	292,150	1,298,700		2,171,350	
16100.0	ELECTRICAL	.20	%	56,143,400.00	36,811,400.00	220,320,000.00	.00	313,274,800.00	
				11,228,680	7,362,280	44,064,000		62,654,960	
0000.0	UNLISTED ITEMS	.20	%	22,423,456	12,609,232	65,481,560		100,514,248	

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	QUANTITY	UOM	LABOR	EQUIPMENT	MATERIAL	OTHER	DIRECT	MARKUP	TOTAL	UNIT PRICE	%
EARTHWORK	13,500.0	CY	479,500	1,579,850	1,072,000		3,131,350	469,703	3,601,053	266.74	5%
CONCRETE REINFORCEMENT	190,000.0	LB	47,500	19,000	123,500		190,000	28,500	218,500	1.15	0%
CAST-IN-PLACE CONCRETE	730.0	CY	152,169	155,741	231,982		539,892	80,984	620,876	850.51	1%
STEEL FABRICATIONS	300,000.0	LB	1,150,000	565,000	3,207,000		4,922,000	738,300	5,660,300	18.87	7%
SPECIAL CONSTRUCTION	1.0	LS	77,000	145,000	256,000		478,000	71,700	549,700	549,700.00	1%
MECHANICAL	1.0	LS	637,000	231,000	1,610,000		2,478,000	371,700	2,849,700	2,849,700.00	4%
ELECTRICAL	1.0	LS	14,292,400	6,470,000	33,615,000		54,377,400	8,156,610	62,534,010	62,534,010.00	82%
Subtotal			16,835,569	9,165,591	40,115,482		66,116,642	9,917,496	76,034,138		100%
UNLISTED ITEMS	.20	%	3,367,114	1,833,118	8,023,096		13,223,328	1,983,499	15,206,828		
Total			20,202,683	10,998,709	48,138,578		79,339,970	11,900,996	91,240,966		
% of Total			22%	12%	53%	0%	87%	13%	100%		

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AUBURN DAM
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800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
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Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
02300.0	EARTHWORK									
0000.0	Excavate: Unclassified	1,000.0	CY	14,300	2,145	16,445			16,445.00	16.45
0000.0	Excavate: Rock	11,500.0	CY	946,450	141,968	1,088,418			1,088,417.50	94.65
0000.0	Excavate: Load, Haul to Waste	12,500.0	CY	122,500	18,375	140,875			140,875.00	11.27
0000.0	Backfill:	1,000.0	CY	11,300	1,695	12,995			12,995.00	13.00
0000.0	Rock Anchors	16,000.0	LF	2,036,800	305,520	2,342,320			2,342,320.00	146.40
02300.0	EARTHWORK	13,500.0	CY	3,131,350	469,703	3,601,053			3,601,053	266.74
03200.0	CONCRETE REINFORCEMENT									
0000.0	Purchase, Set, Tie	190,000.0	LB	190,000	28,500	218,500			218,500.00	1.15
03200.0	CONCRETE REINFORCEMENT	190,000.0	LB	190,000	28,500	218,500			218,500	1.15

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
03300.0	CAST-IN-PLACE CONCRETE									
0000.0	Concrete Aggregate: Excavate, Screen, Wash, Convey	1,000.0	CY	4,250	638	4,888			4,887.50	4.89
0000.0	Cement	220.0	TN	27,500	4,125	31,625			31,625.00	143.75
0000.0	Batch and Convey	730.0	CY	35,332	5,300	40,632			40,631.80	55.66
0000.0	Form,Pour, Finish	730.0	CY	332,150	49,823	381,973			381,972.50	523.25
0000.0	Drill and Grout Anchor Bars	1,300.0	LF	140,660	21,099	161,759			161,759.00	124.43
03300.0	CAST-IN-PLACE CONCRETE	730.0	CY	539,892	80,984	620,876			620,876	850.51
05500.0	STEEL FABRICATIONS									
0000.0	Structural Steel: Lattice Tower	200,000.0	LB	1,450,000	217,500	1,667,500			1,667,500.00	8.34
0000.0	Structural Steel: Tube Tower	100,000.0	LB	725,000	108,750	833,750			833,750.00	8.34
0000.0	Structural Steel: Bushings and Fittings	1.0	LS	2,747,000	412,050	3,159,050			3,159,050.00	3,159,050.00
05500.0	STEEL FABRICATIONS	300,000.0	LB	4,922,000	738,300	5,660,300			5,660,300	18.87
13100.0	SPECIAL CONSTRUCTION									
0000.0	Tanks: Transformer Oil Storage	1.0	LS	478,000	71,700	549,700			549,700.00	549,700.00
13100.0	SPECIAL CONSTRUCTION	1.0	LS	478,000	71,700	549,700			549,700	549,700.00
15100.0	MECHANICAL									
0000.0	Fire Protection: Piping System	1.0	LS	2,478,000	371,700	2,849,700			2,849,700.00	2,849,700.00
15100.0	MECHANICAL	1.0	LS	2,478,000	371,700	2,849,700			2,849,700	2,849,700.00

