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ORANGE COUNTY WATER DISTRICT

November 26, 1996

Mr. Andy Piszkin
 Southwest Division Naval Facilities Engineering Command
 1220 Pacific Highway
 San Diego, CA 92132-5190

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SUBJECT: Correction in Cost Estimate in Alternative 6A Cost Sharing

Dear Mr. Piszkin:

This letter is in response to your question regarding the method in which Orange County Water District (OCWD) calculated the Department of Navy's (DON) cost share of up to 46% for certain line items in the MCAS El Toro OU-1 remedial alternative 6A. OCWD applied this share percentage to two common capital components, "land and easements" and "treatment equipment building/site work/telemetry," as a flow-based value dependent on the amount of untreated water delivered from DON's proposed on-base shallow groundwater unit (SGU) extraction system to the Irvine Desalter Project (IDP).

Upon reviewing our calculations, we found a 3% error in the flow-based percentage for DON's share of the two aforementioned capital components. Assuming DON delivers 1,260 gpm of shallow groundwater to the IDP, then we estimate DON's share to be 49%, rather than 46%, of the costs of the two capital components, according to the following formula:

$$\text{DON \%} = [(\text{total flow} - \text{SGU flow}) \times 35\% + \text{SGU flow}] / \text{total flow}$$

$$49\% = [(5,700 \text{ gpm} - 1,260 \text{ gpm}) \times 35\% + 1,260 \text{ gpm}] / 5,700 \text{ gpm}$$

where:
 total flow = total raw water flow to IDP (5,700 gpm)
 SGU flow = flow from SGU (up to 1,260 gpm)
 35% = flow-based percentage of DON's share of Principal Aquifer remedial components specified in our letter dated October 10, 1996.

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Attached is a revised Alternative 6A cost table to replace the one submitted with our letter to Mr. Dana Sakamoto dated October 25, 1996. The correction of this error would result in an increase in DON's estimated cost share of approximately \$240,000 under OCWD's counter-proposal, should DON elect to deliver up to 1,260 gpm of SGU water to the IDP.

I apologize for any inconvenience this mistake may have caused you, although it may become a moot issue should DON elect to deliver less than 1,260 gpm of SGU water to the IDP. Please call me at (714) 378-3260 if you have any further questions.

Sincerely,



Roy L. Herndon
Manager, Hydrogeology Department

cc: William R. Mills Jr., OCWD

attachment

Description	Division Totals	Proposed		
		Alt. 6A Total DON Cost	Alt. 6A DON Cost %	Alt. 6A DON Payment to OCWD
CAPITAL COSTS				
MCAS El Toro Components				
Principal Aquifer				
Discharge to Remainder of IDP Treatment System	\$13,000	\$4,550	35	\$4,550
Extraction System (EXT1D and EXT2D)	\$584,000	\$204,400	35	\$204,400
Conveyance	\$2,169,500	\$759,325	35	\$759,325
<i>Subtotal-Principal Aquifer</i>	<i>\$2,766,500</i>	<i>\$968,275</i>		<i>\$968,275</i>
Shallow Groundwater Unit				
Extraction System	\$2,199,600	\$2,199,600	100	
Conveyance	\$1,511,500	\$1,511,500	100	
<i>Subtotal-Shallow Groundwater Unit</i>	<i>\$3,711,100</i>	<i>\$3,711,100</i>		<i>\$0</i>
Well Closures (in year 20)	N/A	N/A	100	\$570,500
Groundwater Monitoring Wells	\$712,500	\$712,500	100	\$0
<i>Subtotal MCAS El Toro Components</i>	<i>\$7,190,100</i>	<i>\$5,391,875</i>		<i>\$1,538,775</i>
Conting., Mobil., Engr, Legal, Admin. Allowances (77%)	\$5,510,000	\$4,151,744		\$745,572
MCAS El Toro Replacement Costs	\$415,300	\$415,300	100	\$415,300
MCAS El Toro Components With All Allowances	\$13,115,400	\$9,958,919		\$2,699,647
OCWD Components				
Land and Easements	\$1,149,500	\$563,255	49	\$563,255
Extraction System (Well Construction Costs)				
Wells IDP-1, IDP-2, IDP-3, IDP-4	\$1,440,000	\$504,000	35	\$504,000
Existing Well ET-1 [reimbursed costs deleted]	\$0	\$0	---	\$0
Conveyance	\$4,378,250	\$1,532,388	35	\$1,532,388
VOC Treatment System	\$1,753,000	\$1,753,000	100	\$1,753,000
VOC Treatment to Accommodate SGU Water	\$324,000	\$324,000	100	\$324,000
Treatment Equipment Building/Site Work/Telemetry	\$3,383,900	\$1,658,111	49	\$1,658,111
Replacement Costs	\$470,000	\$164,500	35	\$164,500
<i>Subtotal OCWD Components</i>	<i>\$12,898,650</i>	<i>\$6,499,254</i>		<i>\$6,499,254</i>
Conting., Mobil., Engr, Legal, Admin. Allowances (77%)	\$9,931,961	\$5,004,425		\$5,004,425
OCWD Components With All Allowances	\$22,830,611	\$11,503,679		\$11,503,679
CAPITAL COST TOTAL	\$35,946,011	\$21,462,597		\$14,203,325
ANNUAL O&M COSTS				
Principal Aquifer				
OCWD Components				
Extraction System (IDP-1 through -4)	\$117,200	\$41,020	35	\$41,020
VOC Treatment System	\$240,000	\$240,000	100	\$240,000
Additional VGAC for Untreated SGU Water	\$21,000	\$21,000	100	\$21,000
Existing Well ET-1	\$42,000	\$14,700	35	\$14,700
Lab Analysis of Finished Water	\$127,700	\$63,850	50	\$63,850
<i>Subtotal - OCWD Component Principal Aquifer</i>	<i>\$547,900</i>	<i>\$380,570</i>		<i>\$380,570</i>
MCAS El Toro Components				
Extraction System (EXT1D and EXT2D)	\$4,700	\$1,645	35	\$1,645
Conveyance	\$166,854	\$58,399	35	\$58,399
<i>Subtotal - MCAS El Toro Component Principal Aquifer</i>	<i>\$171,554</i>	<i>\$60,044</i>		<i>\$60,044</i>
Shallow Groundwater Unit				
Extraction System	\$37,150	\$37,150	100	
Conveyance	\$89,250	\$89,250	100	
<i>Subtotal - Shallow Groundwater Unit</i>	<i>\$126,400</i>	<i>\$126,400</i>		<i>\$0</i>
Groundwater Monitoring Wells				
Monitoring	\$186,200	\$186,200	100	\$0
<i>O&M Cost Subtotal</i>	<i>\$1,032,054</i>	<i>\$753,214</i>		<i>\$440,614</i>
10% Contingency on All Components	\$103,205	\$75,321		\$44,061
O&M Cost Total	\$1,135,259	\$828,535		\$484,675
PRESENT WORTH				
Capital Costs with Allowances	\$35,946,011	\$21,462,597		\$14,203,325
Approximate O&M Costs (PW 20 yrs @ 4%)	\$15,428,175	\$11,259,795		\$6,586,737
20-YEAR PRESENT WORTH TOTAL	\$51,374,186	\$32,722,392		\$20,790,063