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AUBURN DAM
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Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
16100.0	ELECTRICAL									
0000.0	Grounding	1.0	LS	1,000,000	150,000	1,150,000			1,150,000.00	1,150,000.00
0000.0	Cables, Wiring	1.0	LS	3,000,000	450,000	3,450,000			3,450,000.00	3,450,000.00
0000.0	Conductors Phase Bus 230 KV	1.0	LS	13,700,000	2,055,000	15,755,000			15,755,000.00	15,755,000.00
0000.0	Substations	4.0	EA	1,298,400	194,760	1,493,160			1,493,160.00	373,290.00
0000.0	Transformers	4.0	EA	16,304,000	2,445,600	18,749,600			18,749,600.00	4,687,400.00
0000.0	Switches	1.0	LS	4,125,000	618,750	4,743,750			4,743,750.00	4,743,750.00
0000.0	Surge Protection	1.0	LS	2,100,000	315,000	2,415,000			2,415,000.00	2,415,000.00
0000.0	Circuit Breakers	1.0	LS	12,000,000	1,800,000	13,800,000			13,800,000.00	13,800,000.00
0000.0	Instrumentation	1.0	LS	850,000	127,500	977,500			977,500.00	977,500.00
16100.0	ELECTRICAL	1	LS	54,377,400	8,156,610	62,534,010			62,534,010	62,534,010.00

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 800 MW INTEGRAL POWERPLANT
 CENTRAL VALLEY PROJECT
 CALIFORNIA

Effective Date:
 June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
0000.0	UNLISTED ITEMS									
02300.0	EARTHWORK	.20	%	626,270	93,941	720,211			720,210.50	3,601,052.50
03200.0	CONCRETE REINFORCEMENT	.20	%	38,000	5,700	43,700			43,700.00	218,500.00
03300.0	CAST-IN-PLACE CONCRETE	.20	%	107,978	16,197	124,175			124,175.16	620,875.80
05500.0	STEEL FABRICATIONS	.20	%	984,400	147,660	1,132,060			1,132,060.00	5,660,300.00
13100.0	SPECIAL CONSTRUCTION	.20	%	95,600	14,340	109,940			109,940.00	549,700.00
15100.0	MECHANICAL	.20	%	495,600	74,340	569,940			569,940.00	2,849,700.00
16100.0	ELECTRICAL	.20	%	10,875,480	1,631,322	12,506,802			12,506,802.00	62,534,010.00
0000.0	UNLISTED ITEMS	.20	%	13,223,328	1,983,499	15,206,828			15,206,828	76,034,138.30

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Engineers Opinion of
Probable Construction Cost
ELEC.POWER TRANS.LINES, SWITCHYARDS,SUBSTATIONS

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
02300.0	EARTHWORK								
	Excavate: Unclassified	1,000.0	CY	4.50	9.80			14.30	
				4,500	9,800			14,300	
	Excavate: Rock	11,500.0	CY	15.90	66.40			82.30	
				182,850	763,600			946,450	
	Excavate: Load, Haul to Waste	12,500.0	CY	3.10	6.70			9.80	
				38,750	83,750			122,500	
	Backfill:	1,000.0	CY	3.80	7.50			11.30	
				3,800	7,500			11,300	
	Rock Anchors	16,000.0	LF	15.60	44.70	67.00		127.30	
				249,600	715,200	1,072,000		2,036,800	
02300.0	EARTHWORK	13,500.0	CY	479,500	1,579,850	1,072,000		3,131,350	

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 Engineers Opinion of
 Probable Construction Cost
 ELEC.POWER TRANS.LINES, SWITCHYARDS,SUBSTATIONS

AUBURN DAM
 CONCRETE CURVED-GRAVITY DAM
 800 MW INTEGRAL POWERPLANT
 CENTRAL VALLEY PROJECT

Effective Date:
 June 2006

<i>Specification</i>	<i>Description</i>	<i>Quantity</i>	<i>UOM</i>	<i>Labor</i>	<i>Equipment</i>	<i>Material</i>	<i>Other</i>	<i>Total</i>	<i>Notes</i>
03200.0	CONCRETE REINFORCEMENT							.00	
	Purchase, Set, Tie	190,000.0	LB	.25	.10	.65		1.00	
				47,500	19,000	123,500		190,000	
03200.0	CONCRETE REINFORCEMENT	190,000.0	LB	47,500	19,000	123,500		190,000	

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03300.0	CAST-IN-PLACE CONCRETE								
	Concrete Aggregate: Excavate, Screen, Wash, Convey	1,000.0	CY	1.40	2.85			4.25	
				1,400	2,850			4,250	
	Cement	220.0	TN			125.00		125.00	
						27,500		27,500	
	Batch and Convey	730.0	CY	11.30	33.70	3.40		48.40	
				8,249	24,601	2,482		35,332	
	Form,Pour, Finish	730.0	CY	150.00	55.00	250.00		455.00	
				109,500	40,150	182,500		332,150	
	Drill and Grout Anchor Bars	1,300.0	LF	25.40	67.80	15.00		108.20	
				33,020	88,140	19,500		140,660	
03300.0	CAST-IN-PLACE CONCRETE	730.0	CY	152,169	155,741	231,982		539,892	

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
05500.0	STEEL FABRICATIONS								
	Structural Steel: Lattice Tower	200,000.0	LB	1.70	.75	4.80		7.25	
				340,000	150,000	960,000		1,450,000	
	Structural Steel: Tube Tower	100,000.0	LB	1.70	.75	4.80		7.25	
				170,000	75,000	480,000		725,000	
	Structural Steel: Bushings and Fittings	1.0	LS	640,000.00	340,000.00	1,767,000.00		2,747,000.00	
				640,000	340,000	1,767,000		2,747,000	
05500.0	STEEL FABRICATIONS	300,000.0	LB	1,150,000	565,000	3,207,000		4,922,000	

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
13100.0	SPECIAL CONSTRUCTION								
	Tanks: Transformer Oil Storage	1.0	LS	77,000.00	145,000.00	256,000.00		478,000.00	
				77,000	145,000	256,000		478,000	
13100.0	SPECIAL CONSTRUCTION	1.0	LS	77,000	145,000	256,000		478,000	
15100.0	MECHANICAL								
	Fire Protection: Piping System	1.0	LS	637,000.00	231,000.00	1,610,000.00		2,478,000.00	
				637,000	231,000	1,610,000		2,478,000	
15100.0	MECHANICAL	1.0	LS	637,000	231,000	1,610,000		2,478,000	

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
16100.0	ELECTRICAL							.00	
	Grounding	1.0	LS	240,000.00	52,000.00	708,000.00		1,000,000.00	
				240,000	52,000	708,000		1,000,000	
	Cables, Wiring	1.0	LS	808,000.00	125,000.00	2,067,000.00		3,000,000.00	
				808,000	125,000	2,067,000		3,000,000	
	Conductors Phase Bus 230 KV	1.0	LS	3,400,000.00	1,700,000.00	8,600,000.00		13,700,000.00	
				3,400,000	1,700,000	8,600,000		13,700,000	
	Substations	4.0	EA	75,600.00	32,000.00	217,000.00		324,600.00	
				302,400	128,000	868,000		1,298,400	
	Transformers	4.0	EA	1,200,000.00	756,000.00	2,120,000.00		4,076,000.00	
				4,800,000	3,024,000	8,480,000		16,304,000	
	Switches	1.0	LS	1,024,000.00	433,000.00	2,668,000.00		4,125,000.00	
				1,024,000	433,000	2,668,000		4,125,000	
	Surge Protection	1.0	LS	525,000.00	231,000.00	1,344,000.00		2,100,000.00	
				525,000	231,000	1,344,000		2,100,000	
	Circuit Breakers	1.0	LS	2,980,000.00	725,000.00	8,295,000.00		12,000,000.00	
				2,980,000	725,000	8,295,000		12,000,000	
	Instrumentation	1.0	LS	213,000.00	52,000.00	585,000.00		850,000.00	
				213,000	52,000	585,000		850,000	
16100.0	ELECTRICAL	1.0	LS	14,292,400	6,470,000	33,615,000		54,377,400	

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 Engineers Opinion of
 Probable Construction Cost
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AUBURN DAM
 CONCRETE CURVED-GRAVITY DAM
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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
0000.0	UNLISTED ITEMS							.00	
02300.0	EARTHWORK	.20	%	479,500.00	1,579,850.00	1,072,000.00	.00	3,131,350.00	
				95,900	315,970	214,400		626,270	
03200.0	CONCRETE REINFORCEMENT	.20	%	47,500.00	19,000.00	123,500.00	.00	190,000.00	
				9,500	3,800	24,700		38,000	
03300.0	CAST-IN-PLACE CONCRETE	.20	%	152,169.00	155,741.00	231,982.00	.00	539,892.00	
				30,434	31,148	46,396		107,978	
05500.0	STEEL FABRICATIONS	.20	%	1,150,000.00	565,000.00	3,207,000.00	.00	4,922,000.00	
				230,000	113,000	641,400		984,400	
13100.0	SPECIAL CONSTRUCTION	.20	%	77,000.00	145,000.00	256,000.00	.00	478,000.00	
				15,400	29,000	51,200		95,600	
15100.0	MECHANICAL	.20	%	637,000.00	231,000.00	1,610,000.00	.00	2,478,000.00	
				127,400	46,200	322,000		495,600	
16100.0	ELECTRICAL	.20	%	14,292,400.00	6,470,000.00	33,615,000.00	.00	54,377,400.00	
				2,858,480	1,294,000	6,723,000		10,875,480	
0000.0	UNLISTED ITEMS	.20	%	3,367,114	1,833,118	8,023,096		13,223,328	

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Probable Construction Cost
HWY and ROAD RELOCATE
PERM. ACCESS ROADS

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
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	QUANTITY	UOM	LABOR	EQUIPMENT	MATERIAL	OTHER	DIRECT	MARKUP	TOTAL	UNIT PRICE	%
HIGHWAY 49 RELOCATION	4.0	Mile	33,791,150	59,953,520	35,085,300		128,829,970	19,324,496	148,154,466	37,038,616	32%
PLACER EL DORADO RELOCATION	12.0	Mile	66,583,220	116,211,460	68,883,100		251,677,780	37,751,667	289,429,447	24,119,121	62%
ACCESS ROADS	4.0	Mile	6,266,920	16,162,660	4,908,900		27,338,480	4,100,772	31,439,252	7,859,813	7%
Subtotal			106,641,290	192,327,640	108,877,300		407,846,230	61,176,935	469,023,165		100%
UNLISTED ITEMS	.20	%	21,328,258	38,465,528	21,775,460		81,569,246	12,235,387	93,804,633		
Total			127,969,548	230,793,168	130,652,760		489,415,476	73,412,321	562,827,797		
% of Total			23%	41%	23%	0%	87%	13%	100%		
Cost Per Mile (Average)	18.0	Mile	7,109,419	12,821,843	7,258,487		27,189,749	4,078,462	31,268,211		

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Specification Description

AUBURN DAM
 CONCRETE CURVED-GRAVITY DAM
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Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
			15%		High, Medium, Low	% Amount		
00001.0	HIGHWAY 49 RELOCATION							
02300.0	Earthwork Road Prism	783,000.0	CY	5,872,500	880,875	6,753,375	6,753,375.00	8.63
02300.0	Earthwork Pier Foundation and Abutments	6,500.0	CY	66,950	10,043	76,993	76,992.50	11.85
02300.0	Earthwork Trenching	40,000.0	CY	412,000	61,800	473,800	473,800.00	11.85
02370.0	Erosion and Sediment Control	8,000.0	CY	141,600	21,240	162,840	162,840.00	20.36
02475.0	Caissons 42 "	800.0	LF	154,560	23,184	177,744	177,744.00	222.18
02610.0	Pipe Culverts 36"	1,200.0	LF	216,840	32,526	249,366	249,366.00	207.81
02640.0	Precast Concrete Culverts 8' x 10'	1,200.0	LF	948,000	142,200	1,090,200	1,090,200.00	908.50
02710.0	Base Courses	133,000.0	CY	1,250,200	187,530	1,437,730	1,437,730.00	10.81
02740.0	Bituminous Pavement	111,000.0	TN	8,547,000	1,282,050	9,829,050	9,829,050.00	88.55
02770.0	Curb and Gutter	5,000.0	LF	91,500	13,725	105,225	105,225.00	21.05
02890.0	Traffic Signs	160.0	EA	121,120	18,168	139,288	139,288.00	870.55
02900.0	Plantings	50.0	AC	107,700	16,155	123,855	123,855.00	2,477.10
03200.0	Concrete Reinforcement	6,700,000.0	LB	8,040,000	1,206,000	9,246,000	9,246,000.00	1.38
03300.0	Cast-In-Place Concrete Foundation, Abutments, Piers	28,000.0	CY	29,260,000	4,389,000	33,649,000	33,649,000.00	1,201.75
05120.0	Structural Steel	23,000,000.0	LB	73,600,000	11,040,000	84,640,000	84,640,000.00	3.68
00001.0	HIGHWAY 49 RELOCATION	4.0	Mile	128,829,970	19,324,496	148,154,466	148,154,466	37,038,616.38

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AUBURN DAM
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CENTRAL VALLEY PROJECT
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					15%		High, Medium, Low	% Amount		
00002.0	PLACER EL DORADO RELOCATION									
02300.0	Earthwork Road Prism	1,500,000.0	CY	11,250,000	1,687,500	12,937,500			12,937,500.00	8.63
02300.0	Earthwork Pier Foundation and Abutments	13,000.0	CY	133,900	20,085	153,985			153,985.00	11.85
02300.0	Earthwork Trenching	75,000.0	CY	772,500	115,875	888,375			888,375.00	11.85
02370.0	Erosion and Sediment Control	24,000.0	CY	424,800	63,720	488,520			488,520.00	20.36
02475.0	Caissons 42 "	1,600.0	LF	309,120	46,368	355,488			355,488.00	222.18
02610.0	Pipe Culverts 36"	3,000.0	LF	542,100	81,315	623,415			623,415.00	207.81
02640.0	Precast Concrete Culverts 8' x 10'	3,000.0	LF	2,370,000	355,500	2,725,500			2,725,500.00	908.50
02710.0	Base Courses	211,000.0	CY	1,983,400	297,510	2,280,910			2,280,910.00	10.81
02740.0	Bituminous Pavement	143,000.0	TN	11,011,000	1,651,650	12,662,650			12,662,650.00	88.55
02770.0	Curb and Gutter	15,000.0	LF	274,500	41,175	315,675			315,675.00	21.05
02890.0	Traffic Signs	480.0	EA	363,360	54,504	417,864			417,864.00	870.55
02900.0	Plantings	150.0	AC	323,100	48,465	371,565			371,565.00	2,477.10
03200.0	Concrete Reinforcement	13,500,000.0	LB	16,200,000	2,430,000	18,630,000			18,630,000.00	1.38
03300.0	Cast-In-Place Concrete Foundation, Abutments, Piers	56,000.0	CY	58,520,000	8,778,000	67,298,000			67,298,000.00	1,201.75
05120.0	Structural Steel	46,000,000.0	LB	147,200,000	22,080,000	169,280,000			169,280,000.00	3.68
00002.0	PLACER EL DORADO RELOCATION	12.0	Mile	251,677,780	37,751,667	289,429,447			289,429,447	24,119,120.58

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PERM. ACCESS ROADS

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
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CALIFORNIA

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					15%		High, Medium, Low	% Amount		
00003.0	ACCESS ROADS									
02300.0	Earthwork Road Prism	1,200,000.0	CY	9,000,000	1,350,000	10,350,000			10,350,000.00	8.63
02300.0	Earthwork Pier Foundation and Abutments	6,500.0	CY	66,950	10,043	76,993			76,992.50	11.85
02300.0	Earthwork Trenching	360,000.0	CY	3,708,000	556,200	4,264,200			4,264,200.00	11.85
02370.0	Erosion and Sediment Control	8,000.0	CY	141,600	21,240	162,840			162,840.00	20.36
02610.0	Pipe Culverts 36"	2,300.0	LF	415,610	62,342	477,952			477,951.50	207.81
02640.0	Precast Concrete Culverts 8' x 10'	2,500.0	LF	1,975,000	296,250	2,271,250			2,271,250.00	908.50
02710.0	Base Courses	140,000.0	CY	1,316,000	197,400	1,513,400			1,513,400.00	10.81
02740.0	Bituminous Pavement	135,000.0	TN	10,395,000	1,559,250	11,954,250			11,954,250.00	88.55
02770.0	Curb and Gutter	5,000.0	LF	91,500	13,725	105,225			105,225.00	21.05
02890.0	Traffic Signs	160.0	EA	121,120	18,168	139,288			139,288.00	870.55
02900.0	Plantings	50.0	AC	107,700	16,155	123,855			123,855.00	2,477.10
00003.0	ACCESS ROADS	4.0	Mile	27,338,480	4,100,772	31,439,252			31,439,252	7,859,813.00

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					15%		High, Medium, Low	% Amount		
00004.0	UNLISTED ITEMS									
00001.0	HIGHWAY 49 RELOCATION	.20	%	25,765,994	3,864,899	29,630,893			29,630,893.10	148,154,465.50
00002.0	PLACER EL DORADO RELOCATION	.20	%	50,335,556	7,550,333	57,885,889			57,885,889.40	289,429,447.00
00003.0	ACCESS ROADS	.20	%	5,467,696	820,154	6,287,850			6,287,850.40	31,439,252.00
00004.0	UNLISTED ITEMS	.2	%	81,569,246	12,235,387	93,804,633			93,804,633	469,023,164.50

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00001.0	HIGHWAY 49 RELOCATION								
02300.0	Earthwork Road Prism	783,000.0	CY	2.40	5.10			7.50	
				1,879,200	3,993,300			5,872,500	
02300.0	Earthwork Pier Foundation and Abutments	6,500.0	CY	3.10	7.20			10.30	
				20,150	46,800			66,950	
02300.0	Earthwork Trenching	40,000.0	CY	3.10	7.20			10.30	
				124,000	288,000			412,000	
02370.0	Erosion and Sediment Control	8,000.0	CY	6.50	11.20			17.70	
				52,000	89,600			141,600	
02475.0	Caissons 42 "	800.0	LF	23.10	65.10	105.00		193.20	
				18,480	52,080	84,000		154,560	
02610.0	Pipe Culverts 36"	1,200.0	LF	23.50	85.20	72.00		180.70	
				28,200	102,240	86,400		216,840	
02640.0	Precast Concrete Culverts 8' x 10'	1,200.0	LF	85.00	185.00	520.00		790.00	
				102,000	222,000	624,000		948,000	
02710.0	Base Courses	133,000.0	CY	2.30	5.90	1.20		9.40	
				305,900	784,700	159,600		1,250,200	
02740.0	Bituminous Pavement	111,000.0	TN	11.50	42.50	23.00		77.00	
				1,276,500	4,717,500	2,553,000		8,547,000	
02770.0	Curb and Gutter	5,000.0	LF	3.40	8.20	6.70		18.30	
				17,000	41,000	33,500		91,500	
02890.0	Traffic Signs	160.0	EA	142.00	55.00	560.00		757.00	

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<i>Specification</i>	<i>Description</i>	<i>Quantity</i>	<i>UOM</i>	<i>Labor</i>	<i>Equipment</i>	<i>Material</i>	<i>Other</i>	<i>Total</i>	<i>Notes</i>
				22,720	8,800	89,600		121,120	
02900.0	Plantings	50.0	AC	360.00	850.00	944.00		2,154.00	
				18,000	42,500	47,200		107,700	
03200.0	Concrete Reinforcement	6,700,000.0	LB	.35	.15	.70		1.20	
				2,345,000	1,005,000	4,690,000		8,040,000	
03300.0	Cast-In-Place Concrete Foundation, Abutments, Piers	28,000.0	CY	369.00	420.00	256.00		1,045.00	
				10,332,000	11,760,000	7,168,000		29,260,000	
05120.0	Structural Steel	23,000,000.0	LB	.75	1.60	.85		3.20	
				17,250,000	36,800,000	19,550,000		73,600,000	
00001.0	HIGHWAY 49 RELOCATION	4.0	Mile	33,791,150	59,953,520	35,085,300		128,829,970	

Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
00002.0 PLACER EL DORADO RELOCATION							.00
02300.0	Earthwork Road Prism	1,500,000.0	CY	2.40	5.10	7.50	
				3,600,000	7,650,000	11,250,000	
02300.0	Earthwork Pier Foundation and Abutments	13,000.0	CY	3.10	7.20	10.30	
				40,300	93,600	133,900	
02300.0	Earthwork Trenching	75,000.0	CY	3.10	7.20	10.30	
				232,500	540,000	772,500	
02370.0	Erosion and Sediment Control	24,000.0	CY	6.50	11.20	17.70	
				156,000	268,800	424,800	
02475.0	Caissons 42 "	1,600.0	LF	23.10	65.10	105.00	
				36,960	104,160	168,000	
02610.0	Pipe Culverts 36"	3,000.0	LF	23.50	85.20	72.00	
				70,500	255,600	216,000	
02640.0	Precast Concrete Culverts 8' x 10'	3,000.0	LF	85.00	185.00	520.00	
				255,000	555,000	1,560,000	
02710.0	Base Courses	211,000.0	CY	2.30	5.90	1.20	
				485,300	1,244,900	253,200	
02740.0	Bituminous Pavement	143,000.0	TN	11.50	42.50	23.00	
				1,644,500	6,077,500	3,289,000	
02770.0	Curb and Gutter	15,000.0	LF	3.40	8.20	6.70	
				51,000	123,000	100,500	

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 Probable Construction Cost
 HWY and ROAD RELOCATE
 PERM. ACCESS ROADS

AUBURN DAM
 CONCRETE CURVED-GRAVITY DAM
 800 MW INTEGRAL POWERPLANT
 CENTRAL VALLEY PROJECT

Effective Date:
 June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
02890.0	Traffic Signs	480.0	EA	142.00	55.00	560.00		757.00	
				68,160	26,400	268,800		363,360	
02900.0	Plantings	150.0	AC	360.00	850.00	944.00		2,154.00	
				54,000	127,500	141,600		323,100	
03200.0	Concrete Reinforcement	13,500,000.0	LB	.35	.15	.70		1.20	
				4,725,000	2,025,000	9,450,000		16,200,000	
03300.0	Cast-In-Place Concrete Foundation, Abutments, Piers	56,000.0	CY	369.00	420.00	256.00		1,045.00	
				20,664,000	23,520,000	14,336,000		58,520,000	
05120.0	Structural Steel	46,000,000.0	LB	.75	1.60	.85		3.20	
				34,500,000	73,600,000	39,100,000		147,200,000	
00002.0	PLACER EL DORADO RELOCATION	12.0	Mile	66,583,220	116,211,460	68,883,100		251,677,780	

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AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
00003.0	ACCESS ROADS								
02300.0	Earthwork Road Prism	1,200,000.0	CY	2.40	5.10			7.50	
				2,880,000	6,120,000			9,000,000	
02300.0	Earthwork Pier Foundation and Abutments	6,500.0	CY	3.10	7.20			10.30	
				20,150	46,800			66,950	
02300.0	Earthwork Trenching	360,000.0	CY	3.10	7.20			10.30	
				1,116,000	2,592,000			3,708,000	
02370.0	Erosion and Sediment Control	8,000.0	CY	6.50	11.20			17.70	
				52,000	89,600			141,600	
02610.0	Pipe Culverts 36"	2,300.0	LF	23.50	85.20	72.00		180.70	
				54,050	195,960	165,600		415,610	
02640.0	Precast Concrete Culverts 8' x 10'	2,500.0	LF	85.00	185.00	520.00		790.00	
				212,500	462,500	1,300,000		1,975,000	
02710.0	Base Courses	140,000.0	CY	2.30	5.90	1.20		9.40	
				322,000	826,000	168,000		1,316,000	
02740.0	Bituminous Pavement	135,000.0	TN	11.50	42.50	23.00		77.00	
				1,552,500	5,737,500	3,105,000		10,395,000	
02770.0	Curb and Gutter	5,000.0	LF	3.40	8.20	6.70		18.30	
				17,000	41,000	33,500		91,500	
02890.0	Traffic Signs	160.0	EA	142.00	55.00	560.00		757.00	
				22,720	8,800	89,600		121,120	

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<i>Specification</i>	<i>Description</i>	<i>Quantity</i>	<i>UOM</i>	<i>Labor</i>	<i>Equipment</i>	<i>Material</i>	<i>Other</i>	<i>Total</i>	<i>Notes</i>
02900.0	Plantings	50.0	AC	360.00	850.00	944.00		2,154.00	
				18,000	42,500	47,200		107,700	
00003.0	ACCESS ROADS	4.0	Mile	6,266,920	16,162,660	4,908,900		27,338,480	

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AUBURN DAM
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 CENTRAL VALLEY PROJECT

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 June 2006

<i>Specification</i>	<i>Description</i>	<i>Quantity</i>	<i>UOM</i>	<i>Labor</i>	<i>Equipment</i>	<i>Material</i>	<i>Other</i>	<i>Total</i>	<i>Notes</i>
00004.0	UNLISTED ITEMS								
00001.0	HIGHWAY 49 RELOCATION	.20	%	33,791,150.00	59,953,520.00	35,085,300.00	.00	128,829,970.00	
				6,758,230	11,990,704	7,017,060		25,765,994	
00002.0	PLACER EL DORADO RELOCATION	.20	%	66,583,220.00	116,211,460.00	68,883,100.00		251,677,780.00	
				13,316,644	23,242,292	13,776,620		50,335,556	
00003.0	ACCESS ROADS	.20	%	6,266,920.00	16,162,660.00	4,908,900.00		27,338,480.00	
				1,253,384	3,232,532	981,780		5,467,696	
00004.0	UNLISTED ITEMS	.20	%	21,328,258	38,465,528	21,775,460		81,569,246	

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AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT

Effective Date:
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	QUANTITY	UOM	LABOR	EQUIPMENT	MATERIAL	OTHER	DIRECT	MARKUP	TOTAL	UNIT PRICE	%
SITE CONSTRUCTION	1.0	LS	1,417,470	3,701,720	5,938,000		11,057,190	1,658,579	12,715,769		39.0%
CONCRETE	1.0	LS	3,737,000	1,238,000	8,484,000		13,459,000	2,018,850	15,477,850		47.5%
MASONRY	1.0	LS	552,500	246,500	952,000		1,751,000	262,650	2,013,650		6.2%
ELECTRICAL	1.0	LS	414,200	140,500	1,533,000		2,087,700	313,155	2,400,855		7.4%
Subtotal			6,121,170	5,326,720	16,907,000		28,354,890	4,253,234	32,608,124		100.0%
UNLISTED ITEMS	.20	%	1,224,234	1,065,344	3,381,400		5,670,978	850,647	6,521,625		
Total			7,345,404	6,392,064	20,288,400		34,025,868	5,103,880	39,129,748		
% of Total			19%	16%	52%	0%	87%	13%	100%		

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AUBURN DAM CONCRETE CURVED-GRAVITY DAM 800 MW INTEGRAL POWERPLANT CENTRAL VALLEY PROJECT CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
00002.0	SITE CONSTRUCTION									
0000.0	Earthwork	134,000.0	CY	845,540	126,831	972,371			972,371.00	7.26
0000.0	Aggregate Base Course	97,000.0	CY	1,813,900	272,085	2,085,985			2,085,985.00	21.51
0000.0	Bituminous Pavement	66,500.0	TN	7,162,050	1,074,308	8,236,358			8,236,357.50	123.86
0000.0	Fences and Gates	24,500.0	LF	705,600	105,840	811,440			811,440.00	33.12
0000.0	Signs	950.0	EA	530,100	79,515	609,615			609,615.00	641.70
00002.0	SITE CONSTRUCTION	1.0	LS	11,057,190	1,658,579	12,715,769			12,715,769	12,715,768.50
00003.0	CONCRETE									
0000.0	Concrete Reinforcement	4,400,000.0	LB	4,092,000	613,800	4,705,800			4,705,800.00	1.07
0000.0	Cast-In-Place Concrete	19,000.0	CY	9,367,000	1,405,050	10,772,050			10,772,050.00	566.95
00003.0	CONCRETE	1.0	LS	13,459,000	2,018,850	15,477,850			15,477,850	15,477,850.00
00004.0	MASONRY									
0000.0	Masonry Assembly	85,000.0	SF	1,751,000	262,650	2,013,650			2,013,650.00	23.69
00004.0	MASONRY	1.0	LS	1,751,000	262,650	2,013,650			2,013,650	2,013,650.00

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AUBURN DAM CONCRETE CURVED-GRAVITY DAM 800 MW INTEGRAL POWERPLANT CENTRAL VALLEY PROJECT CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
00016.0	ELECTRICAL									
0000.0	Electrical: Grounding	1.0	LS	348,500	52,275	400,775			400,775.00	400,775.00
0000.0	Electrical: Wiring, Boxes, Panels	1.0	LS	500,300	75,045	575,345			575,345.00	575,345.00
0000.0	Electrical: Transformers	1.0	LS	610,600	91,590	702,190			702,190.00	702,190.00
0000.0	Electrical: Lighting	1.0	LS	435,800	65,370	501,170			501,170.00	501,170.00
0000.0	Electrical; Telephone and Intercommunications	1.0	LS	192,500	28,875	221,375			221,375.00	221,375.00
00016.0	ELECTRICAL	1.0	LS	2,087,700	313,155	2,400,855			2,400,855	2,400,855.00
0000.0	UNLISTED ITEMS									
00002.0	SITE CONSTRUCTION	.20	%	2,211,438	331,716	2,543,154			2,543,153.70	12,715,768.50
00003.0	CONCRETE	.20	%	2,691,800	403,770	3,095,570			3,095,570.00	15,477,850.00
00004.0	MASONRY	.20	%	350,200	52,530	402,730			402,730.00	2,013,650.00
00016.0	ELECTRICAL	.20	%	417,540	62,631	480,171			480,171.00	2,400,855.00
0000.0	UNLISTED ITEMS	.2	%	5,670,978	850,647	6,521,625			6,521,625	32,608,123.50

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800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
00002.0	SITE CONSTRUCTION								
	Earthwork	134,000.0	CY	1.98	4.33			6.31	
				265,320	580,220			845,540	
	Aggregate Base Course	97,000.0	CY	3.40	6.80	8.50		18.70	
				329,800	659,600	824,500		1,813,900	
	Bituminous Pavement	66,500.0	TN	8.50	33.20	66.00		107.70	
				565,250	2,207,800	4,389,000		7,162,050	
	Fences and Gates	24,500.0	LF	4.60	8.20	16.00		28.80	
				112,700	200,900	392,000		705,600	
	Signs	950.0	EA	152.00	56.00	350.00		558.00	
				144,400	53,200	332,500		530,100	
00002.0	SITE CONSTRUCTION	1.0	LS	1,417,470	3,701,720	5,938,000		11,057,190	

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
00003.0	CONCRETE							.00	
	Concrete Reinforcement	4,400,000.0	LB	.18	.10	.65		.93	
				792,000	440,000	2,860,000		4,092,000	
	Cast-In-Place Concrete	19,000.0	CY	155.00	42.00	296.00		493.00	
				2,945,000	798,000	5,624,000		9,367,000	
00003.0	CONCRETE	1.0	LS	3,737,000	1,238,000	8,484,000		13,459,000	

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AUBURN DAM
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800 MW INTEGRAL POWERPLANT
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CALIFORNIA

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
00004.0	MASONRY								
	Masonry Assembly	85,000.0	SF	6.50	2.90	11.20		20.60	
				552,500	246,500	952,000		1,751,000	
00004.0	MASONRY	1.0	LS	552,500	246,500	952,000		1,751,000	

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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
00016.0	ELECTRICAL								
	Electrical: Grounding	1.0	LS	56,000.00	29,500.00	263,000.00		348,500.00	
				56,000	29,500	263,000		348,500	
	Electrical: Wiring, Boxes, Panels	1.0	LS	102,000.00	42,300.00	356,000.00		500,300.00	
				102,000	42,300	356,000		500,300	
	Electrical: Transformers	1.0	LS	125,000.00	29,600.00	456,000.00		610,600.00	
				125,000	29,600	456,000		610,600	
	Electrical: Lighting	1.0	LS	78,900.00	23,900.00	333,000.00		435,800.00	
				78,900	23,900	333,000		435,800	
	Electrical; Telephone and Intercommunications	1.0	LS	52,300.00	15,200.00	125,000.00		192,500.00	
				52,300	15,200	125,000		192,500	
00016.0	ELECTRICAL	1.0	LS	414,200	140,500	1,533,000		2,087,700	

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CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
0000.0	UNLISTED ITEMS								
00002.0	SITE CONSTRUCTION	.20	%	1,417,470.00	3,701,720.00	5,938,000.00	.00	11,057,190.00	
				283,494	740,344	1,187,600		2,211,438	
00003.0	CONCRETE	.20	%	3,737,000.00	1,238,000.00	8,484,000.00	.00	13,459,000.00	
				747,400	247,600	1,696,800		2,691,800	
00004.0	MASONRY	.20	%	552,500.00	246,500.00	952,000.00	.00	1,751,000.00	
				110,500	49,300	190,400		350,200	
00016.0	ELECTRICAL	.20	%	414,200.00	140,500.00	1,533,000.00	.00	2,087,700.00	
				82,840	28,100	306,600		417,540	
0000.0	UNLISTED ITEMS	.20	%	1,224,234	1,065,344	3,381,400		5,670,978	

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ENVIRONMENTAL MITIGATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
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CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
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	QUANTITY	UOM	LABOR	EQUIPMENT	MATERIAL	OTHER	DIRECT	MARKUP	TOTAL	UNIT PRICE	%
PLANTINGS (MITIGATION ACRES)	23,200.0	AC	276,810,000	354,900,000	440,800,000		1,072,510,000	160,876,500	1,233,386,500	53,163.21	100%
Subtotal			276,810,000	354,900,000	440,800,000		1,072,510,000	160,876,500	1,233,386,500		100%
UNLISTED ITEMS	.20	%	55,362,000	70,980,000	88,160,000		214,502,000	32,175,300	246,677,300		
Total			332,172,000	425,880,000	528,960,000		1,287,012,000	193,051,800	1,480,063,800		
% of Total			22%	29%	36%	0%	87%	13%	100%		

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AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
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Effective Date:
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Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
02900.0	PLANTINGS (MITIGATION ACRES)									
0000.0	Evergreen Hardwood Forest	8,300.0	AC	381,800,000	57,270,000	439,070,000			439,070,000.00	52,900.00
0000.0	Evergreen Hardwood Woodland	8,400.0	AC	386,400,000	57,960,000	444,360,000			444,360,000.00	52,900.00
0000.0	Conifer Forest	1,500.0	AC	69,000,000	10,350,000	79,350,000			79,350,000.00	52,900.00
0000.0	Chaparral	1,400.0	AC	47,600,000	7,140,000	54,740,000			54,740,000.00	39,100.00
0000.0	Grassland / Savannah	450.0	AC	15,300,000	2,295,000	17,595,000			17,595,000.00	39,100.00
0000.0	Freshwater Marsh	50.0	AC	1,910,000	286,500	2,196,500			2,196,500.00	43,930.00
0000.0	Montane Riparian	3,100.0	AC	170,500,000	25,575,000	196,075,000			196,075,000.00	63,250.00
02900.0	PLANTINGS (MITIGATION ACRES)	23,200.0	AC	1,072,510,000	160,876,500	1,233,386,500			1,233,386,500	53,163.21

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CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
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Specification	Description	Quantity	UOM	Direct	Mark Up	Subtotal	Accuracy	Contingency	Total	Unit Price
					15%		High, Medium, Low	% Amount		
0000.0	UNLISTED ITEMS									
02900.0	PLANTINGS (MITIGATION ACRES)	.20	%	214,502,000	32,175,300	246,677,300			246,677,300.00	1,233,386,500.00
0000.0	UNLISTED ITEMS	.20	%	214,502,000	32,175,300	246,677,300			246,677,300	1,233,386,500.00

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ENVIRONMENTAL MITIGATION

AUBURN DAM CONCRETE CURVED-GRAVITY DAM 800 MW INTEGRAL POWERPLANT CENTRAL VALLEY PROJECT CALIFORNIA

Effective Date:
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Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
02900.0	PLANTINGS (MITIGATION ACRES)								
	Evergreen Hardwood Forest	8,300.0	AC	12,000.00	15,000.00	19,000.00		46,000.00	
				99,600,000	124,500,000	157,700,000		381,800,000	
	Evergreen Hardwood Woodland	8,400.0	AC	12,000.00	15,000.00	19,000.00		46,000.00	
				100,800,000	126,000,000	159,600,000		386,400,000	
	Conifer Forest	1,500.0	AC	12,000.00	15,000.00	19,000.00		46,000.00	
				18,000,000	22,500,000	28,500,000		69,000,000	
	Chaparral	1,400.0	AC	8,000.00	12,000.00	14,000.00		34,000.00	
				11,200,000	16,800,000	19,600,000		47,600,000	
	Grassland / Savannah	450.0	AC	8,000.00	12,000.00	14,000.00		34,000.00	
				3,600,000	5,400,000	6,300,000		15,300,000	
	Freshwater Marsh	50.0	AC	4,200.00	16,000.00	18,000.00		38,200.00	
				210,000	800,000	900,000		1,910,000	
	Montane Riparian	3,100.0	AC	14,000.00	19,000.00	22,000.00		55,000.00	
				43,400,000	58,900,000	68,200,000		170,500,000	
02900.0	PLANTINGS (MITIGATION ACRES)	23,200.0	AC	276,810,000	354,900,000	440,800,000		1,072,510,000	

DRAFT

Engineers Opinion of Probable Constrution Cost
ENVIRONMENTAL MITIGATION

AUBURN DAM
CONCRETE CURVED-GRAVITY DAM
800 MW INTEGRAL POWERPLANT
CENTRAL VALLEY PROJECT
CALIFORNIA

Effective Date:
June 2006

Specification	Description	Quantity	UOM	Labor	Equipment	Material	Other	Total	Notes
0000.0	UNLISTED ITEMS							.00	
02900.0	PLANTINGS (MITIGATION ACRES)	.20	%	276,810,000.00	354,900,000.00	440,800,000.00	.00	1,072,510,000.00	
				55,362,000	70,980,000	88,160,000		214,502,000	
0000.0	UNLISTED ITEMS	.20	%	55,362,000	70,980,000	88,160,000		214,502,000	